Appendix H
Transportation Technical Memorandum

RED AHEAD
Moving Ahead to a Better Red

Red Line Extension

Chicago Red Line Extension Project

Transportation
Technical Memorandum

October 14, 2013
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Abbreviations

ADA	Americans with Disabilities Act
API	area of potential impact
BRT	Bus Rapid Transit
CCHD	Cook County Highway Department
CDOT	Chicago Department of Transportation
CIP	CREATE 75th Street Corridor Improvement Project
CN/ME	Canadian National/Metra Electric District
CMAP	Chicago Metropolitan Agency for Planning
CN	Canadian National
CREATE	Chicago Region Environmental and Transportation Efficiency
CSS & SBRR	Chicago South Shore & South Bend Railroad
CTA	Chicago Transit Authority
EIS	Environmental Impact Statement
FTA	Federal Transit Administration
GIS	Geographic Information System
IDOT	Illinois Department of Transportation
IHB	Indiana Harbor Belt
LOS	level of service
ME	Metra Electric
MWRD	Metropolitan Water Reclamation District
NEPA	National Environmental Policy Act
NICTD	Northern Indiana Commuter Transportation District
NS	Norfolk Southern
Pace	Pace Suburban Bus Service
RI	Metra Rock Island
RLE	Red Line Extension
ROW	right-of-way
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
UPRR	Union Pacific Railroad

Section 1
Summary

This technical memorandum analyzes the potential impacts of the Red Line Extension (RLE) Project on transportation facilities that include public transportation, vehicular and freight traffic, bicycle, pedestrians, and parking.

Impacts on the transportation facilities were identified based on the predicted changes from the existing conditions to the horizon year of 2030, using the regional travel demand model. The impacts on transportation facilities were evaluated through a combination of qualitative and quantitative analysis. Section 3 presents the specific methods used to determine impacts. The following paragraphs describe the impacts and proposed mitigation measures for each alternative.

People using public transportation would benefit from the extension of the Red Line south from the 95th Street Terminal. Various bus routes within the project area would be rerouted to complement the rail alternatives and provide a means for connectivity to the expanded service. The extension of the Red Line would provide an alternative mode of travel to reach downtown Chicago (and destinations between downtown Chicago and 95th Street) for people south of the 95th Street Terminal. There would be no permanent adverse impacts on public transportation services for any of the alternatives. Temporary construction impacts on public transportation, including intermittent delays and detours, would occur.

The traffic analysis consisted of analyzing 76 intersections within the area of potential impact (API). Table 1-1 provides a summary of the intersections that would require mitigation measures to minimize the level of impact from any of the build alternatives. At intersections where adverse impacts are expected, potential mitigation measures have been identified to offset the portion of the level of service (LOS) deterioration that is attributable to the RLE Project. After mitigation, there would be no adverse permanent impacts from any of the build alternatives. The minimum acceptable LOS for roadway intersections is “D” for urban areas. Temporary construction impacts on traffic would occur during construction activities. The temporary impacts would be mitigated by following the applicable federal, state, and local requirements for construction activities.

There would be no permanent impacts on freight transportation due to the implementation of any of the build alternatives. There would be temporary impacts due to the construction of Union Pacific Railroad (UPRR) Rail and Halsted Rail Alternatives due to temporary closures of the roadways or highways to erect the aerial structures and superstructures. Railroad flagging would be included where any construction crosses or is adjacent to railroad operations.

There would be no adverse permanent impacts on pedestrians after mitigation for any of the build alternatives. Mitigation measures for pedestrians include the addition of traffic signal or pedestrian refuge islands and/or other pedestrian crossing treatments at the Kensington Avenue stop for the BRT Alternative. Mitigation measures for the UPRR Alternative alignment include

pedestrian crosswalks and/or pedestrian crossing gates at the at-grade railroad crossings near the proposed UPRR Alternative alignment.

Bicycle facilities would not be affected by the implementation of the project alternatives. There would be temporary construction impacts on bicycle facilities for the Halsted Rail Alternative.

There would be no permanent impacts on parking. Minor parking impacts would occur during construction activities for the Halsted Rail Alternative.

Only the UPRR East Option and UPRR West Option have potential for cumulative impacts. With both the UPRR East Option and UPRR West Option, freight traffic would remain on the existing UPRR tracks. Although the project would not increase the number of freight trains, with increased traffic bound for stations (including bus traffic, bicyclists, and pedestrians), delays at the at-grade crossings may increase.

Updated July 27, 2015
In August 2014, based on the technical analysis and public input until then, CTA announced the NEPA Preferred Alternative—the UPRR Rail Alternative. CTA is considering two alignment (route) options of this alternative: the East Option and the West Option. At this time, CTA is also considering only the South Station Option of the 130th Street Station. In late 2014 and early 2015, CTA conducted additional engineering on the East and West Options to refine the East and West Option alignments. Appendix F of this technical memorandum summarizes the refined alignments and any additional or different impacts that would result. The information in Appendix F supersedes information presented in other chapters of this technical memorandum.

Table 1-1: Summary of Mitigated Intersections within the Area of Potential Impact for the Build Alternatives

ID	Intersection	Existing (2012)		2030 Baseline		2030 BRT Mitigated		2030 UPRR Mitigated		2030 Halsted Mitigated	
		AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
		LOS	LOS	LOS	LOS	LOS	LOS	LOS	LOS	LOS	LOS
14	103rd Street and Vincennes Avenue and Beverly Avenue	D	F	E	F	NA	NA	NA	NA	E	F
16	103rd Street and Halsted Street	E	D	F	D	NA	NA	F	C	F	D
41	111th Street and Cottage Grove Avenue	B	C	C	D	C	C	C	C	C	C
42	111th Street and Ellis Avenue	C	B	C	C	C	C	NA	NA	NA	NA
52	115th Street and Michigan Avenue	B	C	B	D	C	D	B	C	NA	NA
54	115th Street and Martin Luther King Drive	D	F	D	F	D	F	D	F	D	F
55a	115th Street and Cottage Grove Avenue	C	C	D	C	C	D	B	C	D	C
55b	115th Street and Cottage Grove Avenue East	D	C	E	C	C	B	C	B	B	C
59	119th Street and Ashland Avenue	D	F	D	F	NA	NA	D	F	D	F
60	119th Street and Halsted Street	C	C	C	C	NA	NA	NA	NA	D	D
61	119th Street and Wentworth Avenue	B	B	B	B	NA	NA	B	B	NA	NA
62	119th Street and State Street	B	B	B	B	C	B	C	B	NA	NA
63	119th Street and Michigan Avenue	A	A	A	A	NA	NA	C	B	NA	NA
64	127th Street and Paulina Street	C	C	C	C	NA	NA	B	C	B	C
65	127th Street and Marshfield Avenue	C	B	C	C	C	C	C	C	D	D

ID	Intersection	Existing (2012)		2030 Baseline		2030 BRT Mitigated		2030 UPRR Mitigated		2030 Halsted Mitigated	
		AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
		LOS	LOS	LOS	LOS	LOS	LOS	LOS	LOS	LOS	LOS
66	127th Street and Ashland Avenue	C	C	C	C	NA	NA	C	C	C	D
67	Ashland Avenue and Vermont Avenue	C	C	C	C	C	C	C	C	C	C
68	127th Street and Halsted Street	C	C	C	C	C	C	C	D	C	D
69	Vermont Avenue and Halsted Street	B	B	B	B	NA	NA	NA	NA	D	D
70	127th Street and Vermont Avenue and Wallace Street	C	D	D	D	C	C	C	D	C	C
71	127th Street and State Street	A	B	B	B	C	C	B	C	D	B
72	127th Street and Michigan Avenue	A	B	A	B	NA	NA	B	C	B	C
73	130th Street and Indiana Avenue	B	C	C	C	D	C	D	D	C	D
74	130th Street and Ellis Avenue	A	A	A	A	NA	NA	B	B	NA	NA

Notes: BRT = Bus Rapid Transit, UPRR = Union Pacific Railroad, LOS = level of service, NA = Not applicable. Intersection did not require mitigation.

Section 2
Project Description

The Chicago Transit Authority (CTA) is proposing to extend the Red Line from the existing 95th Street Terminal to the vicinity of 130th Street, subject to the availability of funding. The RLE would include four stations. Each station would include bus transfer and parking facilities. This project is one part of the Red Ahead Program to extend and enhance the entire Red Line. The CTA is also planning 95th Street Terminal improvements that are anticipated to be completed prior to the proposed RLE construction.

The project area is 11 miles south of the Chicago central business district (commonly referred to as the Loop) and encompasses approximately 20 square miles. The boundaries of the project area are 95th Street on the north, Ashland Avenue on the west, Stony Island Avenue on the east, and the Calumet-Sag Channel/Little Calumet River and 134th Street on the south. The I-57 Expressway and I-94 Bishop Ford Freeway cross the western and eastern edges of the project area, respectively. Lake Calumet is in the eastern portion of the project area. The project area encompasses parts of nine community areas in the City of Chicago and the eastern section of the Village of Calumet Park. Chicago community areas include Beverly, Washington Heights, Roseland, Morgan Park, Pullman, West Pullman, Riverdale, Hegewisch, and South Deering. The project area comprises residential (primarily single family), industrial (both existing and vacant), transportation (including freight), and commercial development.

The Draft Environmental Impact Statement (EIS) focuses on the following alternatives (shown in Figure 2-1), which emerged from the Alternatives Analysis and the National Environmental Policy Act (NEPA) scoping process:

- No Build Alternative
- Bus Rapid Transit (BRT) Alternative
- UPRR Rail Alternative
    - Right-of-Way (ROW) Option
    - East Option
    - West Option
- Halsted Rail Alternative

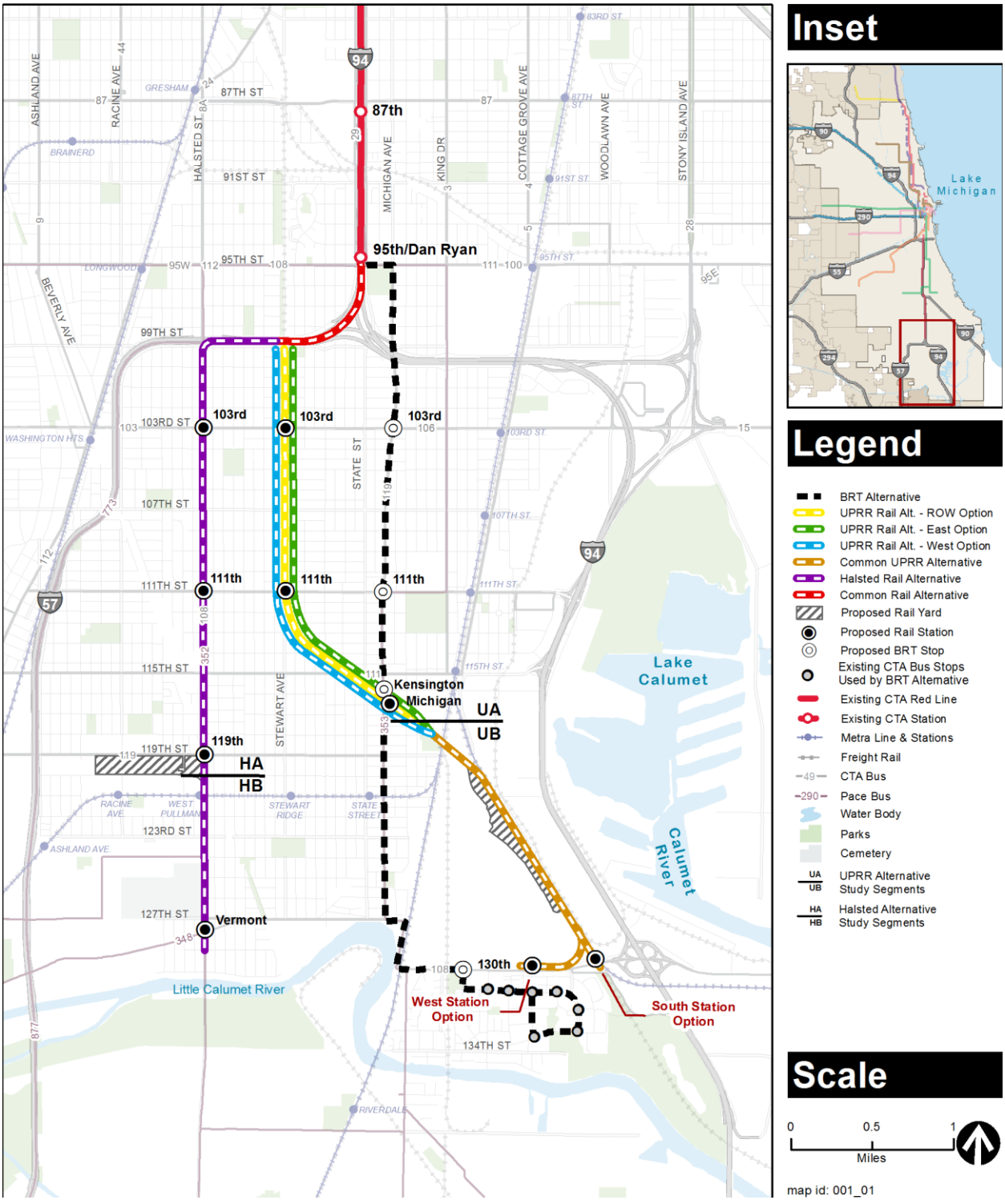


Figure 2-1: Red Line Extension Alternatives

The No Build Alternative is a required alternative as part of the NEPA environmental analysis and is used for comparison purposes to assess the relative benefits and impacts of extending the Red Line. The No Build Alternative is carried into the Draft EIS phase of the project development regardless of its performance versus the build alternatives under consideration. No new infrastructure would be constructed as part of the No Build Alternative other than committed transportation improvements that are already in the Chicago Metropolitan Agency for Planning (CMAP) Fiscal Year 2010–2015 Transportation Improvement Program which includes the improvements to 95th Street Terminal. The Transportation Improvement Program projects within the project area consist of four bridge reconstructions, several road improvement projects including resurfacing and coordination of signal timing on 95th Street, work on Metra's facilities, construction of a bicycle/pedestrian multi-use trail, and preservation of historic facilities. The No Build Alternative includes regular maintenance of existing track and structures, and bus transit service would be focused on the preservation of existing services and projects. All elements of the No Build Alternative are included in each of the other alternatives. Under this alternative, travel times would not improve from existing conditions.

The BRT Alternative (formerly referred to as the Transportation Systems Management Alternative) is a 5.0-mile, limited-stop, enhanced BRT route, which is assumed to operate 24 hours per day between the existing 95th Street Terminal and the intersection of 130th Street and Eberhart Avenue. No dedicated bus lanes would be provided for the BRT Alternative; however, parking lanes would be removed for some portions of the alignment and four stops with improved bus shelters and park & ride facilities would be created at 103rd Street and Michigan Avenue, 111th Street and Michigan Avenue, Kensington Avenue and Michigan Avenue, and 130th Street and Eberhart Avenue. Although BRT service elements would not continue south of the 130th Street stop, the bus route would continue through Altgeld Gardens along the existing route with six stops. The BRT Alternative would be consistent with bus routing changes that may occur as part of improvements to the 95th Street Terminal. Under this alternative, travel times between 130th Street and the Loop would improve over existing conditions.

The UPRR Rail Alternative is a 5.3-mile extension of the heavy rail transit Red Line from its existing 95th Street Terminal to 130th Street, just west of I-94. The Chicago Transit Board designated the UPRR Rail Alternative as the Locally Preferred Alternative at its August 12, 2009 board meeting. This alternative includes construction and operation of new heavy rail transit tracks, mostly in existing transportation corridors. The UPRR Rail Alternative has three options for alignment (ROW, East, and West), all of which would include operation on elevated structure from 95th Street to just past the Canadian National/Metra Electric District (CN/ME) tracks near 119th Street. The alignment would then transition to at-grade through an industrial area with no public through streets, terminating at 130th Street in the vicinity of Altgeld Gardens. Four new stations would be constructed at 103rd Street, 111th Street, Michigan Avenue, and 130th Street. The 130th Street station would be the terminal station, with two options under evaluation: the South Station Option and the West Station Option. A new yard and shop facility would be sited near 120th Street and Cottage Grove Avenue. The bus routes in the vicinity of the UPRR Rail Alternative would be modified to enhance connectivity between the Red Line and the bus network. The hours of operation and service frequency for the UPRR Rail Alternative are assumed

to be the same as for the current Red Line. Under this alternative, travel times between 130th Street and the Loop would improve substantially over existing conditions.

The Halsted Rail Alternative is a 5.0-mile heavy rail transit extension of the existing Red Line. In this alternative, the Red Line would operate on an elevated structure running south from 95th Street along I-57 until Halsted Street. The alignment would then turn south and continue along Halsted Street to the intersection of Halsted Street and Vermont Avenue near 127th Street. This alternative would include four new stations at 103rd Street, 111th Street, 119th Street, and Vermont Avenue. The Vermont Avenue station would be the terminal station. A new yard and shop would be sited west of Halsted Street and between the 119th Street and Vermont Avenue stations. The bus routes in the vicinity of the Halsted Rail Alternative would be modified to enhance connectivity to the Red Line. The hours of operation and service frequency for the Halsted Rail Alternative are assumed to be the same as for the current Red Line. Under this alternative, travel times between 127th Street and the Loop would improve substantially over existing conditions. This alternative would not extend rail service to Altgeld Gardens, which would be served by bus connecting to the Vermont terminal station.

Section 3
Methods for Impact Evaluation

This section describes the process used to conduct a qualitative and quantitative analysis of potential temporary, permanent, and cumulative transportation effects that could result from the construction and operation of the project alternatives.

3.1 Regulatory Framework

Future transit improvements along the project corridor could be financed with a mix of local, state, and federal funds. Accordingly, this transportation analysis was executed in compliance with current Federal Transit Administration (FTA) guidelines, NEPA regulations, and the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) requirements, as detailed below.

3.1.1 Federal

NEPA requires that federal agencies consider environmental impacts before taking actions that could affect the human environment. Transportation, including public transit, traffic, parking, and bicycle and pedestrian transportation are elements typically assessed in NEPA documentation.

Applicable federal regulation for the analysis of transportation impacts also includes the SAFETEA-LU Public Law 109-59, August 10, 2005. The SAFETEA-LU focuses on reducing traffic congestion, increasing intermodal connectivity, and protecting the environment; SAFETEA-LU gives state and local transportation decision-makers more flexibility over previous legislation for solving transportation problems in their communities (Federal Highway Administration 2005).

3.1.2 State

Illinois state law does not require additional transportation environmental analysis to be performed for proposed projects subject to NEPA.

3.1.3 Local

The City of Chicago, Cook County, and the Village of Calumet Park do not require additional transportation environmental analyses to be performed for proposed projects subject to NEPA. The following local resources were used to understand the regional and local transportation network near the project area.

The CMAP is the planning organization for the Chicago region. CMAP has prepared the *GO TO 2040* Regional Plan (2010) that provides strategies for the regional transportation network. In addition, the City of Chicago and Cook County have developed their own strategies and planning activities for their transportation network.

3.2 Impact Analysis Thresholds

The transportation analysis included both quantitative and qualitative analysis of impacts based on a future baseline year of 2030. The traffic analysis also included quantitative analysis of impacts based on a future construction year of 2026. Where quantitative analyses were performed, accepted impact analysis thresholds were developed with CTA, Chicago Department of Transportation (CDOT), Illinois Department of Transportation (IDOT), and Cook County Highway Department (CCHD). The thresholds were used to establish the level of impact. Thresholds for qualitative analysis were determined based on professional judgment, with potential impacts being generally evaluated at three levels: low, moderate, and high.

3.2.1 Public Transportation

For the purpose of this EIS, a public transportation impact (rail or bus service) would be adverse if it would result in negative changes associated with the following:

- Geographic areas of service and routing
- Travel time
- Frequency and hours of service
- Transit patronage and demand, including transit mode share
- Station/stop access and circulation
- Traffic around stations/stops

Impacts may be positive or negative in nature, and the amount of change would determine whether the impacts would be low, moderate, or high. The determination of low, moderate, or high impacts was based on professional judgment. Moderate to high negative impacts would be considered adverse and substantially adverse, respectively.

3.2.2 Traffic

For the purpose of this EIS, a traffic (passenger or freight vehicle) impact would be substantial (impacts may be positive or negative in nature) if it were to result in a degradation (following mitigation) in peak-hour LOS at any intersection within the API (defined in Section 3.3) which leads to:

- A change in traffic distribution and local circulation patterns
- A change in vehicle occupancy levels
- A change in road capacity
- A change in road traffic volumes

The LOS for roadway intersections typically ranges from A to F (Transportation Research Board 2010) and LOSs are defined for this EIS as follows:

- LOS A represents virtually free flow of traffic with no congestion or delay.
- LOS B represents stable traffic flow, but other vehicles in the flow are noticeable.
- LOS C represents stable flow, but marks the beginning of the range where individual vehicles become substantially affected by interactions with other vehicles in the traffic stream.
- LOS D represents high density of traffic but stable flow.
- LOS E represents operating conditions at or near capacity level. All speeds are reduced to a low but relatively uniform flow.
- LOS F represents a breakdown in the operating conditions resulting in substantial congestion and delay.

A change in intersection LOS (with mitigation) from LOS A, B, C, or D to LOS E or F would result in an adverse or substantially adverse impact, respectively. If an intersection operates with LOS E or F for the No Build Alternative and would remain LOS E or F with a build alternative, no impact results.

3.2.3 Freight Transportation

The freight transportation analysis included a qualitative discussion of impacts on freight rail traffic specific to the build alternatives that involve the UPRR and Canadian National (CN) Railroad ROWs. The qualitative analysis broadly discusses the potential impacts and summarizes the coordination activities conducted with UPRR and CN.

3.2.4 Bicycle

For the purpose of this EIS, a bicycle impact would be adverse if it were to result in a disruption of existing or planned bicycle pathways or bicycle parking facilities.

3.2.5 Pedestrians

For the purpose of this EIS, a pedestrian impact would be adverse if it were to result in the following:

- Disruption of existing or planned pedestrian pathway
- Limited pedestrian access to proposed station entrances
- Existence of non-ADA (Americans with Disabilities Act) compliant pedestrian pathways to proposed station entrances

3.2.6 Parking

Potential parking impacts include changes in parking supply as a result of transit facility construction/service expansion, addition of park & ride facilities, and removal of existing parking spaces. Recent criteria regarding parking impacts were not available; however, guidance regarding parking impacts is provided in the United States Department of Transportation, Urban Mass Transportation Administration (now FTA) Circular C 5620.1 "Guidelines for Preparing Environmental Assessments," dated October 16, 1979. The FTA circular was used as guidance for determining the potential for impacts and the intensity of those impacts. For the purpose of this EIS, a parking impact would be adverse if it were to result in the following:

- Reduction in parking spaces by 10 to 50 spaces. (A reduction by 50 or more parking spaces would be a substantially adverse impact.)
- Substantial reduction in accommodation for future programs requiring parking spaces, such as car sharing.
- Reduction in frequently used existing transit parking and park & ride capacity.
- Inadequate parking capacity for proposed transit service.

3.3 Area of Potential Impact

The project area used in the Alternatives Analysis is situated 11 miles south of the downtown Chicago (commonly referred to as the "Loop") and encompasses approximately 20 square miles. The boundaries of the project area are 95th Street on the north, Ashland Avenue on the west, Stony Island Avenue on the east, and the Calumet-Sag Channel/Little Calumet River and 134th Street on the south. The I-57 Expressway and I-94 Bishop Ford Freeway traverse the western and eastern edges of the project area, respectively. Lake Calumet is in the eastern portion of the project area. The Red Line currently terminates at the 95th Street Terminal. Figure 3-1 shows the API.

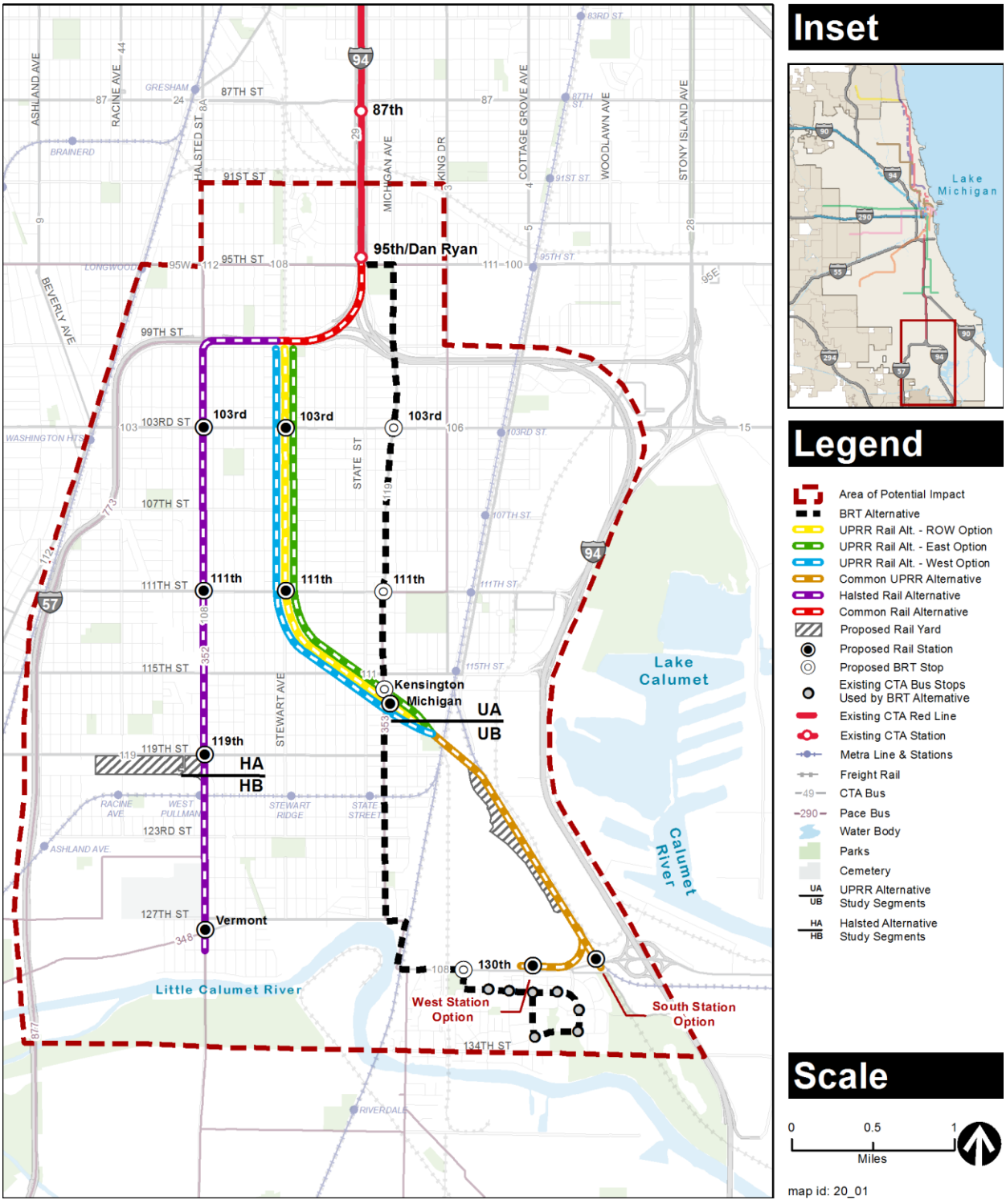


Figure 3-1: Area of Potential Impact

The API boundaries are as follows:

- On the north by 91st Street (four blocks north of the existing 95th Street Terminal);
- On the south by a varying boundary that includes Jackson Street/134th Street (four blocks south of both the UPRR Rail Alternative and Halsted Rail Alternative) station locations;
- On the east by a varying boundary that includes Martin Luther King Drive, Michigan Avenue, and I-94 (from the north to south);
- On the west by a varying boundary that includes Halsted Street, South Vincennes Avenue, and I-57 (from north to south).

The API interfaces with the CTA rail Red Line, Metra commuter rail lines, Pace bus routes, and numerous CTA bus routes. The project area also includes the 98th Street Yard and Shop, which is south of 95th Street and has a capacity of 234 rail cars.

The alternative alignments run through a number of neighborhoods in the southern section of the City of Chicago and the Village of Calumet Park. Community areas in the City of Chicago that may be affected by the improvements include Washington Heights, Morgan Park, Roseland, Pullman, West Pullman, and Riverdale.

3.4 Methods

Transportation data used in the analysis of transportation impacts was collected from the following state and local agencies:

- CTA
- CDOT
- CMAP
- CCHD
- IDOT
- Metra Commuter Rail
- Northern Indiana Commuter Transportation District (NICTD)
- Pace Suburban Bus Service
- Regional Transportation Authority
- UPRR

3.4.1 Public Transportation

A description of the existing conditions within the API was developed for the public transportation environment (rail and bus services) by compiling and reviewing CTA rail, CTA bus, Metra commuter rail, and Pace bus service data. The following public transportation data was compiled and reviewed for this purpose:

- Geographic areas of service and routes
- Travel time
- Frequency and hours of service
- Ridership levels
- Transit mode share
- Station/stop locations

Project horizon year (2030) ridership estimates were projected using the Chicago New Starts forecasting model, which was developed in coordination with CMAP. CTA developed bus service plans for each build alternative that realign existing bus services to serve each alternative.

3.4.2 Traffic

Seventy-six study intersections were identified for traffic analysis within the API, as listed in Table 3-1 and presented on Figure 3-2. Existing traffic count data from CDOT, CMAP, and IDOT along with new manual traffic counts were compiled to develop peak-hour turning movements to understand the existing traffic conditions within the project area, as shown on Figure 3-3. At several minor intersections, counts were not conducted. Volumes were estimated, per CDOT direction, using counts at adjacent intersections along with simple distribution assumptions. Intersections with estimated turning movement volumes are indicated on Figure 3-3. The following traffic data was compiled and reviewed for this purpose:

- Traffic distribution and local circulation patterns
- Vehicle occupancy levels
- Road capacity levels
- Road peak-hour traffic volumes
- Intersection lane geometry and traffic signal timing plans
- Planned roadway improvements

The above data was used to calculate intersection LOS, using Synchro 7 isolated intersection analysis. Peak-hour traffic volumes and lane geometry used for the intersection LOS analysis are included in Appendix A.

Table 3-1: Area of Potential Impact Study Intersections

Intersection ID	Intersection	Control Type	Jurisdiction	Freeway Ramp
1	95th Street and Wentworth Avenue	Signalized	IDOT/CDOT	No
2	95th Street and Lafayette Avenue	Signalized	IDOT/CDOT	Yes
3	95th Street and State Street	Signalized	IDOT/CDOT	Yes
4	95th Street and Michigan Avenue	Signalized	IDOT/CDOT	No
5	98th Place and Halsted Street	Signalized	IDOT/CDOT	Yes
6	99th Street and Halsted Street	Signalized	IDOT/CDOT	Yes
7	98th Place and Wentworth Avenue	Signalized	IDOT/CDOT	Yes
8	99th Street and Wentworth Avenue	Signalized	IDOT/CDOT	No
9	99th Street and State Street	Signalized	CDOT	No
10	99th Street and Michigan Avenue	Signalized	IDOT/CDOT	Yes
11	99th Place and Martin Luther King Drive	Signalized	IDOT/CCHD	No
12	100th Street and Martin Luther King Drive	Signalized	CCHD/CDOT	No
13	100th Street and Cottage Grove Avenue	Unsignalized	CCHD/CDOT	No
14	103rd Street and Vincennes Avenue and Beverly Avenue	Signalized	CCHD/CDOT	No
15	103rd Street and Morgan Street	Signalized	CCHD/CDOT	No
16	103rd Street and Halsted Street	Signalized	IDOT/CCHD	No
17	103rd Street and Normal Avenue	Signalized	CCHD/CDOT	No
18	103rd Street and Wentworth Avenue	Signalized	CCHD/CDOT	No

Intersection ID	Intersection	Control Type	Jurisdiction	Freeway Ramp
19	103rd Street and State Street	Signalized	CCHD/CDOT	No
20	103rd Street and Michigan Avenue	Signalized	CCHD/CDOT	No
21	103rd Street and Martin Luther King Drive	Signalized	CCHD/CDOT	No
22	103rd Street and Cottage Grove Avenue	Signalized	CCHD/CDOT	No
23	103rd Street and Woodlawn Avenue	Signalized	IDOT/CDOT	No
24	107th Street and Halsted Street	Signalized	IDOT/CDOT	No
25	107th Street and Wentworth Avenue	Signalized	CDOT	No
26	107th Street and State Street	Signalized	CDOT	No
27	107th Street and Michigan Avenue	Signalized	CDOT	No
28	107th Street and Martin Luther King Drive	Signalized	CCHD/CDOT	No
29	107th Street and Cottage Grove Avenue	Signalized	CCHD/CDOT	No
30	111th Street and Marshfield Avenue	Signalized	IDOT/CDOT	Yes
31	111th Street and Hamlet Avenue	Signalized	IDOT	Yes
32	112th Place and Marshfield Avenue	Signalized	IDOT/CDOT	Yes
33	112th Place and Hamlet Avenue	Signalized	IDOT/CDOT	Yes
34	111th Street and Halsted Street	Signalized	IDOT/CCHD	No
35	111th Street and Normal Avenue	Signalized	CCHD/CDOT	No
36	111th Street and Wentworth Avenue	Signalized	CCHD/CDOT	No
37	111th Street and State Street	Signalized	CCHD/CDOT	No
38	111th Street and Michigan Avenue	Signalized	CCHD/CDOT	No
39	111th Street and Indiana Avenue	Signalized	CCHD/CDOT	No

Intersection ID	Intersection	Control Type	Jurisdiction	Freeway Ramp
40	111th Street and Martin Luther King Drive	Signalized	CCHD	No
41	111th Street and Cottage Grove Avenue	Signalized	IDOT/CCHD	No
42a	111th Street and Langley Avenue	Signalized	CCHD	No
42b	111th Street and Ellis Avenue	Signalized	CCHD	No
43	111th Street and Doty Avenue	Signalized	IDOT/CDOT	No
44	111th Street and Bishop Ford eastbound Ramps	Unsignalized	IDOT	Yes
45	111th Street and Bishop Ford westbound Ramps	Unsignalized	IDOT	Yes
46	115th Street and Marshfield Avenue	Signalized	CDOT	No
47	115th Street and Ashland Avenue	Signalized	IDOT/CDOT	No
48	115th Street and Racine Avenue	Signalized	IDOT/CDOT	No
49	115th Street and Halsted Street	Signalized	IDOT	No
50	115th Street and Wentworth Avenue	Signalized	CDOT	No
51	115th Street and State Street	Signalized	CCHD/CDOT	No
52	115th Street and Michigan Avenue	Signalized	CCHD/CDOT	No
53	115th Street and Indiana Avenue	Signalized	CCHD/CDOT	No
54	115th Street and Martin Luther King Drive	Unsignalized	CCHD	No
55a	115th Street and Cottage Grove Avenue	Signalized	CCHD/CDOT	No
55b	115th Street and Cottage Grove Avenue East	Signalized	CCHD/CDOT	No
56	115th Street and Bishop Ford Freeway eastbound Ramps	Unsignalized	IDOT	Yes
57	115th Street and Bishop Ford Freeway westbound Ramps	Unsignalized	IDOT	Yes

Intersection ID	Intersection	Control Type	Jurisdiction	Freeway Ramp
58	119th Street and Marshfield Avenue	Signalized	IDOT/CDOT	Yes
59	119th Street and Ashland Avenue	Signalized	IDOT/CDOT	Yes
60	119th Street and Halsted Street	Signalized	IDOT/CDOT	No
61	119th Street and Wentworth Avenue	Signalized	CDOT	No
62	119th Street and State Street	Signalized	IDOT/CCHD/ CDOT	No
63	119th Street and Michigan Avenue	Signalized	CDOT	No
64	127th Street and Paulina Street	Signalized	IDOT	Yes
65	127th Street and Marshfield Avenue	Signalized	IDOT	Yes
66	127th Street and Ashland Avenue	Signalized	IDOT	No
67	Ashland Avenue and Vermont Avenue	Signalized	IDOT	No
68	127th Street and Halsted Street	Signalized	IDOT	No
69	Vermont Avenue and Halsted Street	Signalized	IDOT	No
70	127th Street and Vermont Avenue and Wallace Street	Signalized	IDOT/CDOT	No
71	127th Street and State Street	Signalized	IDOT	No
72	127th Street and Michigan Avenue	Signalized	IDOT/CDOT	No
73	130th Street and Indiana Avenue	Signalized	IDOT	No
74	130th Street and Ellis Avenue	Signalized	IDOT/CDOT	No

Note: IDOT - Illinois Department of Transportation; CCHD - Cook County Highway Department; CDOT - Chicago Department of Transportation

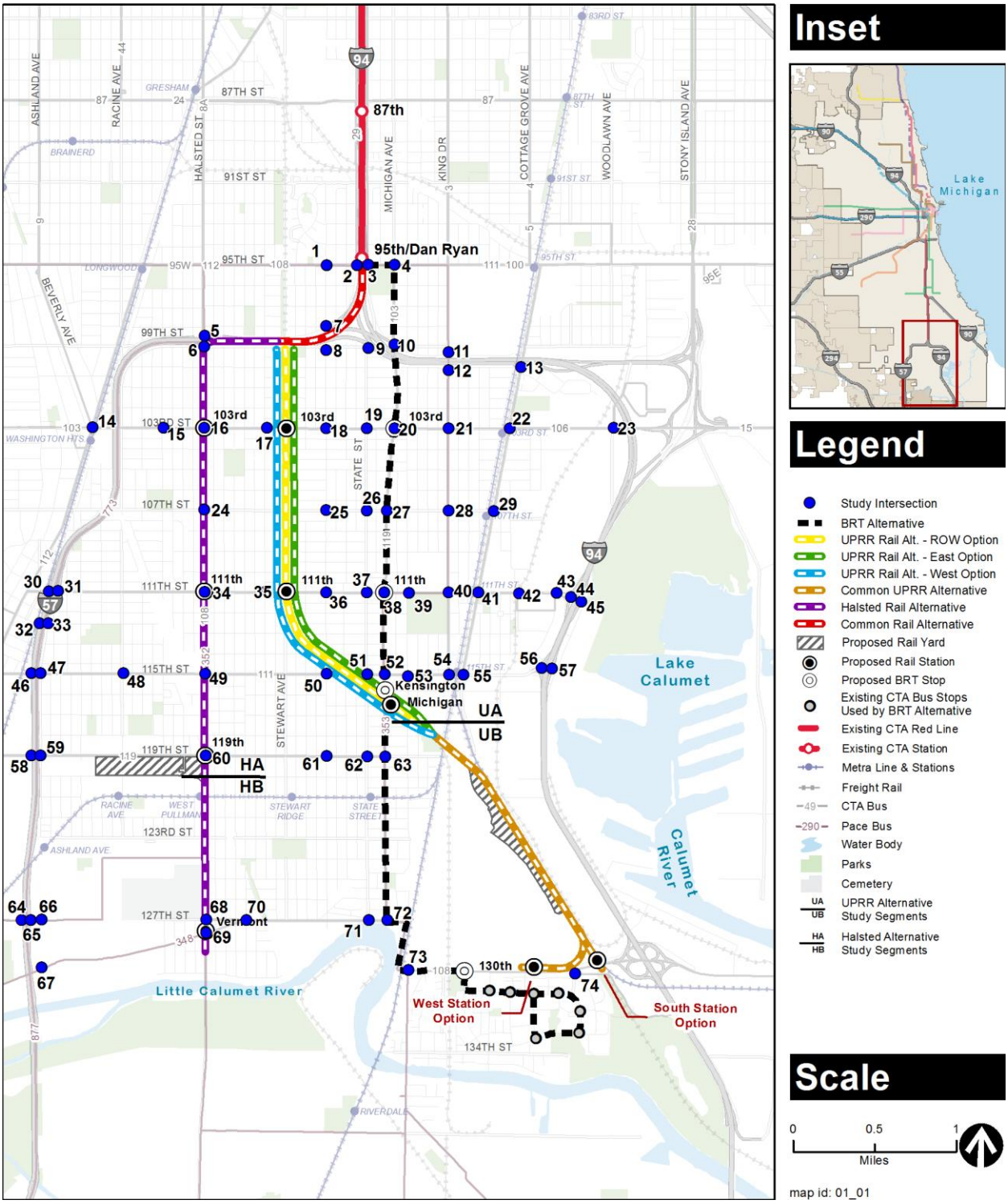


Figure 3-2: Area of Potential Impact Study Intersections

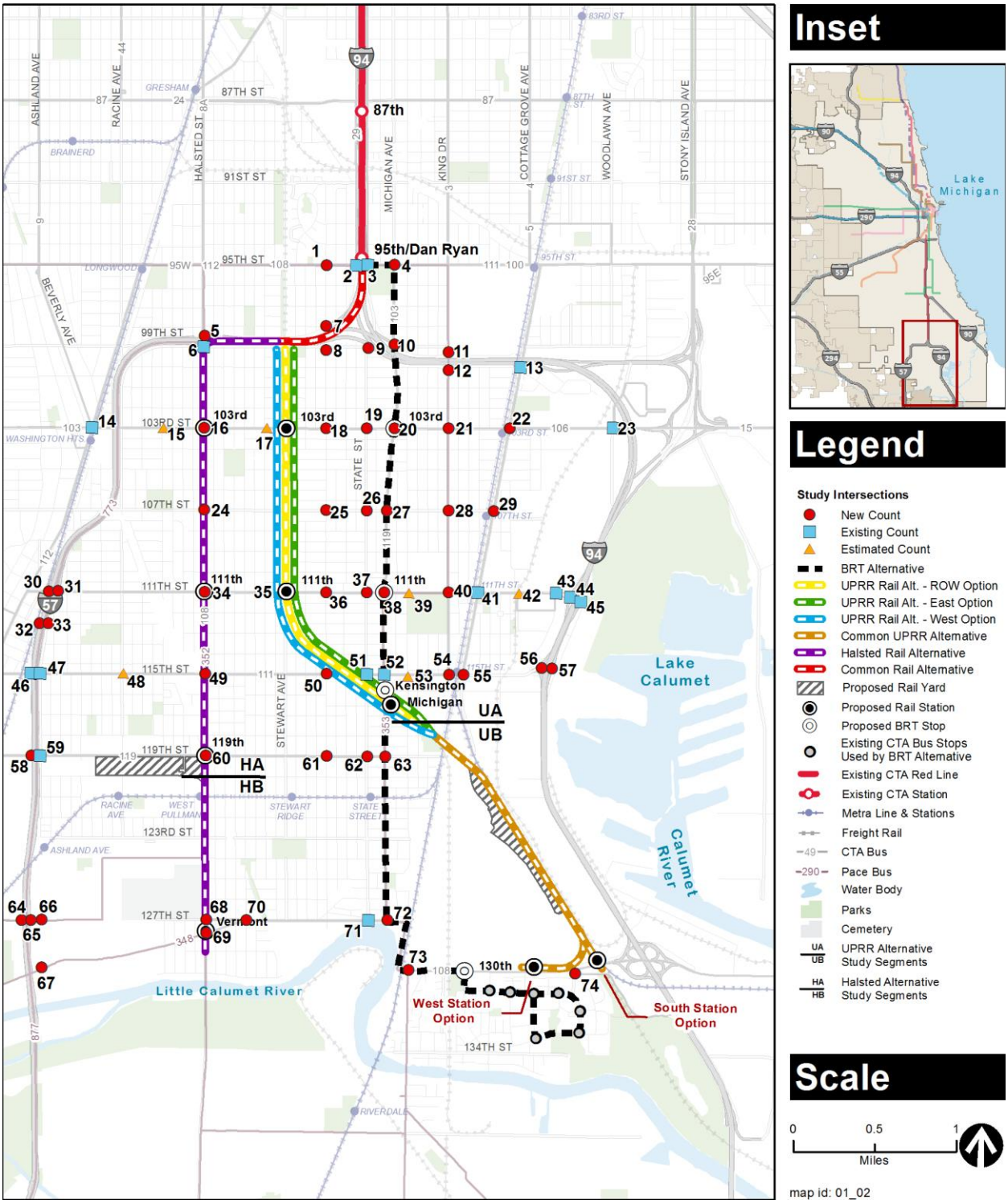


Figure 3-3: Area of Potential Impact Study Intersection Traffic Counts

One future base year model run was performed to simulate project horizon year (2030) conditions without the project (i.e., the No Build Alternative). Data from CMAP's 2030 regional travel demand model was used to develop "no-project" intersection-level traffic projections. These "no-project" traffic projections accounted for the background growth in traffic due to additional regional and subregional land use development and population growth. To simulate project construction year (2026) conditions without the project, background traffic growth was interpolated between existing year (2012) and horizon year (2030) No Build Alternative conditions. The No Build Alternative traffic projections served as the baseline for evaluating the future "with project," (i.e., the build alternatives). The future build alternative conditions included the introduction of park & ride automobile trips to the proposed stations and an overall decrease in project area traffic as a result of trip diversions to transit. Existing and planned lane geometry and traffic signal timing plans were used for the analysis of No Build Alternative and build alternative conditions.

Using Institute of Transportation Engineers trip generation rates (Volume 2, Transit Station with Parking) and trip distribution assumptions from the RLE Alternatives Analysis Traffic Impacts Reports (CTA 2009b and CTA 2009c), the build alternative-generated trips were manually added to the No Build Alternative traffic projections to develop the build alternative traffic volumes. The build alternative intersection LOS analysis was conducted for the study intersections for each alternative. Appendix A includes the build alternative trip generation and trip distribution assumptions used for the intersection LOS analysis.

3.4.3 Freight Transportation

Coordination was conducted with the UPRR regarding the build alternatives that would directly affect the UPRR ROW. Through the coordination process, potential impacts were identified and are qualitatively discussed and presented in this technical memorandum.

3.4.4 Bicycle Facilities

A description of the existing conditions (the affected environment) for bicycles was developed by reviewing the existing and proposed bicycle facilities for the City of Chicago and the *Chicago Streets for Cycling Plan 2020* (City of Chicago 2012c). IDOT's 2012 bicycle map was also used to develop the description of existing conditions for bicycle facilities.

The existing and proposed bicycle facilities were plotted on maps showing the build alternatives. The relationship of the bicycle facilities to the proposed stations in each build alternative was evaluated. The proposed CTA stations would include bicycle parking. The analysis also included an assessment of whether the proposed station locations would conform to the objectives of the bicycle plans for an area within a ½-mile radius of the stations.

3.4.5 Pedestrians

A description of the existing conditions (the affected environment) for pedestrians was developed by compiling and reviewing data from aerial images, Chicago GIS data, and the *Chicago Pedestrian Plan (*City of Chicago 2012b). Pedestrian facilities within immediate area of the

proposed station locations were reviewed for ADA accessibility and conformity to transit station planning.

3.4.6 Parking

A description of the existing parking conditions (the affected environment) was developed through field observations, community resources, and aerial imagery. Using the No Build Alternative as the baseline, an analysis was conducted to determine the extent to which the proposed alternatives would affect on-street parking and parking facilities (off-street) through construction limit encroachment or displacement.

Parking capacity near each of the proposed stations and at the park & ride facilities was reviewed for potential impacts on the surrounding neighborhoods.

Section 4
Affected Environment

This section describes the existing conditions of the transportation facilities within the API. The API includes transit facilities, including rail and bus, expressways, regional arterials, truck routes, intermodal connectors, secondary arterials, local streets, and bicycle and pedestrian facilities. Expressways within the API include I-57 and I-94. Halsted Street is the only north-south arterial road that crosses the Calumet-Sag Channel.

The CTA Red Line service currently ends at the 95th Street Terminal. Customers accessing the station by bus experience measurable delays resulting from poor performance of the roadway network. Difficulty reaching the station by alternative modes of transportation isolates residents and results in lengthy travel times by both auto and transit to jobs north of 95th Street, including the major employment centers in downtown Chicago. According to the American Community Survey the average travel time to work for residents within the project area is 39 minutes. The average commute time in the Chicago region[1] is 32 minutes. The existing travel time from 130th Street to the 95th Street Terminal is 33 minutes and 32 minutes from the 95th Street Terminal to Clark/Division (AECOM 2009). The limited transit services in the project area and complex transfers to reach the 95th Street Terminal make commute times to downtown Chicago area more than an hour for some residents. Many of the residents, 10 percent in 2010, do not own a car and depend on transit for mobility (American Community Survey 2010). The home-based work transit mode share was 25 percent in 2010 (American Community Survey 2010).

Substantial expressway congestion occurs within and surrounding the API. The expressway network was at or over capacity during the morning peak periods in 2010 and congestion is expected to worsen by 2030. (See Figure 4-3 and Figure 4-4.) Arterial street reliability is compromised by delays from at-grade freight railroad crossings, affecting travel times to the 95th Street Terminal. Short traffic delays are experienced due to the Metra Electric (ME) District commuter trains that operate at-grade and cross several arterials in the API.

The following sections provide additional details on the existing conditions for each transportation mode within the API.

4.1 Public Transportation

The existing public transportation systems in use within the API are CTA rail service, CTA bus routes, Pace bus routes, and commuter rail service provided by Metra. The following public transportation services are within the API:

[1] The Chicago region is the seven county area for which CMAP provides regional planning. The counties include Cook, DuPage, Lake, Kane, Kendall, McHenry, and Will counties.

- CTA Red Line
- CTA bus routes: #3, #8A, #9, #28, #29, #34, #95E, #95W, #100, #103, #106, #108, #111, #112, #115, #119, #N5
- Pace bus routes: #348, #352, #353, #359, #381
- Metra: ME District Mainline, ME District Blue Island Branch, RI District Mainline

Figure 4-1 shows the existing bus routes provided by CTA and Pace. The Metra routes and station locations are also shown on Figure 4-1. The following sections provide a more detailed description of the existing public transportation services.

NICTD trains pass through the API but NICTD has no stops within the API.

4.1.1 CTA Rail Service

CTA currently provides rail service within the northern boundary of the API. The Red Line 95th Street Terminal is the only CTA rail station within the API. The 95th Street Terminal is the southernmost CTA rail station. A total of 18 bus routes serve the terminal, many of which serve residents living within the boundaries of the API. The 2012 average weekday ridership for this station was approximately 13,390 based on the *October 2012 Monthly Ridership Report* (CTA 2012). Travel time from 95th Street Terminal to Clark/Division is 33 minutes. The frequency of service during peak periods is 5 minutes, and service is provided around the clock.

4.1.2 CTA and Pace Bus Services

CTA and Pace bus services are provided on east/west and north/south thoroughfares in the API, with 16 CTA and 6 Pace bus routes operating within the API (not including night bus routes). Of those bus routes, 18 serve the 95th Street Terminal on the Red Line. Table 4-1 provides a summary of the existing bus routes within the API. Table 4-1 also indicates which routes serve the 95th Street Terminal. Two columns of ridership data are presented: average weekday for the calendar year 2012 and maximum average monthly weekday ridership for the 12 months from May, 2012 to April, 2013. (Starting in May, 2013, the Red Line Reconstruction project changed ridership patterns into the 95th Street Terminal.) In December, 2012, CTA split the #111 into two routes: the #111 111th/King Drive and the #115 Pullman/115th, both of which serve the 95th Street Terminal. Ridership data for these two routes is only provided starting in January, 2013, the first full month following the route split. Table 4-2 provides weekday hours of service and headways (time between buses) in peak hours for CTA bus service.

Table 4-1: Existing Bus Route Information within the Area of Potential Impact

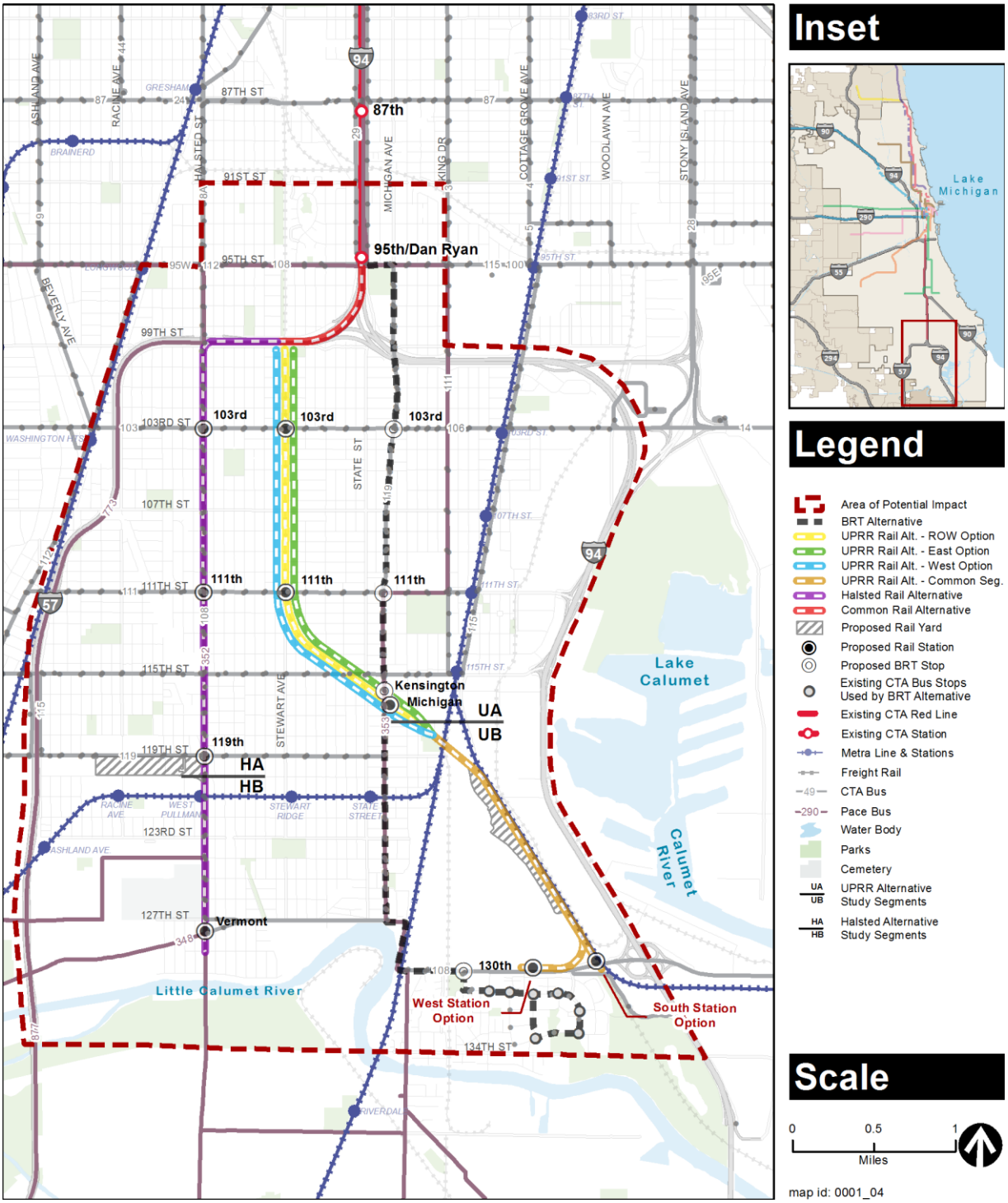
Route Number and Name	2012 Average Weekday Ridership	Maximum Monthly Average Weekday Ridership (May 2012 to April 2013)	Serves 95th Street Terminal
#3 King Drive	22,418	24,205	N
#8A South Halsted	4,042	4,416	N
#9 Ashland	31,565	33,689	Y
#28 Stony Island	5,251	8,290	N
#29 State	15,212	16,341	Y
#34 South Michigan	6,198	6,648	Y
#95E 93rd/95th	4,904	5,489	Y
#95W West 95th	4,730	5,037	Y
#100 Jeffery Manor Express	950	1,195	Y
#103 West 103rd	3,484	3,920	Y
#106 East 103rd	2,259	2,883	Y
#108 Halsted/95th	2,050	2,373	Y
#111 111th/King Drive		3,847	Y
#112 Vincennes/111th	3,008	3,441	Y
#115 Pullman/115th		3,765	Y
#119 Michigan/119th	5,928	6,388	Y
#348 Harvey - Riverdale - Blue Island	368	480	N
#352 Halsted	6,294	6,913	Y
#353 95th - Riverdale-Homewood	2,874	3,193	Y
#359 Robbins/South Kedzie Avenue	1,590	1,778	Y
#381 95th Street	3,464	4,189	Y
#395 CTA 95th – UPS	442	506	Y

Notes:
- Only months since January 2013 are shown for #111 and #115 due to route change in December 2012.
- Maximum monthly average weekday ridership is based on the 12-month period from May 2012 to April 2013. In May 2013, Red Line (Dan Ryan) reconstruction changed ridership patterns during construction.
- #9 Ashland serves the 95th Street Terminal only with the Night Owl Service.
- Night service route #N5 is not included in the above table.
- Service to the 95th Street Terminal is based on route maps current as of July 31, 2013.
- Source: May 2012 to April 2013 CTA Ridership Reports and RTAMS Pace Ridership dataset.

Table 4-2: Existing CTA Bus Service Hours and Peak Headways

Route Number and Name	Weekday Hours of Service	Headway in Peak Hours (minutes)
#3 King Drive	4:45a-11:05p	3-4
#8A South Halsted	6:00a-8:40p	5-10
#9 Ashland	24 hours	6-10
#28 Stony Island	5:40a-10:10p	6-13
#29 State	4:00a-12:30a	9-10
#34 South Michigan	24 hours	12
#95E 93rd/95th	4:50a-12:10a	10
#95W West 95th	4:30a-12:25a	18-20
#100 Jeffery Manor Express	Peak Periods Only	16-20
#103 West 103rd	4:35a-11:20p	15
#106 East 103rd	4:45a-10:30p	14-20
#108 Halsted/95th	4:10a-12:55a	11
#111 111th/King Drive	4:35a-11:05p	10-15
#112 Vincennes/111th	4:30a-10:20p	10-15
#115 Pullman/115th	4:25a-11:15p	11-14
#119 Michigan/119th	4:00a-1:00a	12

Notes:
- Service to the 95th Street Terminal is based on route maps current as of July 31, 2013.



Inset

Legend

- Area of Potential Impact
- BRT Alternative
- UPRR Rail Alt. - ROW Option
- UPRR Rail Alt. - East Option
- UPRR Rail Alt. - West Option
- UPRR Rail Alt. - Common Seg.
- Halsted Rail Alternative
- Common Rail Alternative
- Proposed Rail Yard
- Proposed Rail Station
- Proposed BRT Stop
- Existing CTA Bus Stops Used by BRT Alternative
- Existing CTA Red Line
- Existing CTA Station
- Metra Line & Stations
- Freight Rail
- CTA Bus
- Pace Bus
- Water Body
- Parks
- Cemetery
- UA / UB — UPRR Alternative Study Segments
- HA / HB — Halsted Alternative Study Segments

Scale

0 0.5 1 Miles

map id: 0001_04

Figure 4-1: Existing Public Transportation Services

4.1.2.1 Bus Rapid Transit Alternative

The existing bus services in the vicinity of the proposed stops of the BRT Alternative are provided below.

103rd Street Stop

Bus routes #34, #103, #106, and #119 currently stop at 103rd Street and Michigan Avenue. The existing stops are at the northeast corner of the intersection for the northbound direction and at the northwest corner of the intersection for the southbound direction. Both locations do not have any existing bus shelters. The ME District station, 103rd/Rosemoor Park & Ride, is a few blocks east of Michigan Avenue.

111th Street Stop

Bus routes #34, #111, and #119 stop at 111th Street. The bus route has an existing stop at the southwest corner of the intersection of 111th Street and Michigan Avenue in the eastbound direction and the northwest corner of the intersection in the westbound direction. There are no existing bus shelters.

Kensington Avenue Stop

Bus routes #34 and #119 stop at Kensington Avenue and Michigan Avenue. The existing stops are at the southeast corner of Kensington Avenue and Michigan Avenue in the northbound direction and on the west side of Michigan Avenue in the southbound direction. There is an existing bus shelter on the west side of Michigan Avenue but none in the northbound direction.

130th Street Stop

CTA Bus route #34 operates from the 95th Street Terminal to 130th Street, looping around the Altgeld Gardens neighborhood. This bus serves Harlan High School, Roseland Hospital, Carver Military Academy, and residents of the Altgeld Gardens neighborhood. There are no bus shelters at the existing bus stop locations.

4.1.2.2 Union Pacific Railroad Rail Alternative

The existing bus services in the vicinity of the proposed station areas for all options of the UPRR Alternative are provided below. Due to the proximity of UPRR Alternative option alignments, the existing bus services would be the same for each option. Since there are no existing bus stops at the at-grade UPRR crossings, there are no bus shelters at the station locations for this alternative.

103rd Street Station

Currently, CTA bus route #103 accommodates passengers from Pulaski Road to the 95th Street Terminal. This bus route operates west of Michigan Avenue and serves Harlan High School, Julian High School, St. Xavier University, Mother McAuley High School and Brother Rice High School. This route also crosses the Metra Rock Island (RI) District line at two stations: 103rd Street - Washington Heights and 103rd Street – Beverly Hills. The RI District line is on the edge of the

API. There are existing bus stops at 103rd Street and Michigan Avenue. The northbound bus stops at the northeast corner of the intersection and the southbound bus stops at the northwest corner of the intersection. CTA route #106 provides service west of Michigan Avenue on 103rd Street from 95th Street Terminal to Stony Island Avenue. This bus route serves Olive Harvey College, Corliss High School, and Harlan High School. CTA route #106 also crosses near the 103rd/Rosemoor ME District station.

111th Street Station

The 111th/King Drive CTA route #111 provides service from 95th Street Terminal to 111th Street. This serves Gwendolyn Brooks High School. The bus route has an existing stop at the southwest corner of the intersection of 111th Street and Michigan Avenue in the eastbound direction and the northwest corner of the intersection in the westbound direction.

Michigan Avenue Station

The CTA route #111 has an existing stop at the southwest corner of the intersection of 115th Street and Michigan Avenue in the eastbound direction and the northeast corner of the intersection in the westbound direction.

CTA route #119 operates from Western Avenue to Michigan Avenue on 119th Street, then Michigan Avenue to 95th Street Terminal. This route serves Roseland Hospital and Harlan High School. The existing bus stops at 119th Street and Michigan Avenue are at the northeast corner for the northbound direction and at the northwest corner for the southbound direction. The route also has a stop near the RI District 119th Street station. Pace bus route #353 provides additional service along Michigan Avenue between 111th and 127th Streets.

130th Street Station

CTA Bus route #34 operates from the 95th Street Terminal to 130th Street, looping around the Altgeld Gardens neighborhood. This bus serves Harlan High School, Roseland Hospital, Carver Military Academy, and residents of the Altgeld Gardens neighborhood. There are no bus shelters at the existing bus stop locations.

4.1.2.3 Halsted Rail Alternative

CTA route #8A runs north/south on Halsted Street from 95th Street Terminal to 127th Street and Vermont Street. Existing bus stops along Halsted Street include 103rd Street, 111th Street, 115th Street, 119th Street and Vermont Avenue.

CTA route #108 runs north/south on Halsted Street from the 95th Street Terminal to 127th Street and then continues east on 127th Street. This route is similar to the #8A route and has bus stops at the same locations as listed above for route #8A.

103rd Street Station

Currently, CTA bus route #103 accommodates passengers from Pulaski Road to the 95th Street Terminal. This bus route operates west of Michigan Avenue and serves Harlan High School, Julian High School, St. Xavier University, Mother McAuley High School, and Brother Rice High School. 103rd Street and Halsted bus stop locations are at the southwest corner of the intersection for the eastbound direction, and the westbound direction bus stop locations are at the northwest corner of the intersection. These bus stop locations do not have bus shelters.

111th Street Station

The 111th/King Drive CTA route #111 provides service from the 95th Street Terminal to 111th Street. This route serves Gwendolyn Brooks High School. The bus route has an existing bus shelter at the southeast corner of the intersection of 111th Street and Halsted Street for the eastbound direction and the northeast corner of the intersection for the westbound direction. These bus stops have shelters.

119th Street Station

CTA route #119 operates from Western Avenue to Michigan Avenue on 119th Street, then Michigan Avenue to the 95th Street Terminal. This route serves Roseland Hospital and Harlan High School. The existing bus stops at 119th Street and Halsted Street are at the northwest corner of the intersection for the westbound direction and at the southwest corner of the intersection for the eastbound direction. The eastbound #119 stop and southbound #8A stop have shelters.

The Pace bus route #352 is a north/south bus route from the 95th Street Terminal to Pace Chicago Heights Transportation Center. The route serves St. James Hospital, Prairie State College, and the Illinois Department of Human Services.

Vermont Avenue Station

Pace bus route #348 is an east/west route that stops at Vermont Street and Halsted Street. These stops do not have shelters.

4.1.3 Commuter Rail Service

Metra provides commuter rail service within the API. The NICTD South Shore line used to provide limited commuter rail service to the Kensington/115th Street station until early 2012 when service was discontinued at this station. Metra commuter rail service in the API includes the ME District Mainline, the ME District Blue Island Branch, and the RI District Mainline. There are a total of eleven commuter rail stations within the API. Figure 4-1 shows the location of the stations along the ME District and RI District lines. Stations within the API are listed below:

ME District Mainline

- 103rd Street (Rosemoor)
- 107th Street

- 111th Street (Pullman)
- Kensington/115th Street

ME District Blue Island Branch

- State Street
- Stewart Ridge
- West Pullman
- Racine Avenue
- Ashland Avenue

RI District Mainline

- 95th Street/Longwood
- 103rd Street/Washington Heights

The Kensington/115th Street station provides connecting service to CTA route #111 and Pace route #353, with park & ride facilities. The Kensington/115th Street station is served by 19 inbound trains between 6:00 AM and 9:00 AM on a typical weekday. The other ME District mainline stations within the API are served by four to five inbound trains during the morning peak period. The five stations in the API on the Blue Island Branch of the ME District are served by six inbound trains in the morning peak period (between 6:00 and 9:00 AM). The two stations in the API on the RI District Mainline are served by three inbound trains in the morning peak period. Approximately two-thirds of the Metra stations have available parking. Table 4-3 presents a summary of the 2006 daily boardings and the 2012 parking statistics at the Metra stations within the API.

Table 4-3: Metra Boardings and Parking by Station

Line/Station	2006 Daily Boardings	Parking Available?	Spaces Available (2012)	Parking Utilization Rate (2012)
Metra Electric District Mainline				
103rd Street (Rosemoor)	70	Y	38	5%
107th Street	34	N	-	-
111th Street (Pullman)	27	N	-	-
Kensington/115th Street	1,577	Y	402	90%
Metra Electric District Blue Island Branch				
State Street	85	N	-	-
Stewart Ridge	61	N	-	-
West Pullman	24	Y	27	0%
Racine Avenue	53	Y	29	24%
Ashland Avenue	165	Y	90	52%
Metra Rock Island Mainline				
95th Street/Longwood	147	Y	104	51%
103rd Street/ Washington Heights	249*	Y	267	30%

Source: Regional Transportation Authority Mapping & Statistics
*2002 Boardings. Boardings for 2006 at 103rd Street/Washington Heights were not available.

4.2 Traffic

There are numerous Interstate, regional, and local roadways that provide multiple parallel north/south and east/west routes for automobile travel within the API, including the following:

East/West
- 95th Street
- 99th Street
- 103rd Street
- 107th Street
- 111th Street
- 115th Street
- 119th Street
- 127th Street
- 130th Street

North/South
- Interstate 57
- Halsted Street
- Wentworth Avenue
- State Street
- Michigan Avenue
- Indiana Avenue
- Martin Luther King Drive
- Cottage Grove Avenue
- Interstate 94 (Dan Ryan Expressway/Bishop Ford Freeway)

Table 3-1 identifies whether an intersection is signalized or unsignalized and indicates what agency has jurisdiction over the intersection. Figure 4-2 shows the signalized and unsignalized intersections within the project area. The existing traffic data can be found in Appendix A, Existing Conditions. Existing intersection lane geometry and traffic volumes (2012) for the intersections are on pages A-1 through A-6. The existing traffic counts are on pages A-7 through A-415. The capacity analysis for each intersection is on pages A-416 through A-571.

Table 4-4 presents a summary of the existing (2012) conditions. Under existing (2012) conditions, most of the study intersections within the API operate at LOS "D" or better in both the AM and PM peak hours. Under existing (2012) conditions, the following intersections operate at LOS "E" or "F" in either or both the AM and PM peak hours:

- 98th Place and Halsted Street - AM LOS = F; PM LOS = F
- 103rd Street and Vincennes Avenue and Beverly Avenue - PM LOS = F
- 103rd Street and Halsted Street - AM LOS = E
- 107th Street and Halsted Street - AM LOS = F
- 115th Street and Martin Luther King Drive - PM LOS = F
- 119th Street and Ashland Avenue - PM LOS = F

For a graphic depiction of existing congestion within the API, refer to Figure 4-3 and Figure 4-4 which show estimated congestion based on volume-to-capacity ratios for 2010 and 2030.

Table 4-4: Existing (2012) Intersection Level of Service

ID	Intersection	Control Type	AM Peak-Hour LOS	PM Peak-Hour LOS
1	95th Street and Wentworth Avenue	Signalized	B	B
2	95th Street and Lafayette Avenue	Signalized	D	D
3	95th Street and State Street	Signalized	C	C
4	95th Street and Michigan Avenue	Signalized	B	B
5	98th Place and Halsted Street	Signalized	**F**	**F**
6	99th Street and Halsted Street	Signalized	C	D
7	98th Place and Wentworth Avenue	Signalized	B	B
8	99th Street and Wentworth Avenue	Signalized	B	B
9	99th Street and State Street	Signalized	A	B
10	99th Street and Michigan Avenue	Signalized	B	B
11	99th Place and Martin Luther King Drive	Signalized	B	B
12	100th Street and Martin Luther King Drive	Signalized	B	A
13	100th Street and Cottage Grove Avenue	Unsignalized	A	B
14	103rd Street and Vincennes Avenue and Beverly Avenue	Signalized	D	**F**
15	103rd Street and Morgan Street	Signalized	B	B
16	103rd Street and Halsted Street	Signalized	**E**	D
17	103rd Street and Normal Avenue	Signalized	B	B
18	103rd Street and Wentworth Avenue	Signalized	B	B

ID	Intersection	Control Type	AM Peak-Hour LOS	PM Peak-Hour LOS
19	103rd Street and State Street	Signalized	B	B
20	103rd Street and Michigan Avenue	Signalized	B	B
21	103rd Street and Martin Luther King Drive	Signalized	C	C
22	103rd Street and Cottage Grove Avenue	Signalized	B	B
23	103rd Street and Woodlawn Avenue	Signalized	A	A
24	107th Street and Halsted Street	Signalized	**F**	C
25	107th Street and Wentworth Avenue	Signalized	B	B
26	107th Street and State Street	Signalized	A	A
27	107th Street and Michigan Avenue	Signalized	B	B
28	107th Street and Martin Luther King Drive	Signalized	B	B
29	107th Street and Cottage Grove Avenue	Signalized	B	B
30	111th Street and Marshfield Avenue	Signalized	C	C
31	111th Street and Hamlet Avenue	Signalized	C	C
32	112th Place and Marshfield Avenue	Signalized	C	C
33	112th Place and Hamlet Avenue	Signalized	D	C
34	111th Street and Halsted Street	Signalized	C	C
35	111th Street and Normal Avenue	Signalized	A	A
36	111th Street and Wentworth Avenue	Signalized	A	A
37	111th Street and State Street	Signalized	A	B
38	111th Street and Michigan Avenue	Signalized	B	B
39	111th Street and Indiana Avenue	Signalized	B	B
40	111th Street and Martin Luther King Drive	Signalized	B	A
41	111th Street and Cottage Grove Avenue	Signalized	B	C
42a	111th Street and Langley Avenue	Signalized	B	C
42b	111th Street and Ellis Avenue	Signalized	C	B
43	111th Street and Doty Avenue	Signalized	C	C
44	111th Street and Bishop Ford eastbound Ramps	Unsignalized	C	B
45	111th Street and Bishop Ford westbound Ramps	Unsignalized	C	B
46	115th Street and Marshfield Avenue	Signalized	B	B
47	115th Street and Ashland Avenue	Signalized	B	B
48	115th Street and Racine Avenue	Signalized	B	C
49	115th Street and Halsted Street	Signalized	C	C

ID	Intersection	Control Type	AM Peak-Hour LOS	PM Peak-Hour LOS
50	115th Street and Wentworth Avenue	Signalized	B	B
51	115th Street and State Street	Signalized	B	B
52	115th Street and Michigan Avenue	Signalized	B	C
53	115th Street and Indiana Avenue	Signalized	B	B
54	115th Street and Martin Luther King Drive	Unsignalized	D	**F**
55a	115th Street and Cottage Grove Avenue	Signalized	C	C
55b	115th Street and Cottage Grove Avenue East	Signalized	D	C
56	115th Street and Bishop Ford Freeway eastbound Ramps	Unsignalized	C	B
57	115th Street and Bishop Ford Freeway westbound Ramps	Unsignalized	D	B
58	119th Street and Marshfield Avenue	Signalized	D	D
59	119th Street and Ashland Avenue	Signalized	D	**F**
60	119th Street and Halsted Street	Signalized	C	C
61	119th Street and Wentworth Avenue	Signalized	B	B
62	119th Street and State Street	Signalized	B	B
63	119th Street and Michigan Avenue	Signalized	A	A
64	127th Street and Paulina Street	Signalized	C	C
65	127th Street and Marshfield Avenue	Signalized	C	B
66	127th Street and Ashland Avenue	Signalized	C	C
67	Ashland Avenue and Vermont Avenue	Signalized	C	C
68	127th Street and Halsted Street	Signalized	C	C
69	Vermont Avenue and Halsted Street	Signalized	B	B
70	127th Street and Vermont Avenue and Wallace Street	Signalized	C	D
71	127th Street and State Street	Signalized	A	B
72	127th Street and Michigan Avenue	Signalized	A	B
73	130th Street and Indiana Avenue	Signalized	B	C
74	130th Street and Ellis Avenue	Signalized	A	A

Notes:
LOS = level of service
Signalized intersection LOS reported as the average for all movements. Unsignalized LOS reported is the LOS of the worst movement. LOS “E” and “F” are shown in bold.

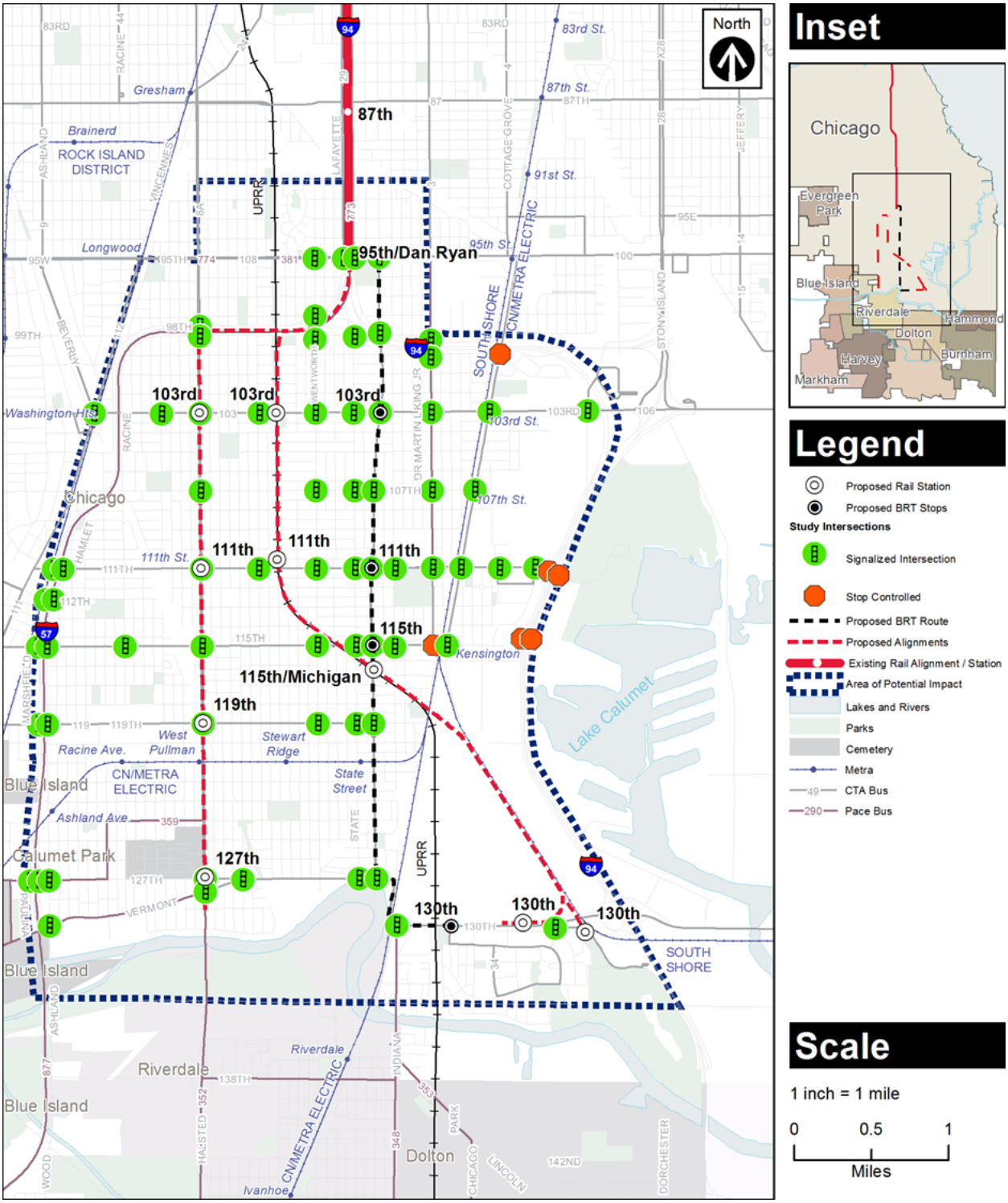


Figure 4-2: Signalized and Unsignalized Intersections within the Area of Potential Impact

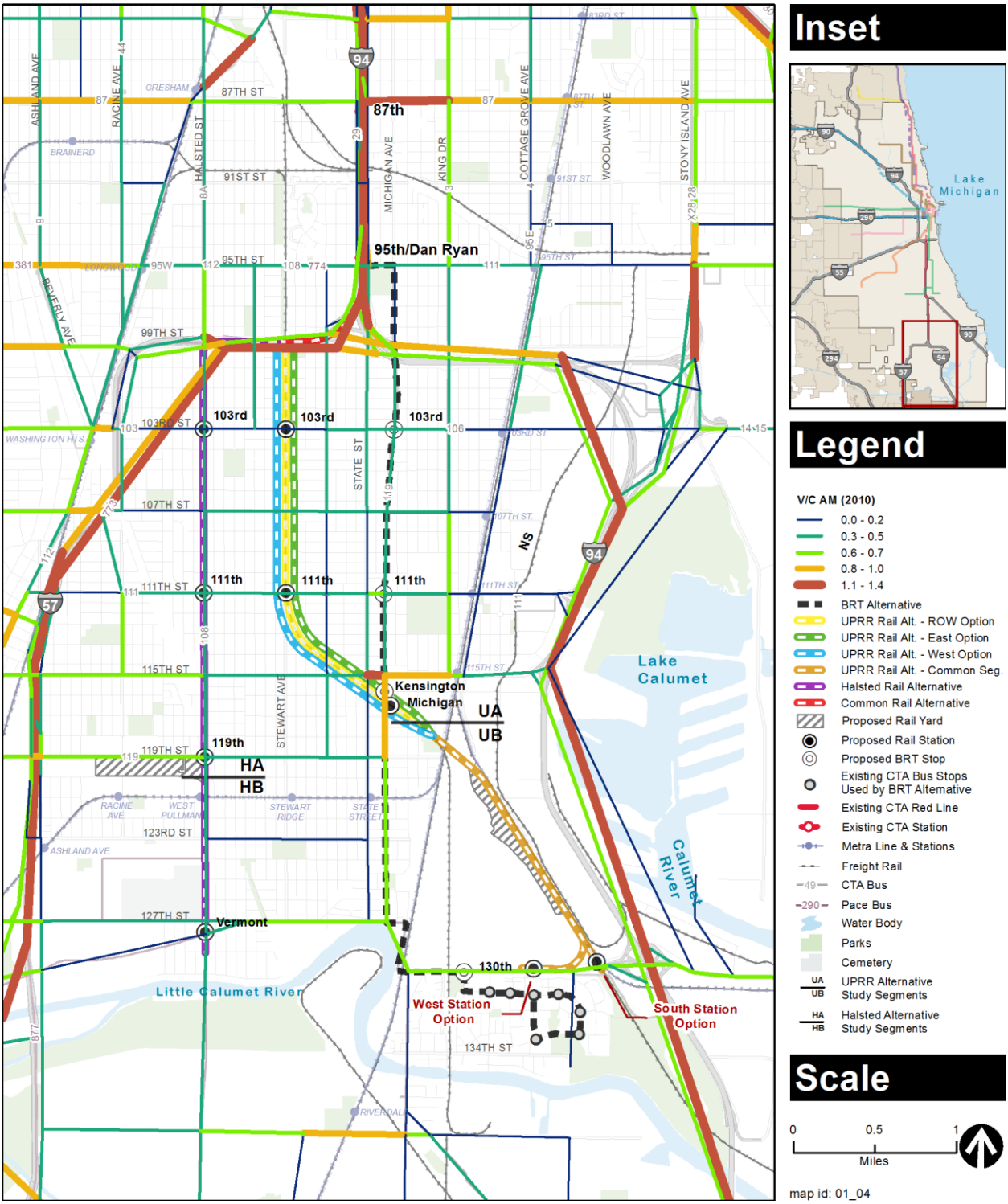


Figure 4-3: Existing (2010) Congestion (Volume/Capacity Ratio) Map

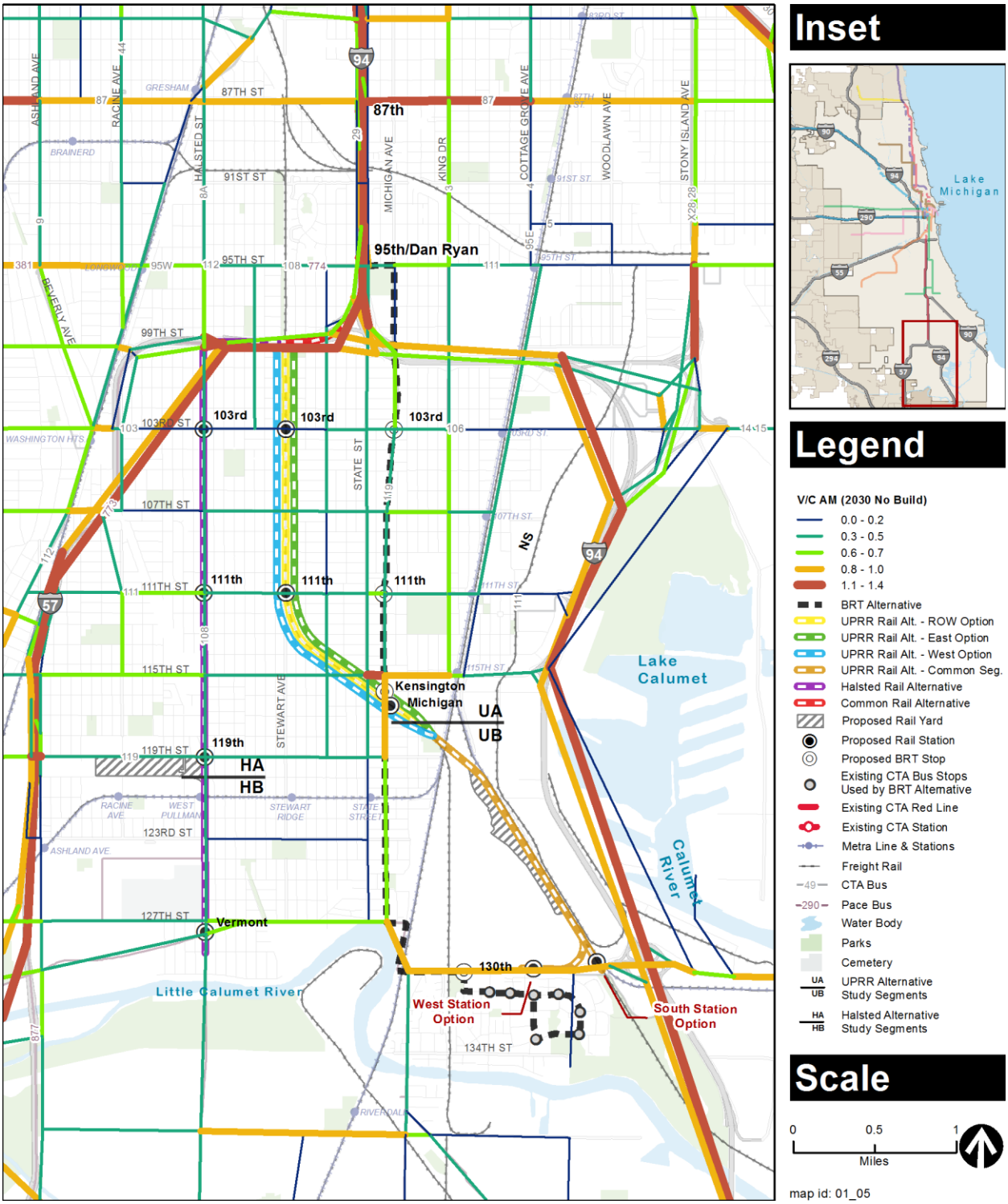


Figure 4-4: 2030 No Build Congestion (Volume/Capacity Ratio) Map

4.3 Freight Transportation

Nearly 500 freight trains per day operate in the Chicago region (Chicago Metropolis 2020). In 2007, regional rail tonnage was estimated at more than 631 million tons, with about 24,000 trailers and containers and about 16,800 carload units moving into, out of, or through the region daily (CMAP 2012). The following active freight train tracks run through the API:

- UPRR Railroad
- CN/Metra Electric Railroad
- NICTD Chicago South Shore & South Bend Railroad (NICTD/CSS & SBRR)
- Norfolk Southern (NS) Railroad
- Indiana Harbor Belt (IHB) Railroad

The UPRR tracks run north/south from the 80th Street junction past the Cal-Sag Channel/Little Calumet River and continue south outside of the API. At the 80th Street junction, near 80th Street and Wallace Avenue, the UPRR tracks converge with RI District, NS, and Belt Railway of Chicago tracks. The UPRR tracks cross over the CN/Metra tracks near 119th Street with a flyover.

The CN freight tracks are west of Cottage Grove Avenue. South of 115th Street, the CN tracks are west of the Metropolitan Water Reclamation District (MWRD) facilities. At 127th Street, the tracks run east of Indiana Avenue and continue south. These tracks carry both passenger and freight trains.

The NICTD/CSS & SBRR tracks run west of Cottage Grove Avenue from Kensington Avenue. This line converges with the CN/Metra tracks between 115th Street and Kensington Avenue. The line continues south between the MWRD facilities and then heads east once the tracks cross under the 130th Street/I-94 Interchange. These tracks carry both passenger and freight trains.

The NS freight tracks are east of the NICTD/CSS & SBRR tracks.

The IHB tracks are west of the NICTD/CSS & SBRR tracks and east of the CN/Metra Tracks.

Figure 4-5 shows the location of the freight railroads within the API.

Table 4-5 lists the existing volumes of passenger and freight trains that pass through the API.

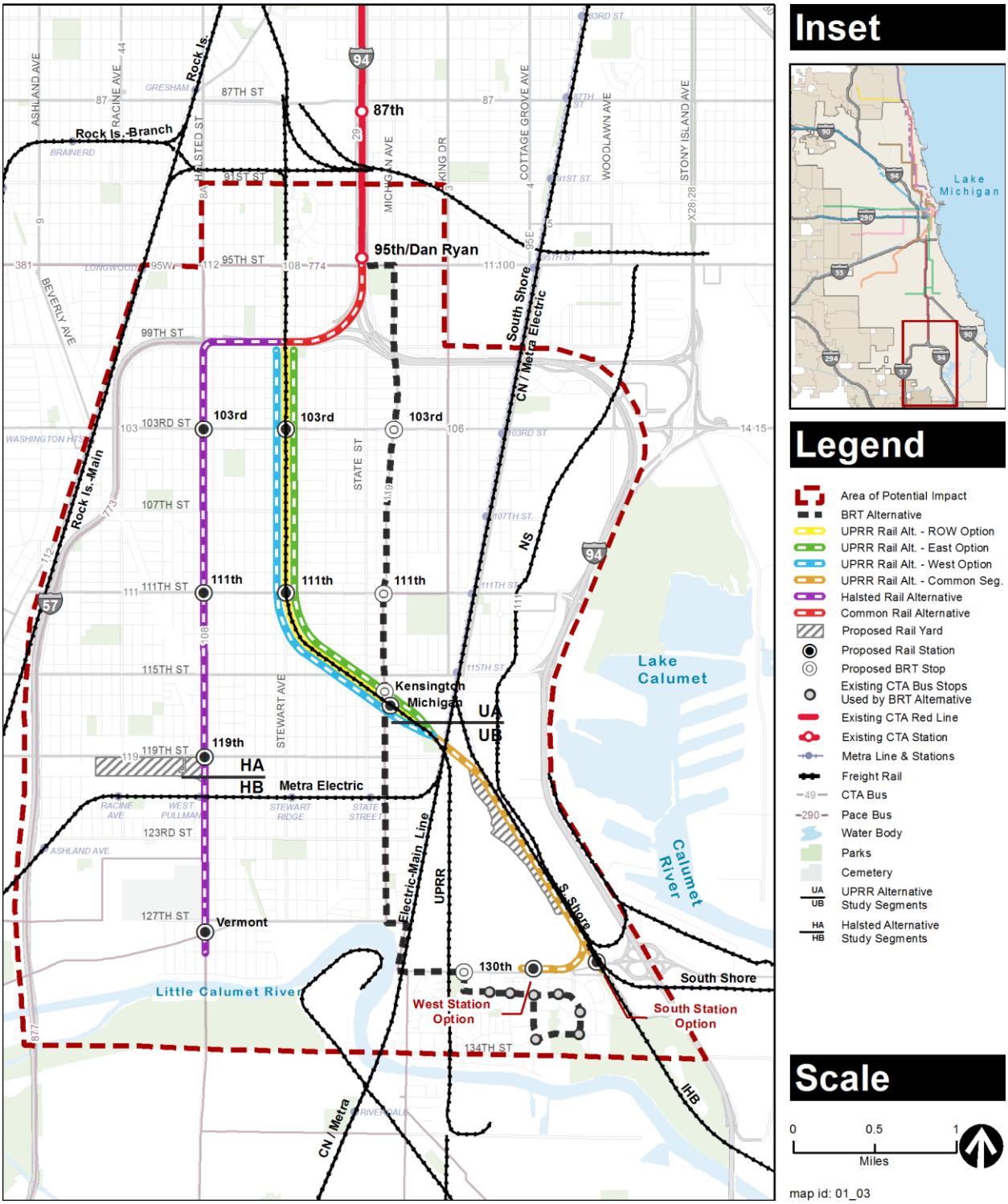


Figure 4-5: Freight Railroads within the Area of Potential Impact

Table 4-5: Existing Train Volumes (2009)

Location	Peak Day	Passenger	Freight	Total
BRC/NS/UP, 75th St. Wye to 80th St. Jct.	Friday	2	62	64
BRC/UP, 80th St. Jct. to 86th Street	Friday	2	41	43
UP, South of 86th Street	Friday	2	24*	26
NS, 80th St Jct. to State St.	Saturday	0	16	16
BRC, 86th St. to State St.	Saturday	0	17	17
BRC/NS, East of State St.	Saturday	0	33	33

Source: CREATE 75th Street CIP Train Model volumes from the Chicago Transportation Coordination Office
Notes: NS = Norfolk Southern; UP = Union Pacific; BRC = Belt Railway Company; Jct. = junction
*On May 15, 2009, UPRR directly reported to CTA that freight volume was 27 trains in the peak day rather than the 24 trains in the peak day used in the CREATE model.

4.4 Bicycle Facilities

The City of Chicago is known as a bicycle-friendly community. Chicago's vision is to make bicycling an integral part of daily life (City of Chicago 2006). Chicago has 117 miles of on-street bike lanes and more than 30 miles of marked lanes on the City streets (City of Chicago 2012c). The *Chicago Streets for Cycling Plan 2020* network consists of 645 miles of on-street bike routes. These routes include Neighborhood Bike Routes, Crosstown Bike Routes and Spoke Routes. The *Chicago Streets for Cycling Plan 2020* will guide the development of a citywide network of innovative bikeways. The existing bike facilities within ½ mile of the alternatives were identified and are shown on Figure 4-6. Bike facilities recommended in the *Chicago Bike 2015 Plan* and pertinent recommended bike routes from the *Chicago Streets for Cycling Plan 2020* are also shown on the figure.

Only one off-street bike trail passes through the project area. Major Taylor Trail is an off-street bike trail that runs through the project area and is intersected by Halsted Street north of the intersection of 119th Street and Halsted Street. There are no other marked bike lanes within the roadway along or crossing the alternative alignments.

The 95th Street Terminal has indoor bicycle parking facilities.

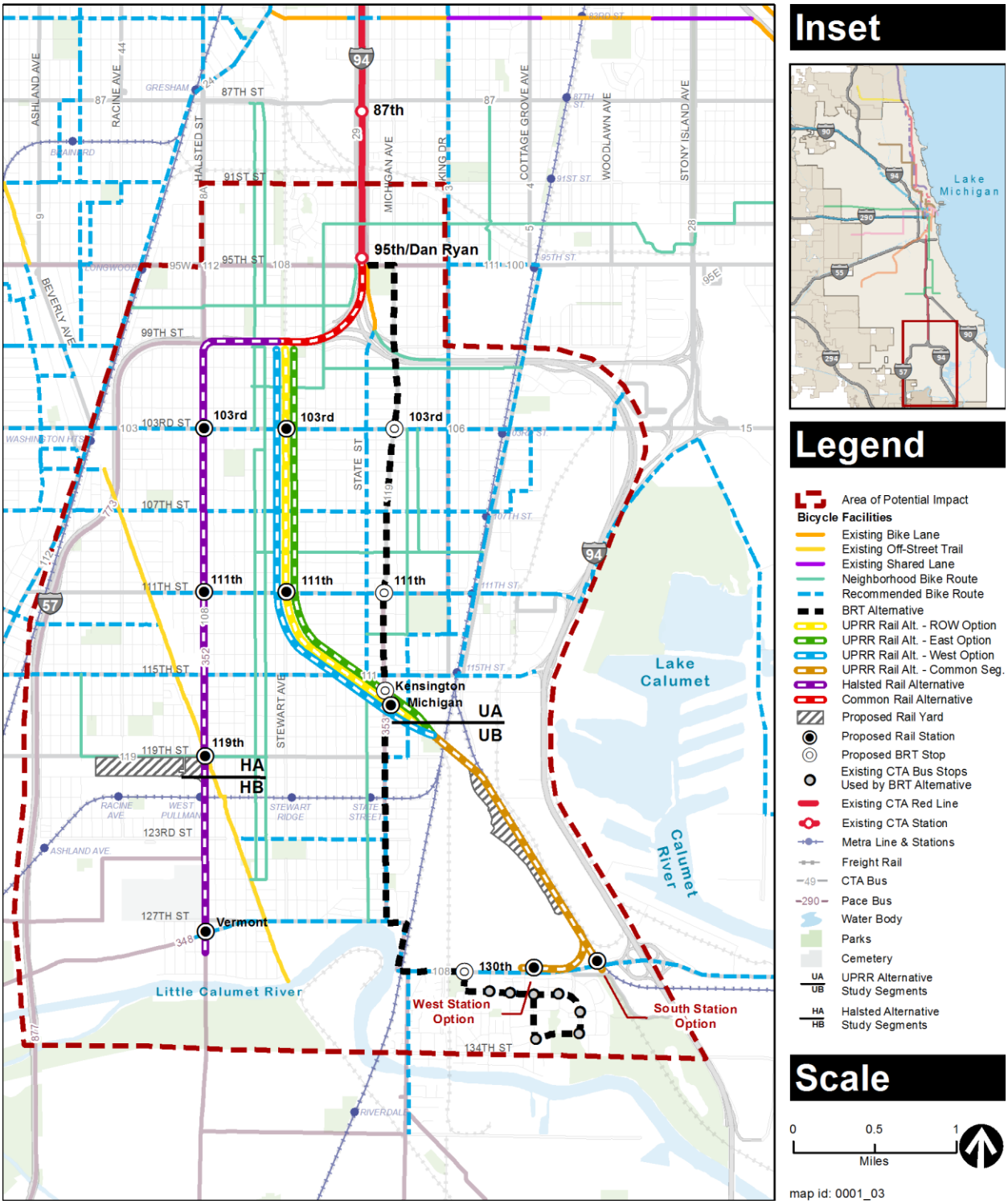


Figure 4-6: Existing and Recommended Bicycle Facilities within the Area of Potential Impact

4.5 Pedestrians

The API for the RLE Project is an urban area with residential and commercial land uses. The sidewalk system within the API is extensive, with sidewalks on both sides of most of the arterial and collector roads. Sidewalks were reviewed qualitatively within the API. The width of sidewalks varies in the API with arterial streets having a standard 6-foot-wide sidewalk. Collector streets have sidewalks that are approximately 12 to 17 feet wide. These widths are average widths; sidewalk widths vary along most streets within the API.

Along the BRT Alternative, sidewalks are present at the 103rd Street, 111th Street, and Kensington Avenue stops.

- At Michigan Avenue and 103rd Street, sidewalks are approximately 8 feet wide along Michigan Avenue and vary from 6 to 8 feet wide along 103rd Street. The sidewalks are directly in back of the curb. Although ramps are present, all ramps are based on older standards which do not comply with current ADA practice. Crossing the street is controlled by pedestrian signals.

- At Michigan Avenue and 111th Street, sidewalks on all four legs vary from approximately 12 to 16 feet in width, all directly in back of the curb. All ramps in the four quadrants appear to be ADA-compliant.[2] Crossing the street is controlled by pedestrian signals.

- At Michigan Avenue and Kensington Avenue, the sidewalks along Michigan Avenue vary between approximately 10 and 12 feet in width and are directly behind the curb. Along Kensington Avenue, the width varies from approximately 6 to 8 feet and, away from the intersection, are separated from the street by a grassy boulevard. Ramps are not ADA-compliant at this intersection. This intersection is uncontrolled (with a stop sign on Kensington Avenue).

- At the proposed 130th Street stop location, no sidewalks are present along 130th Street. Six-foot wide sidewalks run along both sides of Eberhart Avenue separated from the street by a grassy boulevard. The ramps at Eberhart Avenue are not ADA-compliant. This intersection is uncontrolled (with a stop sign on Eberhart Avenue).

Near the proposed stations for the UPRR Rail Alternative options, sidewalks are present along 103rd Street, 111th Street, and Michigan Avenue.

- Where 103rd Street crosses the existing UPRR tracks, sidewalks run on both sides of 103rd Street and are approximately 6 feet wide. Along Eggleston Avenue, immediately to the west of the tracks and north of 103rd Street, a single sidewalk runs along the west side of

[2] All assessment of ADA compliance in this section is based on visual inspection only, examining the configuration of the ramp and presence of tactile warning. Field survey and measurement for precise slopes and other compliance features was not conducted.

the road. The ramp at the corner of 103rd Street and Eggleston Avenue (in the northwest quadrant) is ADA-compliant.

- At 111th Street, sidewalks are on both sides of the road and are approximately 6 feet wide. While ramps are present at the nearby intersections, the ramps do not meet all current ADA standards.

- At Michigan Avenue, sidewalks are on both sides of the road and are approximately 12 feet wide. Ramps are present at the nearby corners, but the ramps do not meet current ADA standards.

- There are no sidewalks along 130th Street at the locations of the 130th Street South and West Station Options.

For the Halsted Rail Alternative, sidewalks are present along 103rd, 111th, and 119th Streets near their intersections with Halsted Street. Sidewalks are present along both sides of Halsted Street except on the west side between 124th and 127th Streets.

- In the vicinity of 103rd Street, sidewalks along Halsted Street are generally 14 to 16 feet wide. Sidewalks along 103rd Street are approximately 9 to 11 feet wide. ADA-compliant ramps are present on all but the northeast corner of the 103rd Street and Halsted Street intersection.

- At 111th Street, sidewalks along Halsted Street are 13 to 17 feet wide. Sidewalks on 111th Street are approximately 11 to 13 feet wide. Only the ramps on the east side of Halsted Street are ADA-compliant.

- At 119th Street, sidewalks along Halsted Street are approximately 16 feet wide at the intersection, but narrow to 6 feet wide north of the intersection. Sidewalks along 119th Street vary from 12 to 19 feet wide. The sidewalk on the south side of 119th Street ends at the alley west of Halsted Street. Only the ramps on the west side of Halsted Street are ADA-compliant.

- Vermont Avenue has sidewalks (6 to 10 feet wide) at the immediate vicinity of its intersection with Halsted Street but the sidewalk does not continue after the alley on the northeast leg of the intersection. Sidewalks on Halsted Street vary from 13 to 17 feet wide. No ramps at this intersection meet the newest ADA standards.

In order to remain compliant with current ADA codes, the City of Chicago is continually updating intersection curb ramps to make the city accessible to everyone. There are curb ramps to allow for wheelchair accessibility at most of the intersections within the API. Most of these curb ramps are not compliant with current ADA standards, which require detectable warning tiles for the visually impaired.

The Chicago Department of Transportation is implementing its *Chicago Pedestrian Plan*. Some of the goals of the plan are to increase pedestrian safety, identify and eliminate gaps and barriers in the pedestrian network, increase the amount and quality of pedestrian space, and increase the number of pedestrian trips for enjoyment, school, work, and daily errands.

4.6 Parking

The existing parking facilities were identified by field observation, aerial imagery, or through published information regarding parking facilities from the City of Chicago. Most of the streets in the API have on-street parking. Table 4-6 is a summary of the on-street parking along some of the major roadways along the alternative alignments. On-street parking is allowed (as posted) on most of the local streets not listed in this table. There is currently no park & ride facility at the existing 95th Street Terminal.

Table 4-6: Existing On-Street Parking

Street	Roadway Functional Class	On-Street Parking
95th Street	other principal arterial	No
99th Street	local road or street	Yes
103rd Street	minor arterial	Yes
107th Street	major collector	No
111th Street	minor arterial	Yes
115th Street	major collector	Yes
Halsted Street	minor arterial	Yes
Wentworth Avenue	major collector	Yes
State Street	minor arterial	Yes
Michigan Avenue	major collector	Yes
Indiana Avenue	minor arterial	No
130th Street	other principal arterial	No

A permit or fee is not required to park on the streets within the API. There are no existing off-street surface parking lots or parking garages that are used for public parking within the API. Many of the commercial and retail buildings within the API have plenty of parking available either through on-street or parking lots associated with the buildings.

Section 5
Impacts and Mitigations

This section describes the transportation impacts for each of the four alternatives under consideration for the RLE Project. The impacts are discussed in three categories for each alternative: permanent impacts, construction impacts, and cumulative impacts. Permanent impacts occur after the project is fully constructed and operational. Construction impacts refer to impacts that occur during the construction phase of the project and are temporary in nature. Cumulative impacts result from the incremental impact of the alternative combined with other past, present and reasonably foreseeable future actions. Where applicable, potential mitigation measures are also presented.

5.1 No Build Alternative

5.1.1 Permanent Impacts and Mitigations - No Build Alternative

5.1.1.1 Public Transportation

The No Build Alternative would not have any impacts on existing bus or rail transit conditions within the API. The existing services would continue to operate under the same conditions as they do today.

5.1.1.2 Traffic

Under No Build (2026) conditions, 88 percent of the study intersections within the API would operate at LOS "D" or better in both the AM and PM peak hours, as shown in Table 5-1. Appendix B contains the No Build traffic data used in the traffic impact analysis. Under No Build (2026) conditions, there would be nine intersections that would operate at LOS "E" or "F" in either or both the AM and PM peak hours. The nine intersections that would operate at LOS "E" or "F" are shown in bold in Table 5-1.

Under No Build (2030) conditions, 87 percent of the study intersections within the API would operate at LOS "D" or better in both the AM and PM peak hours, as shown in Table 5-1. See Appendix B for the No Build traffic data. Under No Build (2030) conditions, there would be ten intersections that would operate at LOS "E" or "F" in either or both the AM and PM peak hours. The ten intersections are shown in bold in Table 5-1.

Table 5-1: No Build (2026 and 2030) Intersection Level of Service

ID	Intersection	Control Type	2026 No Build Alternative		2030 No Build Alternative	
			AM Peak-Hour LOS	PM Peak-Hour LOS	AM Peak-Hour LOS	PM Peak-Hour LOS
1	95th Street and Wentworth Avenue	Signalized	B	B	B	B
2	95th Street and Lafayette Avenue	Signalized	D	D	D	D
3	95th Street and State Street	Signalized	D	C	D	C
4	95th Street and Michigan Avenue	Signalized	B	B	B	B
5	98th Place and Halsted Street	Signalized	**F**	**F**	**F**	**F**
6	99th Street and Halsted Street	Signalized	D	D	D	D
7	98th Place and Wentworth Avenue	Signalized	B	B	B	B
8	99th Street and Wentworth Avenue	Signalized	B	B	B	B
9	99th Street and State Street	Signalized	A	B	A	B
10	99th Street and Michigan Avenue	Signalized	C	B	C	B
11	99th Place and Martin Luther King Drive	Signalized	B	B	B	B
12	100th Street and Martin Luther King Drive	Signalized	B	A	B	A
13	100th Street and Cottage Grove Avenue	Unsignalized	A	B	A	C
14	103rd Street and Vincennes Avenue and Beverly Avenue	Signalized	**E**	**F**	**E**	**F**
15	103rd Street and Morgan Street	Signalized	B	B	B	B
16	103rd Street and Halsted Street	Signalized	**F**	D	**F**	D
17	103rd Street and Normal Avenue	Signalized	B	B	B	B
18	103rd Street and Wentworth Avenue	Signalized	B	B	B	B
19	103rd Street and State Street	Signalized	B	B	B	B
20	103rd Street and Michigan Avenue	Signalized	B	B	B	B
21	103rd Street and Martin Luther King Drive	Signalized	C	C	C	C
22	103rd Street and Cottage Grove Avenue	Signalized	B	B	B	B
23	103rd Street and Woodlawn Avenue	Signalized	A	A	A	A
24	107th Street and Halsted Street	Signalized	**F**	C	**F**	C
25	107th Street and Wentworth Avenue	Signalized	B	B	B	B
26	107th Street and State Street	Signalized	A	A	A	A
27	107th Street and Michigan Avenue	Signalized	B	B	B	B
28	107th Street and Martin Luther King Drive	Signalized	B	B	B	B
29	107th Street and Cottage Grove Avenue	Signalized	B	B	B	B

ID	Intersection	Control Type	2026 No Build Alternative		2030 No Build Alternative	
			AM Peak-Hour LOS	PM Peak-Hour LOS	AM Peak-Hour LOS	PM Peak-Hour LOS
30	111th Street and Marshfield Avenue	Signalized	C	C	C	C
31	111th Street and Hamlet Avenue	Signalized	D	D	D	D
32	112th Place and Marshfield Avenue	Signalized	B	C	B	C
33	112th Place and Hamlet Avenue	Signalized	**E**	C	**E**	C
34	111th Street and Halsted Street	Signalized	C	C	C	C
35	111th Street and Normal Avenue	Signalized	B	A	B	A
36	111th Street and Wentworth Avenue	Signalized	A	A	B	A
37	111th Street and State Street	Signalized	A	B	A	B
38	111th Street and Michigan Avenue	Signalized	B	B	B	B
39	111th Street and Indiana Avenue	Signalized	B	B	B	B
40	111th Street and Martin Luther King Drive	Signalized	B	A	B	A
41	111th Street and Cottage Grove Avenue	Signalized	C	D	C	D
42a	111th Street and Langley Avenue	Signalized	B	C	B	C
42b	111th Street and Ellis Avenue	Signalized	C	C	C	C
43	111th Street and Doty Avenue	Signalized	C	C	C	C
44	111th Street and Bishop Ford eastbound Ramps	Unsignalized	D	C	**E**	C
45	111th Street and Bishop Ford westbound Ramps	Unsignalized	**E**	B	**E**	B
46	115th Street and Marshfield Avenue	Signalized	B	B	B	B
47	115th Street and Ashland Avenue	Signalized	B	B	B	B
48	115th Street and Racine Avenue	Signalized	B	C	B	C
49	115th Street and Halsted Street	Signalized	C	C	C	C
50	115th Street and Wentworth Avenue	Signalized	B	B	B	B
51	115th Street and State Street	Signalized	B	B	B	B
52	115th Street and Michigan Avenue	Signalized	B	D	B	D
53	115th Street and Indiana Avenue	Signalized	B	B	B	B
54	115th Street and Martin Luther King Drive	Unsignalized	D	**F**	D	**F**
55a	115th Street and Cottage Grove Avenue	Signalized	D	C	D	C
55b	115th Street and Cottage Grove Avenue East	Signalized	**E**	C	**E**	C
56	115th Street and Bishop Ford Freeway eastbound Ramps	Unsignalized	D	C	D	C

ID	Intersection	Control Type	2026 No Build Alternative		2030 No Build Alternative	
			AM Peak-Hour LOS	PM Peak-Hour LOS	AM Peak-Hour LOS	PM Peak-Hour LOS
57	115th Street and Bishop Ford Freeway westbound Ramps	Unsignalized	D	B	D	C
58	119th Street and Marshfield Avenue	Signalized	D	D	D	D
59	119th Street and Ashland Avenue	Signalized	D	**F**	D	**F**
60	119th Street and Halsted Street	Signalized	C	C	C	C
61	119th Street and Wentworth Avenue	Signalized	B	B	B	B
62	119th Street and State Street	Signalized	B	B	B	B
63	119th Street and Michigan Avenue	Signalized	A	A	A	A
64	127th Street and Paulina Street	Signalized	C	C	C	C
65	127th Street and Marshfield Avenue	Signalized	C	C	C	C
66	127th Street and Ashland Avenue	Signalized	C	C	C	C
67	Ashland Avenue and Vermont Avenue	Signalized	C	C	C	C
68	127th Street and Halsted Street	Signalized	C	C	C	C
69	Vermont Avenue and Halsted Street	Signalized	B	B	B	B
70	127th Street and Vermont Avenue and Wallace Street	Signalized	C	D	D	D
71	127th Street and State Street	Signalized	B	B	B	B
72	127th Street and Michigan Avenue	Signalized	A	B	A	B
73	130th Street and Indiana Avenue	Signalized	C	C	C	C
74	130th Street and Ellis Avenue	Signalized	A	A	A	A

Notes:
LOS = level of service
Signalized intersection LOS reported as the average for all movements. Unsignalized LOS reported is the LOS of the worst movement. LOS "E" and "F" are shown in bold.

5.1.1.3 Freight Transportation

Rail tonnage moving to, from, and through the Chicago region is expected to increase by more than 60 percent by 2040 (CMAP 2010b). Tonnage carried by truck in the Chicago region may grow by more than 70 percent (CMAP 2010b). Table 5-2 shows the forecasted freight rail volumes for 2029 developed by the Chicago Transportation Coordination Office.[3] These forecasts are not available beyond the year 2029. The No Build Alternative would not have any impacts on the freight transportation within the API.

[3] The Chicago Transportation Coordination Office was established in 1999 to develop managerial solutions wherever possible to railroad operating problems in Chicago, to work with public agencies on the public impacts of rail service, and to assist in continuing the capital planning process. The coordination efforts by the Chicago Transportation Coordination Office were a forerunner to the coordination established in the CREATE program in 2003. Still playing a

Table 5-2: Forecasted Train Volumes (2029 No Build)

Location	Peak Day	Passenger	Freight	Total
BRC/NS/UP, 75th St. Wye to 80th St. Jct.	Thursday	4	77	81
BRC/UP, 80th St. Jct. to 86th Street	Friday	4	51	55
UP, South of 86th Street	Friday	4	23	27
NS, 80th St Jct. to State St.	Saturday	0	22	22
BRC, 86th St. to State St.	Saturday	0	28	28
BRC/NS, East of State St.	Saturday	0	50	50

Source: CREATE 75th Street CIP Train Model volumes from the Chicago Transportation Coordination Office
Notes: NS = Norfolk Southern; UP = Union Pacific; BRC = Belt Railway Company

5.1.1.4 Bicycle Facilities

The No Build Alternative would not have any impacts on existing bike routes or recommended bike routes within the API. Recommended bicycle routes from the *Streets for Cycling Plan 2020* are shown on Figure 4-6.

5.1.1.5 Pedestrians

The No Build Alternative would not upgrade any intersections that currently do not meet the ADA accessibility code except as upgraded as part of the Chicago ADA Sidewalk Ramp Program. The conditions under the No Build Alternative would be the same as the existing conditions.

5.1.1.6 Parking

Under the No Build Alternative parking facilities are expected to remain the same as under existing conditions.

5.1.2 Construction Impacts and Mitigations - No Build Alternative

The only construction activities associated with this alternative would be the already funded and committed roadway and public transportation projects in the API, plus typical repairs required to keep roadways, intersections, and transit service operational.

5.1.3 Cumulative Impacts and Mitigations - No Build Alternative

There would be no cumulative impacts associated with the No Build Alternative. However, the No-Build Alternative would not realize the economic benefits from transportation improvements as the other build alternatives.

vital role today, the Chicago Transportation Coordination Office focuses on process improvements and enhanced communication to help trains flow better through the region (while CREATE focuses on capital projects).

5.2 Bus Rapid Transit Alternative

5.2.1 Permanent Impacts and Mitigations - Bus Rapid Transit Alternative

5.2.1.1 Public Transportation

The BRT Alternative would provide an enhanced bus route with transit signal priority along the existing #34 South Michigan bus route. Figure 5-1 shows the proposed alignment of the BRT Alternative. The anticipated overall runtime from 130th Street to the 95th Street Terminal and the wait time at 130th Street would decrease. The headway for the route #34 would be changed to 12 minutes due to the addition of the enhanced bus route. The BRT Alternative would have 4-minute headways from 6:00 AM to 8:00 PM and 15-minute headways at all other times of service. The BRT Alternative would add 250 bus runs along the BRT Alternative alignment relative to existing conditions. Table 5-3 summarizes the additional bus service for the BRT Alternative. No other changes to existing bus routes would be made with the BRT Alternative.

Table 5-3: Bus Services for the Bus Rapid Transit Alternative

	Headway (minutes)		Bus Runs		
	6 AM-8 PM	Rest of Day	6 AM-8 PM	Rest of Day	Total
Weekday	4	15	210	40	250
Weekend	15	15	56	40	96

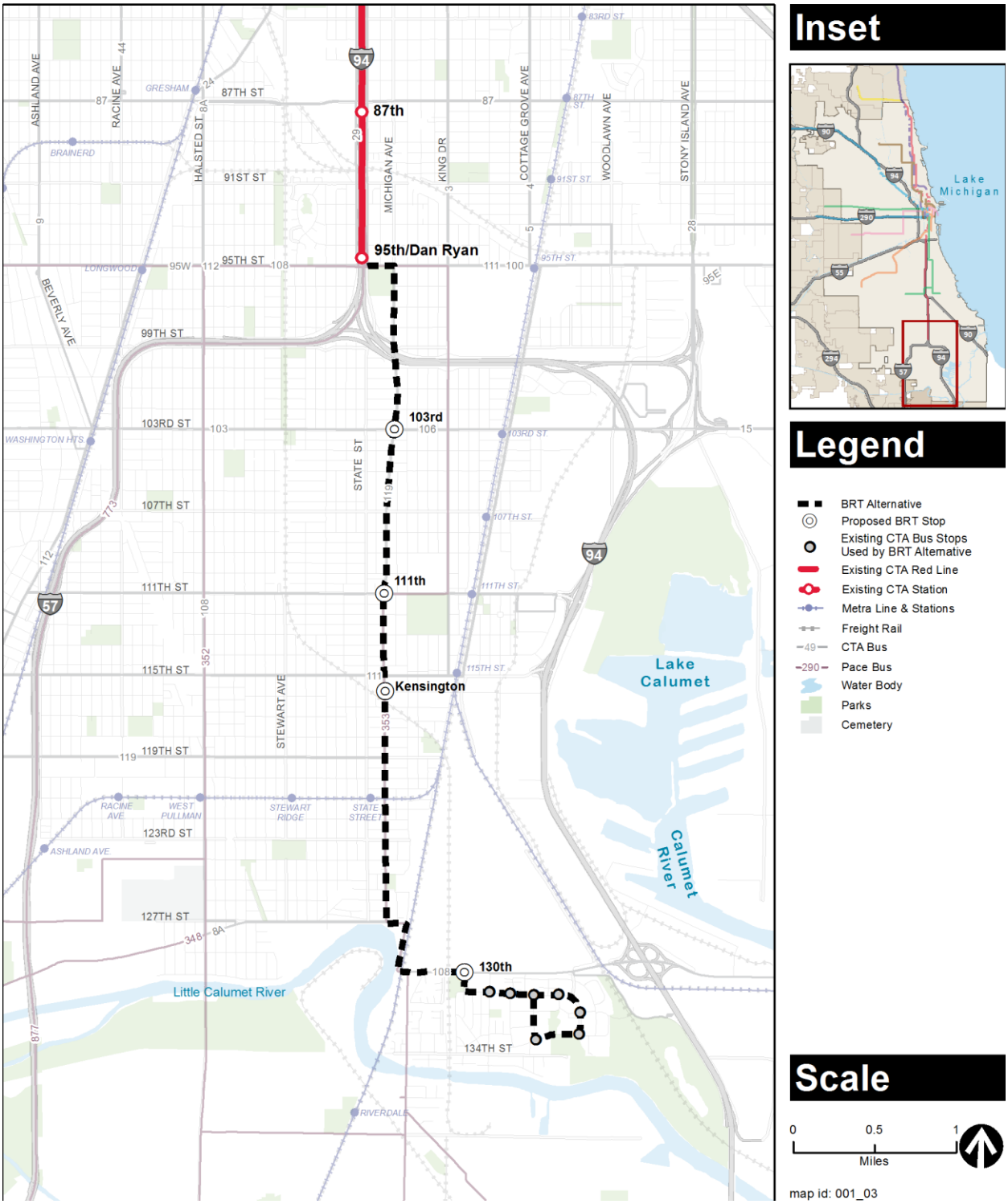


Figure 5-1: Bus Rapid Transit Alternative

The BRT Alternative would have positive impacts on public transportation service. The transportation model indicates 374 new daily riders for the BRT Alternative and total project weekday boardings of 3,190 (AECOM 2009). The additional services would reduce travel times for passengers compared to existing conditions. (Average existing travel time for existing #34 between 7 AM and 9 AM from 131st Street/Eberhart is 28 minutes. Expected travel time for the BRT Alternative from 130th Street to the 95th Street Terminal is 23 minutes. Average wait time for the existing #34 between 7 AM and 9 AM is 5 minutes, or half the average headway of 10 minutes. The expected average wait time for the BRT Alternative is two minutes, or half the average headway of four minutes during the entire 6 AM to 8 PM time period.) The transportation model indicates an average "user benefit" of 9 minutes per boarding for the BRT Alternative (AECOM 2009). In addition to benefits for passengers making use of the BRT Alternative, passengers using the local #34 would likely experience benefits. With fewer boardings on the local #34, dwell time would be decreased, marginally improving end-to-end run times. Also, with a shift in passengers to the BRT Alternative, peak-hour local buses would be less crowded. (In peak hours, the existing #34 buses run at or near capacity.)

5.2.1.2 Traffic

Under BRT Alternative (2026) conditions, most of the study intersections within the API would operate at an acceptable LOS (LOS "D" or better) in both the AM and PM peak hours, as shown in Table 5-4. The traffic data and Synchro results are in Appendix C for the BRT Alternative. All changes in traffic volumes are related to access to parking at BRT stations. Under BRT Alternative (2026) conditions, there would be 15 intersections that would operate at an unacceptable LOS (LOS "E" or "F") in either or both the AM and PM peak hours. Of those 15 intersections, 7 would operate at conditions worse than the No Build conditions. The intersections that would operate at worse than the No Build conditions are shown in bold in Table 5-4 and are listed below:

- 115th Street and Michigan Avenue (ID #52) - **AM LOS = E; PM LOS = F**
- 115th Street and Cottage Grove Avenue (ID #55a) - **AM LOS = E; PM LOS = F**
- 115th Street and Cottage Grove Avenue East (ID # 55b) - **AM LOS = F**
- 119th Street and State Street (ID #62) - **PM LOS = E**
- 127th Street and Halsted Street (ID #68) - **PM LOS = E**
- 127th Street and Vermont Avenue and Wallace Street (ID #70) - **AM LOS = F; PM LOS = F**
- 130th Street and Indiana Avenue (ID #73)– **AM LOS = E; PM LOS = F**

Under BRT Alternative (2030) conditions, most of the study intersections within the API would operate at LOS "D" or better in both the AM and PM peak hours, as shown in Table 5-4. Under BRT Alternative (2030) conditions, there would be 17 intersections that would operate at LOS "E" or "F" in either or both the AM and PM peak hours. Of the 17 intersections, 10 would operate at

worse than the No Build conditions. The 10 intersections that would operate at worse than the No Build conditions are the following, and are shown in bold text in Table 5-4:

- 103rd Street and Halsted Street (ID #16) - AM LOS = F; **PM LOS = E**
- 111th Street and Cottage Grove Avenue (ID #41) - **PM LOS = E**
- 115th Street and Michigan Avenue (ID #52) - **AM LOS = E; PM LOS = F**
- 115th Street and Martin Luther King Drive (ID #54) - **AM LOS = E**; PM LOS = F
- 115th Street and Cottage Grove Avenue (ID #55a) - **AM LOS = E; PM LOS = F**
- 115th Street and Cottage Grove Avenue East (ID #55b) - **AM LOS = F**
- 119th Street and State Street (ID #62) - **PM LOS = E**
- 127th Street and Halsted Street (ID #68) - **PM LOS = E**
- 127th Street and Vermont Avenue and Wallace Street (ID #70) - **AM LOS = F; PM LOS = F**
- 130th Street and Indiana Avenue (ID # 73) - **AM LOS = E; PM LOS = F**

Table 5-4: Bus Rapid Transit Alternative (2026 and 2030) Intersection Level of Service

ID	Intersection	Control Type	2026 BRT Alternative		2030 BRT Alternative	
			AM Peak-Hour LOS	PM Peak-Hour LOS	AM Peak-Hour LOS	PM Peak-Hour LOS
1	95th Street and Wentworth Avenue	Signalized	B	B	B	B
2	95th Street and Lafayette Avenue	Signalized	D	D	D	D
3	95th Street and State Street	Signalized	D	C	D	C
4	95th Street and Michigan Avenue	Signalized	B	B	B	B
5	98th Place and Halsted Street	Signalized	**F**	**F**	**F**	**F**
6	99th Street and Halsted Street	Signalized	D	C	D	C
7	98th Place and Wentworth Avenue	Signalized	B	B	B	B
8	99th Street and Wentworth Avenue	Signalized	B	B	B	B
9	99th Street and State Street	Signalized	A	B	A	B
10	99th Street and Michigan Avenue	Signalized	C	B	C	B
11	99th Place and Martin Luther King Drive	Signalized	B	B	B	B
12	100th Street and Martin Luther King Drive	Signalized	B	A	B	A
13	100th Street and Cottage Grove Avenue	Unsignalized	A	C	A	C

ID	Intersection	Control Type	2026 BRT Alternative		2030 BRT Alternative	
			AM Peak-Hour LOS	PM Peak-Hour LOS	AM Peak-Hour LOS	PM Peak-Hour LOS
14	103rd Street and Vincennes Avenue and Beverly Avenue	Signalized	**E**	**F**	**E**	**F**
15	103rd Street and Morgan Street	Signalized	B	B	B	B
16	103rd Street and Halsted Street	Signalized	**F**	D	**F**	**E**
17	103rd Street and Normal Avenue	Signalized	B	B	B	B
18	103rd Street and Wentworth Avenue	Signalized	B	B	B	B
19	103rd Street and State Street	Signalized	B	B	B	B
20	103rd Street and Michigan Avenue	Signalized	B	B	B	B
21	103rd Street and Martin Luther King Drive	Signalized	C	C	C	C
22	103rd Street and Cottage Grove Avenue	Signalized	B	B	B	B
23	103rd Street and Woodlawn Avenue	Signalized	A	A	A	A
24	107th Street and Halsted Street	Signalized	**F**	C	**F**	C
25	107th Street and Wentworth Avenue	Signalized	B	B	B	B
26	107th Street and State Street	Signalized	A	B	A	B
27	107th Street and Michigan Avenue	Signalized	B	B	B	B
28	107th Street and Martin Luther King Drive	Signalized	B	B	B	B
29	107th Street and Cottage Grove Avenue	Signalized	B	B	B	B
30	111th Street and Marshfield Avenue	Signalized	C	C	C	C
31	111th Street and Hamlet Avenue	Signalized	D	D	D	D
32	112th Place and Marshfield Avenue	Signalized	B	C	C	C
33	112th Place and Hamlet Avenue	Signalized	**E**	C	**E**	C
34	111th Street and Halsted Street	Signalized	C	C	C	C
35	111th Street and Normal Avenue	Signalized	B	B	B	B
36	111th Street and Wentworth Avenue	Signalized	B	A	B	A
37	111th Street and State Street	Signalized	B	B	B	B
38	111th Street and Michigan Avenue	Signalized	B	B	B	B
39	111th Street and Indiana Avenue	Signalized	B	B	B	B
40	111th Street and Martin Luther King Drive	Signalized	B	A	B	A
41	111th Street and Cottage Grove Avenue	Signalized	C	D	C	**E**
42a	111th Street and Langley Avenue	Signalized	B	C	B	C
42b	111th Street and Ellis Avenue	Signalized	C	C	D	D
43	111th Street and Doty Avenue	Signalized	C	C	C	C
44	111th Street and Bishop Ford eastbound Ramps	Unsignalized	D	C	**E**	C

ID	Intersection	Control Type	2026 BRT Alternative		2030 BRT Alternative	
			AM Peak-Hour LOS	PM Peak-Hour LOS	AM Peak-Hour LOS	PM Peak-Hour LOS
45	111th Street and Bishop Ford westbound Ramps	Unsignalized	**E**	C	**E**	C
46	115th Street and Marshfield Avenue	Signalized	B	B	B	B
47	115th Street and Ashland Avenue	Signalized	B	B	B	B
48	115th Street and Racine Avenue	Signalized	B	D	B	D
49	115th Street and Halsted Street	Signalized	C	C	C	C
50	115th Street and Wentworth Avenue	Signalized	B	B	B	B
51	115th Street and State Street	Signalized	B	B	B	B
52	115th Street and Michigan Avenue	Signalized	**E**	**F**	**E**	**F**
53	115th Street and Indiana Avenue	Signalized	B	B	B	C
54	115th Street and Martin Luther King Drive	Unsignalized	D	**F**	**E**	**F**
55a	115th Street and Cottage Grove Avenue	Signalized	**E**	**F**	**E**	**F**
55b	115th Street and Cottage Grove Avenue East	Signalized	**F**	D	**F**	D
56	115th Street and Bishop Ford Freeway eastbound Ramps	Unsignalized	D	C	D	C
57	115th Street and Bishop Ford Freeway westbound Ramps	Unsignalized	D	C	D	C
58	119th Street and Marshfield Avenue	Signalized	D	D	D	D
59	119th Street and Ashland Avenue	Signalized	D	**F**	D	**F**
60	119th Street and Halsted Street	Signalized	C	C	C	C
61	119th Street and Wentworth Avenue	Signalized	B	B	B	B
62	119th Street and State Street	Signalized	C	**E**	C	**E**
63	119th Street and Michigan Avenue	Signalized	B	B	B	B
64	127th Street and Paulina Street	Signalized	C	C	C	C
65	127th Street and Marshfield Avenue	Signalized	C	C	C	C
66	127th Street and Ashland Avenue	Signalized	C	C	C	C
67	Ashland Avenue and Vermont Avenue	Signalized	C	C	C	C
68	127th Street and Halsted Street	Signalized	D	**E**	D	**E**
69	Vermont Avenue and Halsted Street	Signalized	B	B	B	B
70	127th Street and Vermont Avenue and Wallace Street	Signalized	**F**	**F**	**F**	**F**
71	127th Street and State Street	Signalized	B	D	B	D

ID	Intersection	Control Type	2026 BRT Alternative		2030 BRT Alternative	
			AM Peak-Hour LOS	PM Peak-Hour LOS	AM Peak-Hour LOS	PM Peak-Hour LOS
72	127th Street and Michigan Avenue	Signalized	A	C	A	C
73	130th Street and Indiana Avenue	Signalized	**E**	**F**	**E**	**F**
74	130th Street and Ellis Avenue	Signalized	A	B	A	B

Notes:
BRT = Bus Rapid Transit.
Signalized intersection level of service (LOS) reported as the average for all movements. Unsignalized LOS reported is the LOS of the worst movement. Intersections with LOS "E" or "F" that would be worse than the No Build conditions shown in bold.

Mitigation measures to reduce or minimize the impacts were evaluated using Synchro for the transportation network surrounding the BRT Alternative alignment. Mitigation measures for intersections near the affected intersection may also be necessary to provide better flow of traffic; therefore, the mitigation measures include the affected intersections as well as adjacent or nearby intersections. Table 5-5 lists the mitigation measures that would address impacts on the study intersections under BRT Alternative (2030) conditions. At intersections where adverse impacts are expected, potential mitigation measures have been identified to offset the portion of the LOS deterioration attributable to the BRT Alternative.

Table 5-5: Mitigation Measures for the Bus Rapid Transit Alternative (2030) Conditions

ID	Intersection	Mitigation Measure
41	111th Street and Cottage Grove Avenue	PM: Optimize cycle length/splits.
42	111th Street and Ellis Avenue	AM/PM: Optimize cycle length/splits.
52	115th Street and Michigan Avenue	AM/PM: Optimize cycle length/splits.
54	115th Street and Martin Luther King Drive	Remove on-street parking lane for additional through eastbound/westbound lane on 115th Street.
55a	115th Street and Cottage Grove Avenue	AM/PM: Optimize cycle length/splits.
55b	115th Street and Cottage Grove Avenue East	AM/PM: Optimize cycle length/splits.
62	119th Street and State Street	PM: Optimize cycle length/splits.
65	127th Street and Marshfield Avenue	AM: Optimize cycle length/splits.
68	127th Street and Halsted Street	AM/PM: Optimize cycle length/splits.

ID	Intersection	Mitigation Measure
70	127th Street and Vermont Avenue and Wallace Street	Change westbound through/left to dedicated westbound left turn lane. Restrict northeast bound to northbound movement. Actuate signal. Optimize cycle length/splits.
71	127th Street and State Street	PM: Optimize cycle length/splits.
73	130th Street and Indiana Avenue	AM/PM: Add northbound right turn lane. Optimize cycle length/splits.

Under BRT Alternative mitigated (2030) conditions, most of the study intersections within the API would operate at LOS "D" or better in both the AM and PM peak hours, as shown in Table 5-6. Under BRT Alternative (2030) mitigated conditions, some intersections would operate at LOS "E" or "F;" however, these intersections would be no worse than No Build (2030) conditions. Mitigated conditions would not result in additional intersections with unacceptable LOS. As such, there would be no adverse permanent traffic impacts for this alternative. LOS D is considered to be acceptable for urban areas.

Table 5-6: Bus Rapid Transit Alternative Mitigated (2030) Intersection Level of Service

ID	Intersection	Control Type	2030 No Build Alternative		2030 BRT Alternative Mitigated	
			AM Peak-Hour LOS	PM Peak-Hour LOS	AM Peak-Hour LOS	PM Peak-Hour LOS
1	95th Street and Wentworth Avenue	Signalized	B	B	B	B
2	95th Street and Lafayette Avenue	Signalized	D	D	D	D
3	95th Street and State Street	Signalized	D	C	D	C
4	95th Street and Michigan Avenue	Signalized	B	B	B	B
5	98th Place and Halsted Street	Signalized	**F**	**F**	**F**	**F**
6	99th Street and Halsted Street	Signalized	D	D	D	C
7	98th Place and Wentworth Avenue	Signalized	B	B	B	B
8	99th Street and Wentworth Avenue	Signalized	B	B	B	B
9	99th Street and State Street	Signalized	A	B	A	B
10	99th Street and Michigan Avenue	Signalized	C	B	C	B
11	99th Place and Martin Luther King Drive	Signalized	B	B	B	B
12	100th Street and Martin Luther King Drive	Signalized	B	A	B	A
13	100th Street and Cottage Grove Avenue	Unsignalized	A	C	A	C
14	103rd Street and Vincennes Avenue and Beverly Avenue	Signalized	**E**	**F**	**E**	**F**
15	103rd Street and Morgan Street	Signalized	B	B	B	B
16	103rd Street and Halsted Street	Signalized	**F**	D	**F**	D

ID	Intersection	Control Type	2030 No Build Alternative		2030 BRT Alternative Mitigated	
			AM Peak-Hour LOS	PM Peak-Hour LOS	AM Peak-Hour LOS	PM Peak-Hour LOS
17	103rd Street and Normal Avenue	Signalized	B	B	B	B
18	103rd Street and Wentworth Avenue	Signalized	B	B	B	B
19	103rd Street and State Street	Signalized	B	B	B	B
20	103rd Street and Michigan Avenue	Signalized	B	B	B	B
21	103rd Street and Martin Luther King Drive	Signalized	C	C	C	C
22	103rd Street and Cottage Grove Avenue	Signalized	B	B	B	B
23	103rd Street and Woodlawn Avenue	Signalized	A	A	A	A
24	107th Street and Halsted Street	Signalized	**F**	C	**F**	C
25	107th Street and Wentworth Avenue	Signalized	B	B	B	B
26	107th Street and State Street	Signalized	A	A	A	B
27	107th Street and Michigan Avenue	Signalized	B	B	B	B
28	107th Street and Martin Luther King Drive	Signalized	B	B	B	B
29	107th Street and Cottage Grove Avenue	Signalized	B	B	B	B
30	111th Street and Marshfield Avenue	Signalized	C	C	C	C
31	111th Street and Hamlet Avenue	Signalized	D	D	D	D
32	112th Place and Marshfield Avenue	Signalized	B	C	C	C
33	112th Place and Hamlet Avenue	Signalized	**E**	C	**E**	C
34	111th Street and Halsted Street	Signalized	C	C	C	C
35	111th Street and Normal Avenue	Signalized	B	A	B	B
36	111th Street and Wentworth Avenue	Signalized	B	A	B	A
37	111th Street and State Street	Signalized	A	B	B	B
38	111th Street and Michigan Avenue	Signalized	B	B	B	B
39	111th Street and Indiana Avenue	Signalized	B	B	B	B
40	111th Street and Martin Luther King Drive	Signalized	B	A	B	A
41	111th Street and Cottage Grove Avenue	Signalized	C	D	C	C
42a	111th Street and Langley Avenue	Signalized	B	C	B	D
42b	111th Street and Ellis Avenue	Signalized	C	C	C	C
43	111th Street and Doty Avenue	Signalized	C	C	C	C
44	111th Street and Bishop Ford eastbound Ramps	Unsignalized	**E**	C	**E**	C
45	111th Street and Bishop Ford westbound Ramps	Unsignalized	**E**	B	**E**	C
46	115th Street and Marshfield Avenue	Signalized	B	B	B	B
47	115th Street and Ashland Avenue	Signalized	B	B	B	B

ID	Intersection	Control Type	2030 No Build Alternative		2030 BRT Alternative Mitigated	
			AM Peak-Hour LOS	PM Peak-Hour LOS	AM Peak-Hour LOS	PM Peak-Hour LOS
48	115th Street and Racine Avenue	Signalized	B	C	B	D
49	115th Street and Halsted Street	Signalized	C	C	C	C
50	115th Street and Wentworth Avenue	Signalized	B	B	B	B
51	115th Street and State Street	Signalized	B	B	B	B
52	115th Street and Michigan Avenue	Signalized	B	D	C	D
53	115th Street and Indiana Avenue	Signalized	B	B	B	C
54	115th Street and Martin Luther King Drive	Unsignalized	D	**F**	D	**F**
55a	115th Street and Cottage Grove Avenue	Signalized	D	C	C	D
55b	115th Street and Cottage Grove Avenue East	Signalized	**E**	C	C	B
56	115th Street and Bishop Ford Freeway eastbound Ramps	Unsignalized	D	C	D	C
57	115th Street and Bishop Ford Freeway westbound Ramps	Unsignalized	D	C	D	C
58	119th Street and Marshfield Avenue	Signalized	D	D	D	D
59	119th Street and Ashland Avenue	Signalized	D	**F**	D	**F**
60	119th Street and Halsted Street	Signalized	C	C	C	C
61	119th Street and Wentworth Avenue	Signalized	B	B	B	B
62	119th Street and State Street	Signalized	B	B	C	B
63	119th Street and Michigan Avenue	Signalized	A	A	B	B
64	127th Street and Paulina Street	Signalized	C	C	B	C
65	127th Street and Marshfield Avenue	Signalized	C	C	C	C
66	127th Street and Ashland Avenue	Signalized	C	C	C	D
67	Ashland Avenue and Vermont Avenue	Signalized	C	C	C	C
68	127th Street and Halsted Street	Signalized	C	C	C	C
69	Vermont Avenue and Halsted Street	Signalized	B	B	B	B
70	127th Street and Vermont Avenue and Wallace Street	Signalized	D	D	C	C
71	127th Street and State Street	Signalized	B	B	C	C
72	127th Street and Michigan Avenue	Signalized	A	B	B	C
73	130th Street and Indiana Avenue	Signalized	C	C	D	C
74	130th Street and Ellis Avenue	Signalized	A	A	A	B

Notes:
BRT = Bus Rapid Transit
Signalized intersection level of service (LOS) reported as the average for all movements. Unsignalized LOS reported is the LOS of the worst movement. LOS “E” and “F” are shown in bold.

The BRT Alternative includes Transit Signal Priority (TSP). TSP is an operational strategy that is applied to reduce the delay transit vehicles experience at traffic signals. TSP involves communication between buses and traffic signals so that a signal can alter its timing to give priority to transit operations. Priority may be accomplished through a number of methods, such as extending the duration of the green signal for the bus or providing an earlier red signal for side-street traffic. TSP is different from signal preemption, which interrupts the normal signal cycle to accommodate special events (e.g., a train approaching a railroad grade crossing adjacent to a signal or an emergency vehicle responding to a call). With preemption, certain signal phases may be skipped for the intersecting streets.

With TSP, however, the transit detection system communicates a priority request to the traffic signal that may or may not be granted. The TSP communication can fall in four categories:

1. If the bus will pass through a green signal with no alteration of the timing, then no change is made to the timing.

2. If the bus will be stopped at a red signal regardless of an alteration of the timing, then no change is made to the timing.

3. If the transit detection system calculates that keeping the signal green for a few more seconds (as determined by the priority algorithm) will allow the bus to clear the intersection, then the duration of the green signal is extended by a few seconds. “Green time” is reallocated for the benefit of the transit vehicle for this particular signal cycle.

4. If the transit detection system calculates that the bus will just catch the tail end of a red signal, the side street may be given a shorter green signal so that the BRT vehicle may be given an early green signal. Again, “green time” is reallocated for the benefit of the transit vehicle. Note that minimum side-street green times and minimum pedestrian crossing times are always checked in the priority algorithm.

In categories 3 and 4 when a request is granted, the traffic signal timing is altered to serve the priority request without disrupting coordination. In this situation, the normal signal operations process and overall signal cycle are maintained. With TSP, side-street phases would not be skipped, although the timing of the side-street phases will be altered in order to benefit the transit vehicle.

Because of the reallocation of green time, there is potential for additional delays to cross-street traffic. This potential is limited, based on the TSP algorithm to be developed in the design phase. Reallocation of green time typically occurs in less than ten percent of signal cycles because of the algorithm, constraints related to minimum green times, and granting of the TSP request only when the BRT vehicle is behind schedule. For another comparable study (Columbia Pike in Arlington, Virginia), there was only a one percent increase in overall delay with the use of TSP. Because the potential for change in delay (and level of service associated with delay) is small, and because the TSP algorithm is typically developed in the design phase (with refinement during operation), TSP impacts were not included in the traffic analysis for intersections within API.

5.2.1.3 Freight Transportation

There is an existing grade separation between the UPRR and the BRT Alternative on Michigan Avenue. The increase in bus service would therefore not affect the freight rail operations on the UPRR. The CN is separated from vehicular traffic with a grade separation structure at 130th and Indiana Avenue. The CN freight operations would not be affected.

The BRT Alternative would not affect freight transportation. Michigan Avenue is not a designated truck route; therefore, impacts on freight truck traffic would be minimal.

5.2.1.4 Bicycle Facilities

The City of Chicago has recommended a bike route along Michigan Avenue from 119th Street to 127th Street; however, the *Chicago Streets for Cycling Plan 2020* does not indicate a bike route along Michigan Avenue at this location. The *Streets for Cycling Plan 2020* has a recommended neighborhood bike route on State Street, west of Michigan Avenue at this location. Because the *Chicago Streets for Cycling Plan 2020* was adopted by the City of Chicago, it is assumed that the preferred route would be along State Street. There would be no impacts on bicycle facilities from the BRT Alternative.

5.2.1.5 Pedestrians

Pedestrian crossings are uncontrolled at the intersection of Kensington Street and Michigan Avenue. The proposed park & ride facility would have 1,000 spaces at this location. Due to the large number of potential riders, there would be a large number of passengers crossing Michigan Avenue at an unprotected location. There are existing crosswalks that could be improved to mitigate the potential impacts. Mitigation measures could include a public awareness campaign of pedestrian crosswalks, pedestrian refuge islands with signage, or signalization of the intersection.

Implementing the BRT Alternative would result in beneficial impacts by upgrading intersections with ADA-compliant curb ramps and replacing deteriorated sidewalks at bus stop locations with improved bus shelters. Improved bus shelters would be added to provide pedestrians protection from weather conditions. Proposed parking lots would have convenient and safe access to stop locations. Pedestrian access would benefit at the Eberhart Avenue stop with a new traffic signal, marked crosswalks, and ADA-compliant curb ramps. These improvements would provide access for all users and increase pedestrian safety.

5.2.1.6 Parking

Four park & ride locations are proposed with this alternative. The park & ride facilities would expand the reach of the BRT Alternative ridership, while providing enough parking capacity to prevent spillover parking into the surrounding neighborhoods. Table 5-7 lists the parking facility locations and capacity.

Table 5-7: Bus Rapid Transit Alternative Park & Ride Facilities

Location	Description	Parking Spaces Horizon Year (2030)
103rd Street	Surface Parking Lot	200
111th Street	Surface Parking Lot	200
Kensington Avenue	Three-Story Parking Garage	1,000
130th Street	Three-Story Parking Garage	1,400
Total		2,800

103rd Street

The BRT Alternative would stop in the same location that the existing CTA route #34 stops. Because there is already a no parking zone in the area of the bus lane, there would be no impact on any on-street parking at this stop. No off-street parking would be affected.

111th Street

The BRT Alternative would stop in the same location that the existing CTA route #34 stops in the farside configuration in the northbound direction and in the nearside configuration in the southbound direction. Because there is already a no parking zone in the area of the bus lane there would be no impact on any on-street parking at this stop. There is a proposed nearside configuration in the northbound direction, which is not currently a location of an existing bus stop. This configuration would eliminate approximately two to three on-street parking spaces. No off-street parking would be affected.

Kensington Avenue

The BRT Alternative would stop in the same location that the existing CTA route #34 stops. Because there is already a no parking zone in the area of the bus lane there would be no impact on any on-street parking at this stop. No off-street parking would be affected.

130th Street

There would be no impact on any on-street or off-street parking at this location.

5.2.2 Construction Impacts and Mitigations - Bus Rapid Transit Alternative

5.2.2.1 Public Transportation

The BRT Alternative would include construction of improved bus shelters at four locations, four park & ride parking lots or parking structures, and one proposed traffic signal. Existing traffic signals would be reprioritized. The construction activities associated with this alternative would temporarily affect the physical capacity of roadways and intersections, although construction zones at BRT stops typically occupy only one lane and are less than 200 feet in length. This may lead to increased travel times, a possible shift in traffic volumes, and the need to temporarily reroute bus transit service and move stop locations. Bus stops for routes along Michigan Avenue

(#34, #103, #106, and #119) will have changes in stops as construction progresses along the corridor. Bus stops for routes intersecting Michigan Avenue (#111 and #115) will require changes only when construction activities are in the vicinity of the applicable intersection. With adherence to local, state, and federal construction and temporary traffic management programs, as well as public transportation management guidelines, no lasting adverse impacts from the BRT Alternative would result.

5.2.2.2 Traffic

The construction activities associated with this alternative would temporarily affect the physical capacity of local roadways and intersections. Construction of BRT stops typically create only minor construction impacts since the work zones at BRT stops occupy only one lane and are less than 200 feet in length. This may lead to increased travel times and possible shift in traffic volumes and traffic patterns during construction. Detours to other nearby streets are not anticipated for BRT stop construction.

Adherence to local, state, and federal construction and temporary traffic management guidelines would result in no lasting adverse traffic impacts from the BRT Alternative.

5.2.2.3 Freight Transportation

Construction of the proposed parking lot northeast of the UPRR tracks may require some temporary scheduled track closures. Construction activities would be phased to ensure that impacts on freight trains are minimized.

5.2.2.4 Bicycle Facilities

Temporary construction impacts for bicycle facilities associated with the BRT Alternative may occur in locations where new bus shelters and surface parking lots are proposed. Some construction activities may reduce the capacity of the roadway due to maintenance of traffic during construction activities. This may lead to increased travel times for bicyclists. There are no existing or recommended routes along Michigan Avenue, which is the proposed alignment of the BRT Alternative.

5.2.2.5 Pedestrians

Temporary construction impacts for pedestrians associated with the BRT Alternative would occur in locations of the four upgraded bus shelters and park & ride lots or structures. Some construction activities may result in a temporary sidewalk closure on one side of the street.

5.2.2.6 Parking

On-street parking along the roadways would be temporarily affected for construction of park & ride lots or structures and bus shelters due to maintenance of traffic during construction activities.

5.2.3 Cumulative Impacts and Mitigations - Bus Rapid Transit Alternative

There would be no cumulative impacts due to the BRT Alternative.

5.3 Union Pacific Railroad Rail Alternative - Right-of-Way Option

The Union Pacific Railroad (UPRR) Rail Alternative Right-of-Way (ROW) Option would include construction of an elevated structure heading south from 95th Street along I-57 until reaching the UPRR corridor in the vicinity of Eggleston Avenue. The alignment would then turn south along the UPRR corridor to approximately 111th Street, where it would turn southeast. East of Prairie Avenue, the alignment would cross over the CN/ME tracks near 119th Street, where it would transition to an at-grade profile and then continue southeast along the NICTD/CSS & SBRR ROW using a portion of the IHB alignment to terminate at 130th Street. Four stations would be included at 103rd Street, 111th Street, Michigan Avenue, and 130th Street. CTA tracks would be placed in the UPRR ROW. CDOT is preparing the Far South Railroad Relocation Feasibility Study (FSRRFS). The study examines a possible project to move the existing freight operations out of the UPRR corridor, leaving the corridor vacant. The CTA would implement the ROW Option only if this separate project occurs prior to RLE. If the relocation project does not occur, then the CTA would need to choose either the East Option or West Option in order to pursue the UPRR Rail Alternative.

Figure 5-2 shows the UPRR ROW Option. The impact analysis was conducted for two segments within the UPRR Rail Alternative options. Segments UA and UB are shown on Figure 5-2. (Segment UB is the same for the three UPRR options, although impacts are not the same across all categories.) Because the traffic analysis was conducted on a regional basis, the traffic discussion was not divided into segments.

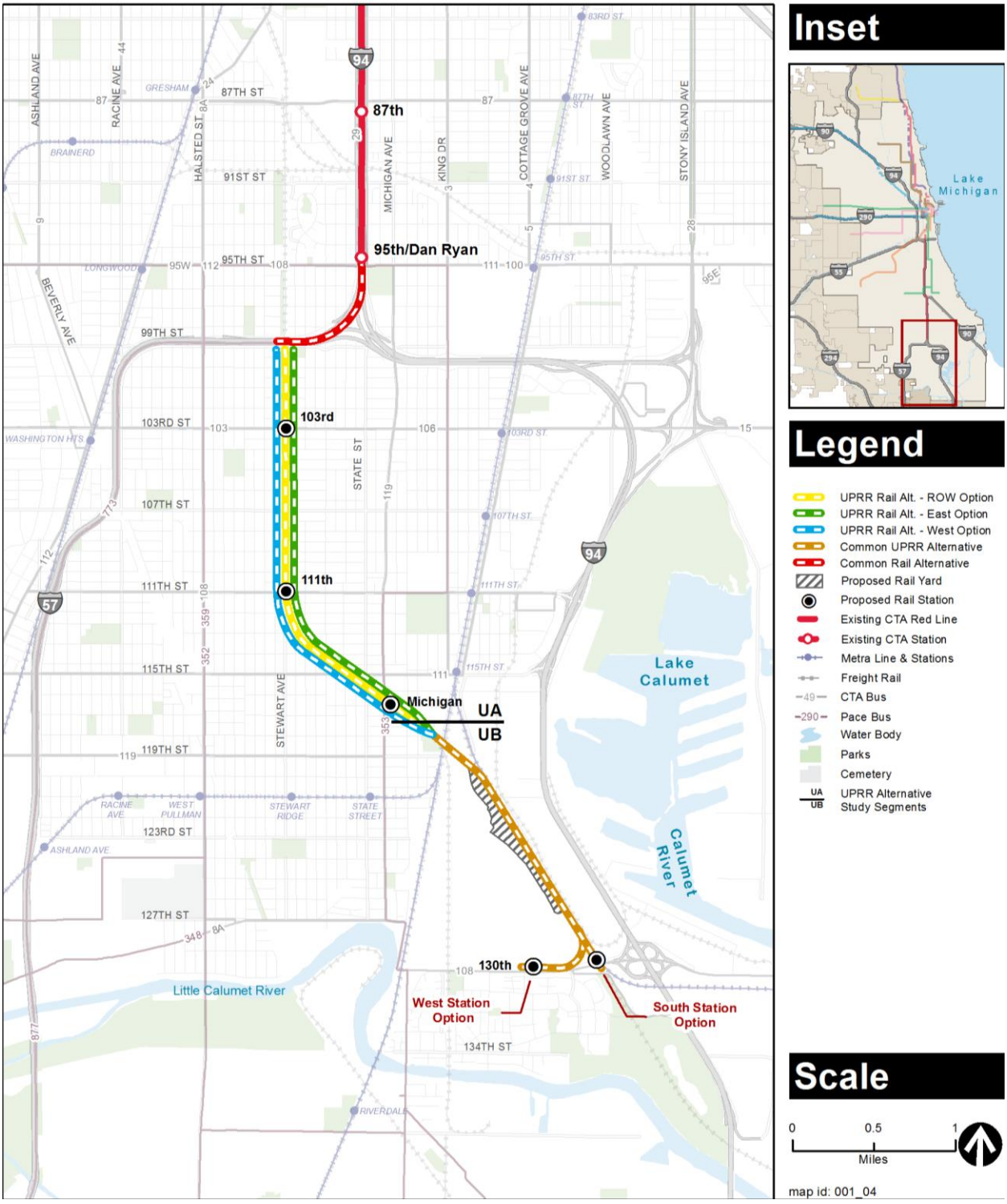


Figure 5-2: Union Pacific Railroad Rail Alternative

5.3.1 Permanent Impacts and Mitigations - Union Pacific Railroad Rail Alternative - Right-of-Way Option

5.3.1.1 Public Transportation

Currently the 95th Street Terminal is the southern terminus of the Red Line. Many of the existing bus routes within the project area terminate at this location. From this station, passengers continue to travel north on the Red Line or connect to a different bus route. With the expansion of the Red Line, some existing bus routes would be rerouted to feed into the proposed stations. Passengers would benefit from reduced travel times to connecting rail service, further south of the 95th Street Terminal. The transportation modeling indicates approximately 4,050 new riders for the UPRR Rail Alternative and total project weekday boardings of 41,500 (AECOM 2009).

The following describes changes to existing bus routes as a result of the UPRR ROW Option:

Segment UA

- CTA route #9 Ashland would terminate at the 103rd Street station, allowing passengers to continue to travel south of 104th Street, where the existing route #9 currently terminates. A proposed bus turnaround would be included in the surface parking lot.
- CTA route #103 West 103rd and #106 East 103rd would be combined into one route operating between a west terminal at Pulaski Road and an east terminal at Stony Island Avenue. This change would reduce the number of bus routes that terminate at 95th Street while still providing service to the proposed Red Line. This route would serve transit users east and west of the proposed UPRR Rail Alternative alignment.
- The CTA route #108 Halsted/95th would be eliminated because the addition of the rail extension would reduce the need for this express bus service.
- CTA routes #112 Vincennes/111th and #111 111th/King Drive would be restructured to simplify route paths and better serve the new alignment. Route #111 would operate on 111th Street between 111th Street/Pulaski Road and 111th Street/Corliss Avenue, serving the new 111th Street station. A new CTA route #115 would operate as a two-directional loop on 115th Street, Cottage Grove Avenue, 95th Street, and Vincennes Avenue. CTA route #112 would be eliminated.
- CTA route #119 Michigan/119th would stop at the Michigan Avenue station. This route provides service to transit users west of the proposed UPRR Rail Alternative alignment.

Segment UB

- Pace route #348 would terminate at 130th Street/I-94, extending the route from its current southern turnaround location at 136th Street/Indiana Avenue. CTA route #30 South Chicago would terminate at the 130th Street station from its current terminal at 130th Street/Exchange Avenue. Pace route #353, rather than run on the expressway to the 95th Street Terminal, would provide passengers a transfer at the 130th Street station.
- Pace routes #352 and #359 would terminate at the 111th Street station instead of 95th Street.

"User benefit" is a measure of travel time improvement for each person boarding the system. This measure indicates the overall reduction in travel time including travel to the station, wait time, transfer time, and on-transit time. For the UPRR Alternative, the average user benefit per boarding passenger would be 10 minutes (AECOM 2009). Public transportation would be restructured to supplement the UPRR Alternative, allowing patrons reduced travel times to the Loop. The congestion at 95th Street Terminal would be reduced by minimizing the number of bus transfers patrons need because they would be able to transfer to or directly board at the proposed stations.

There would be no adverse impacts on public transportation from the UPRR ROW Option. Public transportation would benefit from the UPRR ROW Option.

5.3.1.2 Traffic

Under UPRR ROW Option (2026) conditions, most of the study intersections within the API would operate at LOS "D" or better in both the AM and PM peak hours, as shown in Table 5-8. The traffic data and Synchro results are in Appendix D for the UPRR ROW Option. All increases in traffic volumes are related to vehicle access to park & ride facilities at stations. Under UPRR ROW Option (2026) conditions, there would be 18 intersections that would operate at an unacceptable LOS (LOS "E" or "F") in either or both the AM and PM peak hours. Of those 18 intersections, 11 would operate at conditions worse than the No Build conditions. The intersections that would operate at worse than the No Build conditions are shown in bold in Table 5-8 and are listed below:

- 103rd Street and Halsted Street - AM LOS = F; **PM LOS = E**
- 115th Street and Michigan Avenue - **AM LOS = F; PM LOS = E**
- 115th Street and Cottage Grove Avenue - **AM LOS = F; PM LOS = F**
- 115th Street and Cottage Grove Avenue East - **AM LOS = E**
- 119th Street and Wentworth Avenue - **PM LOS = E**
- 119th Street and State Street - **AM LOS = F; PM LOS = F**
- 119th Street and Michigan Avenue - **AM LOS = E**
- 127th Street and Halsted Street - **AM LOS = E; PM LOS = F**
- 127th Street and Vermont Avenue and Wallace Street - **AM LOS = F; PM LOS = F**
- 127th Street and State Street - **PM LOS = E**
- 130th Street and Indiana Avenue - **AM LOS = F; PM LOS = F**

Under UPRR ROW Option (2030) conditions, most of the study intersections within the API would operate at LOS "D" or better in both the AM and PM peak hours, as shown in Table 5-8. Under UPRR ROW Option (2030) conditions, there would be 21 intersections operating at LOS "E" or "F" in either or both the AM and PM peak hours. Of the 21 intersections, 15 would operate at worse than the No Build conditions. The following 15 intersections would operate at worse than the No Build conditions (shown in bold text in Table 5-8):

- 103rd Street and Halsted Street - AM LOS = F; **PM LOS = E**
- 111th Street and Cottage Grove Avenue - **PM LOS = E**
- 115th Street and Michigan Avenue - **AM LOS = F; PM LOS = E**
- 115th Street and Martin Luther King Drive - **AM LOS = E**; PM LOS = F
- 115th Street and Cottage Grove Avenue - **PM LOS = F**
- 115th Street and Cottage Grove Avenue East - **AM LOS = F**
- 119th Street and Ashland Avenue - **AM LOS = E**; PM LOS = F
- 119th Street and Wentworth Avenue - **PM LOS = F**
- 119th Street and State Street - **AM LOS = F; PM LOS = F**
- 119th Street and Michigan Avenue - **AM LOS = E**
- 127th Street and Halsted Street - **AM LOS = E; PM LOS = F**
- 127th Street and Vermont Avenue and Wallace Street - **AM LOS = F; PM LOS = F**
- 127th Street and State Street - **AM LOS = E; PM LOS = E**
- 130th Street and Indiana Avenue - **AM LOS = F; PM LOS = F**
- 130th Street and Ellis Avenue - **PM LOS = E**

Table 5-8: Union Pacific Railroad Rail Alternative Right-of-Way Option (2026 and 2030) Intersection Level of Service

ID	Intersection	Control Type	2026 UPRR ROW Option		2030 UPRR ROW Option	
			AM Peak-Hour LOS	PM Peak-Hour LOS	AM Peak-Hour LOS	PM Peak-Hour LOS
1	95th Street and Wentworth Avenue	Signalized	B	B	B	B
2	95th Street and Lafayette Avenue	Signalized	D	D	D	D
3	95th Street and State Street	Signalized	D	C	D	C
4	95th Street and Michigan Avenue	Signalized	B	B	B	B
5	98th Place and Halsted Street	Signalized	F	F	F	F
6	99th Street and Halsted Street	Signalized	D	C	D	C
7	98th Place and Wentworth Avenue	Signalized	B	B	B	B
8	99th Street and Wentworth Avenue	Signalized	B	B	B	B
9	99th Street and State Street	Signalized	A	B	A	B
10	99th Street and Michigan Avenue	Signalized	C	B	C	B
11	99th Place and Martin Luther King Drive	Signalized	B	B	B	B
12	100th Street and Martin Luther King Drive	Signalized	B	A	B	A
13	100th Street and Cottage Grove Avenue	Unsignalized	A	C	A	C
14	103rd Street and Vincennes Avenue and Beverly Avenue	Signalized	E	F	E	F
15	103rd Street and Morgan Street	Signalized	B	B	B	B
16	103rd Street and Halsted Street	Signalized	F	**E**	F	**E**
17	103rd Street and Normal Avenue	Signalized	B	B	B	C
18	103rd Street and Wentworth Avenue	Signalized	B	B	B	B
19	103rd Street and State Street	Signalized	B	B	B	B
20	103rd Street and Michigan Avenue	Signalized	B	B	B	B
21	103rd Street and Martin Luther King Drive	Signalized	C	C	C	C
22	103rd Street and Cottage Grove Avenue	Signalized	B	B	B	B
23	103rd Street and Woodlawn Avenue	Signalized	A	A	A	A
24	107th Street and Halsted Street	Signalized	F	C	F	C
25	107th Street and Wentworth Avenue	Signalized	B	B	B	B
26	107th Street and State Street	Signalized	A	B	A	A
27	107th Street and Michigan Avenue	Signalized	B	B	B	B
28	107th Street and Martin Luther King Drive	Signalized	B	B	B	B
29	107th Street and Cottage Grove Avenue	Signalized	B	B	B	B
30	111th Street and Marshfield Avenue	Signalized	C	C	C	C

ID	Intersection	Control Type	2026 UPRR ROW Option		2030 UPRR ROW Option	
			AM Peak-Hour LOS	PM Peak-Hour LOS	AM Peak-Hour LOS	PM Peak-Hour LOS
31	111th Street and Hamlet Avenue	Signalized	D	D	D	D
32	112th Place and Marshfield Avenue	Signalized	B	C	C	C
33	112th Place and Hamlet Avenue	Signalized	E	C	E	C
34	111th Street and Halsted Street	Signalized	C	C	C	C
35	111th Street and Normal Avenue	Signalized	B	B	B	B
36	111th Street and Wentworth Avenue	Signalized	B	A	B	A
37	111th Street and State Street	Signalized	A	B	A	B
38	111th Street and Michigan Avenue	Signalized	B	B	B	B
39	111th Street and Indiana Avenue	Signalized	B	B	B	B
40	111th Street and Martin Luther King Drive	Signalized	B	A	B	A
41	111th Street and Cottage Grove Avenue	Signalized	C	D	C	**E**
42a	111th Street and Langley Avenue	Signalized	B	C	B	C
42b	111th Street and Ellis Avenue	Signalized	C	C	D	D
43	111th Street and Doty Avenue	Signalized	C	C	C	C
44	111th Street and Bishop Ford eastbound Ramps	Unsignalized	D	C	E	C
45	111th Street and Bishop Ford westbound Ramps	Unsignalized	E	C	E	C
46	115th Street and Marshfield Avenue	Signalized	B	B	B	B
47	115th Street and Ashland Avenue	Signalized	B	B	B	B
48	115th Street and Racine Avenue	Signalized	B	C	B	C
49	115th Street and Halsted Street	Signalized	C	C	C	C
50	115th Street and Wentworth Avenue	Signalized	B	B	B	B
51	115th Street and State Street	Signalized	B	B	B	B
52	115th Street and Michigan Avenue	Signalized	**F**	**E**	**F**	**E**
53	115th Street and Indiana Avenue	Signalized	B	B	B	C
54	115th Street and Martin Luther King Drive	Unsignalized	D	F	**E**	F
55a	115th Street and Cottage Grove Avenue	Signalized	**F**	**F**	D	**F**
55b	115th Street and Cottage Grove Avenue East	Signalized	**E**	D	**F**	D
56	115th Street and Bishop Ford Freeway eastbound Ramps	Unsignalized	D	C	D	C
57	115th Street and Bishop Ford Freeway westbound Ramps	Unsignalized	D	C	D	C
58	119th Street and Marshfield Avenue	Signalized	D	D	D	D
59	119th Street and Ashland Avenue	Signalized	D	F	**E**	F
60	119th Street and Halsted Street	Signalized	C	D	C	D

ID	Intersection	Control Type	2026 UPRR ROW Option		2030 UPRR ROW Option	
			AM Peak-Hour LOS	PM Peak-Hour LOS	AM Peak-Hour LOS	PM Peak-Hour LOS
61	119th Street and Wentworth Avenue	Signalized	B	**E**	B	**F**
62	119th Street and State Street	Signalized	**F**	**F**	**F**	**F**
63	119th Street and Michigan Avenue	Signalized	**E**	B	**E**	B
64	127th Street and Paulina Street	Signalized	C	D	C	D
65	127th Street and Marshfield Avenue	Signalized	D	C	D	C
66	127th Street and Ashland Avenue	Signalized	C	D	C	D
67	Ashland Avenue and Vermont Avenue	Signalized	C	C	C	C
68	127th Street and Halsted Street	Signalized	**E**	**F**	**E**	**F**
69	Vermont Avenue and Halsted Street	Signalized	B	B	B	B
70	127th Street and Vermont Avenue and Wallace Street	Signalized	**F**	**F**	**F**	**F**
71	127th Street and State Street	Signalized	D	**E**	**E**	**E**
72	127th Street and Michigan Avenue	Signalized	A	D	B	D
73	130th Street and Indiana Avenue	Signalized	**F**	**F**	**F**	**F**
74	130th Street and Ellis Avenue	Signalized	A	D	B	**E**

Notes:
UPRR = Union Pacific Railroad, LOS = level of service
Signalized intersection LOS reported as the average for all movements. Unsignalized LOS reported is the LOS of the worst movement. LOS "E" and "F" are shown in bold.

Mitigation measures to reduce or minimize the impacts were evaluated for the transportation network surrounding the UPRR ROW Option. Mitigation measures for intersections near the affected intersection may also be necessary to provide better flow of traffic; therefore, the provided mitigation measures include the affected intersections as well as adjacent or nearby intersections. Table 5-9 lists the mitigation measures that would address impacts on the study intersections under UPRR ROW Option (2030) conditions. At intersections where adverse impacts are expected, potential mitigation measures have been identified to offset the portion of the LOS deterioration attributable to the RLE Project.

Table 5-9: Mitigation Measures for the Union Pacific Railroad Rail Alternative Right-of-Way Option (2030) Conditions

ID	Intersection	Mitigation Measure
16	103rd Street and Halsted Street	PM: Optimize cycle length/splits.
41	111th Street and Cottage Grove Avenue	PM: Optimize splits.
52	115th Street and Michigan Avenue	AM: Optimize splits. PM: Optimize cycle length/splits.
54	115th Street and Martin Luther King Drive	Remove on-street parking lane for additional through eastbound/westbound lane on 115th Street.
55a	115th Street and Cottage Grove Avenue	AM/PM: Optimize Cycle length. Optimize PM splits.
55b	115th Street and Cottage Grove Avenue East	AM/PM: Optimize Cycle length. Optimize PM splits.
59	119th Street and Ashland Avenue	PM: Optimize splits
61	119th Street and Wentworth Avenue	PM: Optimize splits
62	119th Street and State Street	AM/PM: Optimize splits.
63	119th Street and Michigan Avenue	AM: Optimize splits.
64	127th Street and Paulina Street	AM/PM: Optimize cycle length/splits.
65	127th Street and Marshfield Avenue	AM/PM: Optimize cycle length/splits.
66	127th Street and Ashland Avenue	AM/PM: Optimize cycle length/splits.
68	127th Street and Halsted Street	AM/PM: Optimize cycle length and splits.
70	127th Street and Vermont Avenue and Wallace Street	Add additional northeast right turn lane. Change westbound through/left to dedicated westbound left turn lane. Restrict northeast bound to northbound movement. Actuate signal. Optimize cycle length/splits.
71	127th Street and State Street	AM/PM: Optimize cycle length/splits
72	127th Street and Michigan Avenue	PM: Optimize cycle length/splits
73	130th Street and Indiana Avenue	AM/PM: Add northbound right turn lane. Optimize cycle length/splits
74	130th Street and Ellis Avenue	PM: Optimize splits

Under UPRR ROW Option mitigated (2030) conditions, most of the study intersections within the API would operate at LOS "D" or better in both the AM and PM peak hours, as shown in Table 5-10. Under UPRR ROW Option mitigated (2030) conditions, some intersections would operate at LOS "E" or "F;" however, these intersections would be no worse than No Build (2030) conditions. Mitigated conditions would not result in additional intersections with unacceptable LOS. As such, there would be no adverse permanent traffic impacts for this alternative. Coordination regarding LOS thresholds was conducted with IDOT and CDOT. LOS D is considered to be acceptable for urban areas.

Table 5-10: Union Pacific Railroad Rail Alternative Right-of-Way Option Mitigated Alternative (2030) Intersection Level of Service

ID	Intersection	Control Type	2030 No Build Alternative		2030 UPRR ROW Option Mitigated	
			AM Peak-Hour LOS	PM Peak-Hour LOS	AM Peak-Hour LOS	PM Peak-Hour LOS
1	95th Street and Wentworth Avenue	Signalized	B	B	B	B
2	95th Street and Lafayette Avenue	Signalized	D	D	D	D
3	95th Street and State Street	Signalized	D	C	D	C
4	95th Street and Michigan Avenue	Signalized	B	B	B	B
5	98th Place and Halsted Street	Signalized	**F**	**F**	**F**	**F**
6	99th Street and Halsted Street	Signalized	D	D	D	C
7	98th Place and Wentworth Avenue	Signalized	B	B	B	B
8	99th Street and Wentworth Avenue	Signalized	B	B	B	B
9	99th Street and State Street	Signalized	A	B	A	B
10	99th Street and Michigan Avenue	Signalized	C	B	C	B
11	99th Place and Martin Luther King Drive	Signalized	B	B	B	B
12	100th Street and Martin Luther King Drive	Signalized	B	A	B	A
13	100th Street and Cottage Grove Avenue	Unsignalized	A	C	A	C
14	103rd Street and Vincennes Avenue and Beverly Avenue	Signalized	**E**	**F**	**E**	**F**
15	103rd Street and Morgan Street	Signalized	B	B	B	B
16	103rd Street and Halsted Street	Signalized	**F**	D	**F**	C
17	103rd Street and Normal Avenue	Signalized	B	B	B	C
18	103rd Street and Wentworth Avenue	Signalized	B	B	B	B
19	103rd Street and State Street	Signalized	B	B	B	B
20	103rd Street and Michigan Avenue	Signalized	B	B	B	B
21	103rd Street and Martin Luther King Drive	Signalized	C	C	C	C
22	103rd Street and Cottage Grove Avenue	Signalized	B	B	B	B
23	103rd Street and Woodlawn Avenue	Signalized	A	A	A	A
24	107th Street and Halsted Street	Signalized	**F**	C	**F**	C
25	107th Street and Wentworth Avenue	Signalized	B	B	B	B
26	107th Street and State Street	Signalized	A	A	A	A
27	107th Street and Michigan Avenue	Signalized	B	B	B	B
28	107th Street and Martin Luther King Drive	Signalized	B	B	B	B

ID	Intersection	Control Type	2030 No Build Alternative		2030 UPRR ROW Option Mitigated	
			AM Peak-Hour LOS	PM Peak-Hour LOS	AM Peak-Hour LOS	PM Peak-Hour LOS
29	107th Street and Cottage Grove Avenue	Signalized	B	B	B	B
30	111th Street and Marshfield Avenue	Signalized	C	C	C	C
31	111th Street and Hamlet Avenue	Signalized	D	D	D	D
32	112th Place and Marshfield Avenue	Signalized	B	C	C	C
33	112th Place and Hamlet Avenue	Signalized	**E**	C	**E**	C
34	111th Street and Halsted Street	Signalized	C	C	C	C
35	111th Street and Normal Avenue	Signalized	B	A	B	B
36	111th Street and Wentworth Avenue	Signalized	B	A	B	A
37	111th Street and State Street	Signalized	A	B	B	B
38	111th Street and Michigan Avenue	Signalized	B	B	B	B
39	111th Street and Indiana Avenue	Signalized	B	B	B	B
40	111th Street and Martin Luther King Drive	Signalized	B	A	B	A
41	111th Street and Cottage Grove Avenue	Signalized	C	D	C	C
42a	111th Street and Langley Avenue	Signalized	B	C	B	C
42b	111th Street and Ellis Avenue	Signalized	C	C	D	D
43	111th Street and Doty Avenue	Signalized	C	C	C	C
44	111th Street and Bishop Ford eastbound Ramps	Unsignalized	**E**	C	**E**	C
45	111th Street and Bishop Ford westbound Ramps	Unsignalized	**E**	B	**E**	C
46	115th Street and Marshfield Avenue	Signalized	B	B	B	B
47	115th Street and Ashland Avenue	Signalized	B	B	B	B
48	115th Street and Racine Avenue	Signalized	B	C	B	C
49	115th Street and Halsted Street	Signalized	C	C	C	C
50	115th Street and Wentworth Avenue	Signalized	B	B	B	B
51	115th Street and State Street	Signalized	B	B	B	B
52	115th Street and Michigan Avenue	Signalized	B	D	B	C
53	115th Street and Indiana Avenue	Signalized	B	B	B	C
54	115th Street and Martin Luther King Drive	Unsignalized	D	**F**	D	**F**
55a	115th Street and Cottage Grove Avenue	Signalized	D	C	B	C
55b	115th Street and Cottage Grove Avenue East	Signalized	**E**	C	C	B

ID	Intersection	Control Type	2030 No Build Alternative		2030 UPRR ROW Option Mitigated	
			AM Peak-Hour LOS	PM Peak-Hour LOS	AM Peak-Hour LOS	PM Peak-Hour LOS
56	115th Street and Bishop Ford Freeway eastbound Ramps	Unsignalized	D	C	D	C
57	115th Street and Bishop Ford Freeway westbound Ramps	Unsignalized	D	C	D	C
58	119th Street and Marshfield Avenue	Signalized	D	D	D	D
59	119th Street and Ashland Avenue	Signalized	D	**F**	D	**F**
60	119th Street and Halsted Street	Signalized	C	C	C	D
61	119th Street and Wentworth Avenue	Signalized	B	B	B	B
62	119th Street and State Street	Signalized	B	B	C	B
63	119th Street and Michigan Avenue	Signalized	A	A	C	B
64	127th Street and Paulina Street	Signalized	C	C	B	C
65	127th Street and Marshfield Avenue	Signalized	C	C	C	C
66	127th Street and Ashland Avenue	Signalized	C	C	C	C
67	Ashland Avenue and Vermont Avenue	Signalized	C	C	C	C
68	127th Street and Halsted Street	Signalized	C	C	C	D
69	Vermont Avenue and Halsted Street	Signalized	B	B	B	B
70	127th Street and Vermont Avenue and Wallace Street	Signalized	D	D	C	D
71	127th Street and State Street	Signalized	B	B	B	C
72	127th Street and Michigan Avenue	Signalized	A	B	B	C
73	130th Street and Indiana Avenue	Signalized	C	C	D	D
74	130th Street and Ellis Avenue	Signalized	A	A	B	B

Notes:
UPRR = Union Pacific Railroad, ROW = right-of=way, LOS = level of service
Signalized intersection LOS reported as the average for all movements. Unsignalized LOS reported is the LOS of the worst movement. LOS "E" and "F" are shown in bold.

5.3.1.3 Freight Transportation

Rail

As part of the UPRR ROW Option the UPRR trains would be relocated to another corridor as part of a separate, earlier project that may occur regardless of the RLE implementation; therefore, no adverse permanent impacts would result from by UPRR operations. There would be no adverse permanent impacts on the CN or IHB freight operations.

Truck

The biggest challenge to the trucking industry is highway congestion, according to the *GO TO 2040 Regional Plan*. Congestion data prepared by CMAP shows that on several corridors where

truck volumes are over 10,000 per day, congestion during morning peak periods increases travel times an average of 60 percent. The 130th Street station park & ride facility may divert motorists from I-94 commuting into the city during these peak periods. With the extension of the Red Line to 130th Street, the regional vehicle-miles traveled would be reduced by 0.02 percent, removing some motorists from the surrounding roadways (CMAP 2012b).

5.3.1.4 Bicycle Facilities

Under the UPRR ROW Option there would be no adverse permanent impacts on existing or recommended bike routes. Recommended bike routes along 103rd, 107th, 111th, and 115th Streets have the potential to be used by bicyclists to access the RLE (see Figure 4-6). The stations for the UPRR Alternative would have bicycle parking to accommodate bicyclists. This alternative would create easy and efficient transit connections to the RLE and the larger network of CTA stops and stations for bicyclists.

5.3.1.5 Pedestrians

The UPRR ROW Option would provide pedestrians with more choices, flexibility, and potentially reduced travel times as compared to other UPRR options. Under this option the existing at-grade crossings at 101st Street, 103rd Street, 107th Street, 109th Street, 111th Street, 115th Street, and State Street would no longer be active railroad crossings. This change would improve pedestrian safety at the 103rd Street, 111th Street, and Michigan Avenue stations as compared to other UPRR options.

Implementing the UPRR ROW Option would result in beneficial impacts at stations by upgrading intersections with ADA-compliant curb ramps and replacing deteriorated sidewalks. These improvements would provide access for all users and increase pedestrian safety.

Segment UA

103rd Street Station

Existing striped crosswalks at Eggleston Avenue and 103rd Street and Harvard Avenue and 103rd Street could be used to access the station and the surface parking lots. These crosswalks would be improved with the construction of the proposed surface lots. Entrances to the station would be near the surface parking lots, allowing for a direct route from the platform to the parking lot, allowing users to avoid crossing 103rd Street. The entrance to the parking lot east of the station would be in the southeast corner of the parking lot. The parking lot on the south side of 103rd Street would have an entrance at the intersection of 103rd Street and Eggleston Avenue, allowing cars to leave the parking lot farther away from the station, where the majority of pedestrian traffic would occur. All of these improvements would contribute to convenient, safe, and secure access for all users.

111th Street Station

Because the majority of the existing properties adjacent to the existing railroad tracks are undeveloped, sidewalks would need to be provided for pedestrian access to the primary and

auxiliary entrances of the proposed station. Existing striped crosswalks are not close to the location of the proposed station's primary entrance. The surface parking lots would be on the east and west side of the station, allowing for a direct route from the platform to the parking lot, in which users could avoid crossing 111th Street. The east surface parking lot would have an entrance at the southeast corner of the lot and the west surface parking lot would have an entrance along Eggleston Avenue. Both of these entrances would be away from the proposed station location where the majority of pedestrian traffic would occur. Eggleston Avenue is currently a dead-end street and has little traffic. The majority of traffic on the street would occur from the surface parking lot. All of these improvements would contribute to convenient, safe, and secure access for all users.

Potential pedestrian conflicts with vehicular traffic would be mitigated through the addition of a striped crosswalk on 111th Street at the location of the primary entrance due to the tendency of pedestrians to cross at the entrance/exit of the station.

Michigan Avenue Station

The existing pedestrian access on 116th Street east of Michigan Avenue would be improved with the construction of the surface lot and the auxiliary station entrance. The existing viaduct and existing sidewalks would be replaced, providing a continuous ADA-accessible route east and west of the station and sidewalk connectivity to the existing homes east of the station on 116th Street. The parking garage would be located close to the primary entrance of the proposed station, allowing commuters who park in this garage to avoid crossing Michigan Avenue or 116th Street. Parking lot entrances would be on State Street and 116th Street, which are a good distance from the station, where pedestrian traffic would be concentrated. The surface parking lot would be near the auxiliary entrance of the station. Commuters would have a direct route from the surface lot to the platform without any need to cross 116th Street.

Segment UB

130th Street Station

- South Station Option: The existing parcels in the location of the proposed station are currently undeveloped land. Proposed sidewalks along 130th Street and Ellis Avenue, as well as striped crosswalks at the intersection of 130th Street and Ellis Avenue, would provide a safe pedestrian access for the Altgeld Gardens neighborhood residents. The auxiliary entrance would also provide direct access to the Altgeld Gardens neighborhood by eliminating the need to cross 130th Street. It would also provide access to students and faculty at the Carver Military Academy High School, east of the station on Doty Avenue.

- West Station Option: Part of the proposed station improvements include sidewalks along 130th Street and Evans Avenue, a proposed traffic signal, and marked crosswalks. These improvements would provide a continuous ADA-accessible route from the Altgeld Gardens neighborhood to the station.

There would be no adverse impacts on pedestrians from the UPRR ROW Option.

5.3.1.6 Parking

The UPRR ROW Option alignment is within the existing ROW of the UPRR. On-street parking restrictions already exist at the railroad crossings. There would be no impact on on-street parking due to the proposed stations. Existing bus stops are on 103rd Street and 111th Street at the location of the proposed stations. These existing stops already have a no parking zone in the locations of the existing bus lanes, so there would be no impact on on-street parking due to bus stop locations. There are two existing bus stops on Michigan Avenue from Kensington Avenue to 116th Street. These existing bus stop locations could serve the proposed station; therefore, no on-street parking would be affected by adding bus stop locations.

Each of the proposed stations would have surface parking lots and/or parking garages, which would expand the reach of the RLE and provide an opportunity for users to access the station by car. Users may benefit from reduced travel time and reduced travel cost by riding the Red Line. Another benefit would be that motorists could be diverted from congested sections of roadway. Sufficient parking capacity would be provided in all locations to avoid spillover parking into the residential areas near the station locations. Table 5-11 presents a summary of the proposed parking for each of the stations.

Segment UA

Table 5-11: Segment UA Proposed Park & Ride Facilities

Station	Parking Type	Capacity	Location	Description
103rd Street	Surface lot	100	East of station, North side of 103rd Street	Bus turnaround within the lot for route #9
	Surface lot	100	Adjacent to station on the south side of 103rd Street	
111th Street	Surface lot	100	East of station. North side of 111th Street	
	Surface lot	100	West of station. North side of 111th Street	Bus turnaround within the lot for route #352
Michigan Avenue	Three-Story Parking Garage	750	Southwest of station	Parking garage with ground level available for retail and/or community facilities. Bus turnaround on the ground level for route #119 and #359
	Surface lot	250	Located northeast of the station.	

Segment UB

130th Street Station

There would be no adverse impact on any existing off-street or on-street parking as a result of the South Station Option or the West Station Option. Each of the station options would include a bus terminal with four bus bays and an overhead canopy. A park & ride facility with 2,300 parking spaces would be constructed by 2030 for the South Station Option. The West Station Option would include a park & ride facility with 1,950 parking spaces plus a surface lot with 350 parking spaces. The park & ride facility would be near the I-94 Bishop Ford Freeway and 130th Street interchange. This facility would expand the reach of the RLE to the south suburban and northwest Indiana automobile commuters. These commuters could benefit from decreased travel times and cost by riding the Red Line and avoiding congestion and travel delays on the Dan Ryan Expressway. See Table 5-12 for summary of proposed parking options for the 130th Street station.

Table 5-12: Segment UB Proposed Park & Ride Facilities

Station	Parking Type	Capacity	Location	Description
130th Street South Station Option	Seven-Story Parking Garage	2,300	North of 130th Street adjacent to the NICTD/CSS & SBRR tracks	Bus terminals with 4 bus bays and an overhead canopy
130th Street West Station Option	Four-Story Parking Garage	1,950	North of 130th Street	Bus terminals with 4 bus bays and an overhead canopy
	Surface lot	350		

5.3.2 Construction Impacts and Mitigations - Union Pacific Railroad Rail Alternative - Right-of-Way Option

5.3.2.1 Public Transportation

Bus Transit

The construction activities associated with the UPRR ROW Option would temporarily affect the physical capacity of roadways and intersections requiring detours. This may lead to increased travel times and possible shift in traffic volumes, increasing travel times for bus transit users. Bus stop locations may be eliminated or relocated temporarily and buses rerouted during construction activities. Bus stops for routes intersecting the UPRR Alternative (#34, #103, #111, and #115) will have changes only when construction activities are in the vicinity of the applicable crossing. With adherence to local, state, and federal construction and temporary traffic and public transportation management guidelines, no adverse construction impacts from the UPRR ROW Option would result.

Commuter Rail

The UPRR ROW Option would consist of new construction of dual-track, elevated structure within the UPRR ROW, branching off and running along the east side of the corridor and over

existing CN/ME tracks. Construction at the CN/ME crossing would be phased to minimize the impacts on Metra operations. This impact is expected only in segment UB.

During new track roadbed construction for the 120th Street yard and shop and the new access road for the existing MWRD facility, construction over and adjacent to the NICTD/CSS & SBRR ROW would occur. Flagging operations and scheduled track closures would occur during these construction activities. Construction would be phased to minimize the impacts on passenger trains.

5.3.2.2 Traffic

Construction activities associated with this alternative would temporarily affect the physical capacity of local roadways and intersections. This may lead to increased travel times, possible shift in traffic volumes, and the need to reroute traffic patterns during construction. On the local streets, steel beam placement across a street would require temporary shutdown of traffic across the crossing. Detours would be to adjacent parallel streets with existing crossings of the UPRR tracks.

Work within the median of I-94 would require temporary lane closures. Proposed structure construction would be sequenced to minimally affect traffic flow on I-94. Increased traffic congestion due to construction activities may temporarily increase travel times along this portion of I-94.

Dual-track, elevated structures would be constructed through the I-94/I-57 interchange, across the westbound I-57 entrance ramp from northbound I-94, and within the I-57 corridor. For superstructure erection over expressway traffic lanes, temporary shutdown of all traffic would be required at nighttime, per IDOT approval, typically at times of low traffic volume. Proposed structure construction would be sequenced to minimally affect traffic flow on I-57. Increased traffic congestion due to construction activities may temporarily increase travel times along this portion of I-57. With adherence to local, state, and federal construction and temporary traffic management guidelines, no lasting adverse traffic impacts would result from the UPRR ROW Option.

5.3.2.3 Freight Transportation

Segment UA

Rail

The UPRR ROW Option would consist of new construction of a dual-track, elevated structure within the UPRR corridor, branching off and running along the east side of the corridor and over existing CN/ME tracks. There would be no impact on the UPRR operations due to construction activities because UPRR trains would be relocated to another corridor as part of a separate, earlier project.

Truck

Work within the median of I-94 would require temporary lane closures. Proposed structure construction would be sequenced to minimally affect traffic flow on I-94. Increased traffic congestion due to construction activities may temporarily increase freight truck travel times for shipping routes that include this portion of I-94.

Dual-track, elevated structures would be constructed through the I-94/I-57 interchange, across the westbound I-57 entrance ramp from northbound I-94, and within the I-57 corridor. For superstructure erection over expressway traffic lanes, intermittent, temporary shutdown (typically no more than 15-minute increments) of all traffic would be required at nighttime, per IDOT approval. Proposed structure construction would be sequenced to minimally affect traffic flow on I-57. Increased traffic congestion due to construction activities may temporarily increase freight truck travel times for shipping routes that include this portion of I-57.[4]

Segment UB

Construction at the CN/ME crossing would be phased to minimize the impacts on CN and Metra operations. Railroad flagging and scheduled track closures would be needed to construct the crossing.

During new track roadbed construction for the 120th Street yard and shop and the new access road for the existing MWRD facility, construction over and adjacent to the NICTD/CSS & SBRR ROW would occur. Flagging operations and scheduled track closures would also occur during these construction activities. Construction would be phased to minimize impacts on freight operations.

A portion of the new track alignment would be constructed over IHB tracks north of 130th Place. Construction activities would be coordinated with IHB railroad to ensure that no construction activities would affect freight operations.

5.3.2.4 Bicycle Facilities

Bicyclists using recommended low traffic residential streets such as 103rd Street, 111th Street, or 115th Street may incur increased travel times due to detours or increase vehicular traffic due to construction activities.

5.3.2.5 Pedestrians

Due to the construction of the aerial structure and stations, sidewalks would need to be temporarily closed during these construction activities. Increased travel distance and time may be incurred due to pedestrian traffic reroutes.

[4] Per IDOT Average Daily Truck Traffic maps, an average of 5,700 trucks per day travel along I-57 just east of Halsted Street. Based on time-of-day truck distribution, less than one percent of this daily average travel during each hour between midnight and 4:00 AM weekdays.

5.3.2.6 Parking

On-street parking would be temporarily affected during construction of the aerial structure and stations. Construction of park & ride lots would also contribute to temporary on-street parking loss due to maintenance of traffic during construction activities.

5.3.3 Cumulative Impacts and Mitigations - Union Pacific Railroad Rail Alternative - Right-of-Way Option

There would be no adverse cumulative impacts due to the implementation of the UPRR ROW Option. Cumulative benefits, related to the earlier project to remove UPRR trains from the corridor, include decreased delay for vehicles and buses at at-grade railroad crossings and increased pedestrian safety at the crossings.

5.3.4 120th Street Yard and Shop

A 270-car yard and shop facility would be constructed on a combination of industrial/vacant land to the east of the CN/ME tracks and west of the NICTD/CSS & SBRR tracks at approximately 120th Street and Cottage Grove Avenue. The yard would be entirely at grade. A nominal amount of parking for employees would be included at the yard. A substation is tentatively proposed for a location within the 120th Street yard, west of the existing railroad tracks and east of the proposed shop facility.

5.3.4.1 Permanent Impacts and Mitigations

Under the UPRR ROW Option there would be no permanent impacts on bicycle or pedestrians because the existing site is a combination of industrial and vacant land. Pedestrian access by the general public would be restricted and discouraged. Because of the location of the yard, no public transportation or parking facilities would be affected by this alternative. Some proposed parking would be provided for yard employees.

5.3.4.2 Construction Impacts and Mitigations

During new track roadbed construction for the 120th Street yard and shop and the new access road for the existing MWRD facility, construction over and adjacent to the NICTD/CSS & SBRR ROW would occur. Flagging operations and scheduled track closures would also occur during these construction activities. Construction would be phased to minimize impacts on MWRD operations and NICTD/CSS & SBRR operations.

5.4 Union Pacific Railroad Rail Alternative - East Option

The UPRR Rail Alternative East Option would include construction of an elevated structure following an alignment similar to that of the UPRR ROW Option. The difference is that CTA tracks would be placed immediately adjacent to and east of the UPRR ROW Option alignment. Four stations would be included at 103rd Street, 111th Street, Michigan Avenue, and 130th Street.

5.4.1 Permanent Impacts and Mitigations - Union Pacific Railroad Rail Alternative - East Option

5.4.1.1 Public Transportation

The UPRR Rail Alternative option alignments are in similar locations. See Section 5.3.1.1 for permanent impacts on public transportation in Segments UA and UB.

5.4.1.2 Traffic

The UPRR Rail Alternative option alignments are in similar locations. See Section 5.3.1.2 for permanent traffic impacts. Delays waiting for freight trains to pass through at-grade crossings would be similar to the No Build Alternative.

5.4.1.3 Freight Transportation

Rail

As part of the East Option, the UPRR tracks would continue to be operational. Because the proposed track would be elevated, there would be no permanent impacts on the UPRR freight train operations. Future freight train movements on the UPRR track may increase, causing additional delays to motorists at at-grade crossings; however, freight train movements typically occur during off-peak traffic travel times.

Truck

The East Option would have a similar impact on freight truck operations as the UPRR ROW Option. Because the proposed track would be elevated, there would be no impact on truck routes. The 130th Street station park & ride facility may divert motorists from I-94 commuting into the city during these peak periods. This may help alleviate congestion on the expressway, reducing freight truck travel times and cost.

5.4.1.4 Bicycle Facilities

The UPRR Rail Alternative option alignments are in similar locations. See Section 5.3.1.4 for permanent impacts on bicyclists.

5.4.1.5 Pedestrians

The East Option would provide pedestrians with more mode choices, flexibility, and potentially reduced travel times as compared to the No Build Alternative. This option alignment is east of the existing UPRR tracks. The existing at-grade crossings at 101st Street, 103rd Street, 107th Street, 109th Street, 111th Street, 115th Street, and State Street would remain.

Implementing the East Option would result in beneficial impacts at stations by upgrading intersections with ADA-compliant curb ramps and replacing deteriorated sidewalks. These improvements would provide access for all users and increase pedestrian safety.

Segment UA

103rd Street Station

Existing striped crosswalks at Eggleston Avenue and 103rd Street, and Harvard Avenue and 103rd Street, could be used to access the station and the surface parking lots. These crosswalks would be improved with the construction of the proposed surface lots. Entrances to the station would be near the surface parking lots, allowing for a direct route from the platform to the parking lot. The location of the surface lot west of the UPRR tracks would require pedestrians to cross the tracks to access the station. Existing railroad crossing signals with road gates and railroad crossing pavement markings are at the crossing on 103rd Street. Pedestrian gates would need to be installed to prevent pedestrians from crossing the active UPRR tracks during freight movements. The parking lot on the south side of 103rd Street would have an entrance at the intersection of 103rd and Eggleston Avenue, allowing cars to leave the parking lot farther away from the station, where the majority of pedestrian traffic would occur. The entrance to the parking lot east of the proposed station would be in the southeast corner of the parking lot. All of these improvements would contribute to convenient, safe, and secure access for all users.

There would be no adverse impacts on pedestrians after mitigating for pedestrian crossing gates at 103rd street.

111th Street Station

Because the majority of the properties adjacent to the existing railroad tracks are currently undeveloped, proposed sidewalks would need to be provided for pedestrian access to the primary and auxiliary entrances of the station. Existing striped crosswalks are not close to the proposed primary entrance of the station. The surface parking lots would be on the east and west sides of the station, allowing for a direct route from the platform to the parking lot in which users could avoid crossing 111th Street. The location of the surface lot west of the UPRR tracks would require pedestrians to cross the tracks to access the station. Existing railroad crossing signals with road gates and railroad crossing pavement markings are at the crossing on 111th Street. The east surface parking lot would have an entrance at the southeast corner of the lot and the west surface parking lot would have an entrance along Eggleston Avenue. Both of these entrances would be away from the proposed station location, where the majority of pedestrian traffic would occur. Eggleston Avenue north of 11th Street is a dead-end street less than one block in length. The majority of traffic on the street would occur from the surface parking lot. All of these improvements would contribute to convenient, safe, and secure access for all users.

There would be no adverse impacts after mitigating for the pedestrian crossing gates at 111th Street and providing striped crosswalks.

Michigan Avenue Station

The existing pedestrian access on 116th Street east of Michigan Avenue would be improved with the construction of the surface lot and the auxiliary station entrance. The sidewalk under and adjacent to the existing viaduct for the UPRR tracks would be replaced, providing a continuous

ADA-accessible route east and west of the station and sidewalk connectivity to the existing residential homes east of the station on 116th Street. The parking garage would be close to the primary entrance of the station, allowing commuters who park in this garage to avoid crossing Michigan Avenue or 116th Street. Pedestrians would not have to cross the UPRR tracks on 116th Street or Michigan Avenue, because the tracks would be elevated. There would be an entrance on State Street and 116th Street, which would be a good distance from the station, where pedestrian traffic would be concentrated. The surface parking lot would be near the auxiliary entrance of the station. Commuters would have a direct route from the surface lot to the platform without any need to cross 116th Street.

Segment UB

The UPRR Rail Alternative option alignments are in similar locations. See Section 5.3.1.5 for permanent impacts on Segment UB.

5.4.1.6 Parking

Each of the station locations would have surface parking lots and/or parking garages. These parking facilities would expand the reach of the RLE and provide an opportunity for users to access the station by car. These users may benefit from reduced travel time and reduced travel cost. Another benefit would be that motorists could be diverted from congested sections of roadway. Sufficient parking capacity would be provided in all locations to avoid spillover parking into the residential areas near the station locations. Table 5-13 presents a summary of the proposed parking for each of the stations.

Segment UA

Table 5-13: Union Pacific Railroad Rail Alternative East Option Park & Ride Facilities

Station	Parking Type	Capacity	Location	Description
103rd Street	Surface Lot	75	East of proposed station, North side of 103rd Street	Bus turnaround within the lot for route #9
	Surface Lot	125	West of proposed station on the south side of 103rd Street	
111th Street	Surface Lot	55	East of proposed station. North side of 110th Place	
	Surface Lot	145	West of proposed station. North side of 111th Street	Bus turnaround within the lot for route #352
Michigan Avenue	Three-Story Parking Garage	825	Southwest of proposed station	Parking garage with ground level available for retail and/or community facilities. Bus turnaround on the ground level for route #119 and #359
	Surface Lot	175	Located northeast of the station.	

Segment UB

130th Street Station

The 130th Street South Station Option and West Station Option would be the same for all of the UPRR Rail Alternatives. Refer to Section 5.3.1.6, for permanent impacts on Segment UB Parking Facilities.

5.4.2 Construction Impacts and Mitigations - Union Pacific Railroad Rail Alternative - East Option

5.4.2.1 Public Transportation

Bus Transit

- The construction activities associated with the East Option would temporarily affect the physical capacity of roadways and intersections requiring detours. This may lead to increased travel times and possible shift in traffic volumes, increasing travel times for bus transit users. Bus stop locations may be eliminated or relocated temporarily and buses rerouted during construction activities. With adherence to local, state, and federal construction and temporary traffic and public transportation management guidelines, no adverse impacts would result from the East Option.

Commuter Rail

Segment UA

The East Option would consist of new construction of dual-track, elevated structure immediately adjacent to and east of the UPRR ROW, branching off and running along the east side of the corridor and over existing CN/ME tracks.

Segment UB

Refer to Section 5.3.2.1 for construction impacts on Segment UB.

5.4.2.2 Traffic

The construction activities associated with this alternative would temporarily affect the physical capacity of local roadways and intersections. This may lead to increased travel times, possible shift in traffic volumes, and the need to reroute traffic patterns during construction.

Work within the median of I-94 would require temporary lane closures. Proposed structure construction would be sequenced to minimally affect traffic flow on I-94. Increased traffic congestion due to construction activities may temporarily increase travel times along this portion of I-94.

The East Option alignment curves over I-57 and runs parallel to the UPRR tracks. Dual-track, elevated structures would be constructed through the I-94/I-57 interchange, across the westbound I-57 entrance ramp from northbound I-94, and within the I-57 corridor. For superstructure erection over expressway traffic lanes, intermittent, temporary shutdown of all traffic would be required at nighttime, per IDOT approval. Temporary shutdown of other traffic lanes (for work in the adjacent median) would occur at nighttime and low traffic volume intervals per IDOT approval. Proposed structure construction would be sequenced to minimally affect traffic flow on I-57. Increased traffic congestion due to construction activities may temporarily increase travel times along this portion of I-57.

With adherence to local, state, and federal construction and temporary traffic management guidelines, no lasting adverse traffic impacts would result from the East Option.

5.4.2.3 Freight Transportation

Segment UA

Rail

The East Option would consist of new construction of dual-track, elevated structure immediately adjacent to and east of the UPRR ROW, branching off and running along the east side of the corridor and over existing CN/ME tracks. The East Option would require construction activities to occur while UPRR tracks are operational. The work would be sequenced along the UPRR corridor to minimize impacts on UPRR operations. Construction adjacent to railroads would require flagging operations and scheduled track closures. Signal devices would need to be moved

or temporary signals installed to replace existing signals during construction of viaducts for the following at-grade crossings: 101st Street, 103rd Street, 107th Street, 109th Street, 111th Street, 115th Street, and State Street.

Truck

Work within the median of I-94 would require temporary lane closures. Proposed structure construction would be sequenced to minimally affect traffic flow on I-94. Increased traffic congestion due to construction activities may temporarily increase freight truck travel times for shipping routes that include this portion of I-94.

The East Option alignment curves over I-57 and runs parallel to the UPRR tracks. Dual-track, elevated structures would be constructed through the I-94/I-57 interchange, across the westbound I-57 entrance ramp from northbound I-94, and within the I-57 corridor. For superstructure erection over expressway traffic lanes, intermittent, temporary shutdown of all traffic would be required at nighttime, per IDOT approval. Temporary shutdown of other traffic would occur at nighttime and low traffic volume intervals per IDOT approval. Proposed structure construction would be sequenced to minimally affect traffic flow on I-57. Increased traffic congestion due to construction activities may temporarily increase freight truck travel times for shipping routes that include this portion of I-57.

Segment UB

Refer to Section 5.3.2.3 for construction impacts on Segment UB related to freight transportation.

5.4.2.4 Bicycle Facilities

The UPRR Rail Alternative option alignments are in similar locations. See Section 5.3.2.4 for construction impacts on bicyclists.

5.4.2.5 Pedestrians

The UPRR Rail Alternative option alignments are in similar locations. See Section 5.3.2.5 for construction impacts on pedestrians.

5.4.2.6 Parking

The UPRR Rail Alternative option alignments are in similar locations. See Section 5.3.2.6 for construction impacts on parking facilities.

5.4.3 Cumulative Impacts and Mitigations - Union Pacific Railroad Rail Alternative - East Option

5.4.3.1 Segment UA

Freight Transportation

The Chicago Region Environmental and Transportation Efficiency (CREATE) Program 75th Street Corridor Improvement Project (CIP) consists of the following improvements:

- Reconfiguring the Belt Railway of Chicago main tracks between the Dan Ryan and Belt Junction, where there are existing conflicts between the freight railroads and Metra SouthWest Service.
- Reconfiguring and building a third Belt Railway Company main track, and constructing a flyover to connect the Metra SouthWest Service to the RI District Line in the vicinity of 74th Street and Normal Avenue and 75th Street and Parnell Avenue.
- Constructing a bridge that substantially reduces conflicts between CSX and Belt Railway Company, Metra (Rock Island District) and NS.
- Road-rail grade separation of 71st Street and CSX freight line north of project boundary

The corridor improvements would be north of the proposed UPRR Rail Alternative alignments. Table 5-14 summarizes the CIP train model volumes based on the above improvements for the UPRR.

Table 5-14: Existing and Forecast Train Volumes for Union Pacific Railroad South of 86th Street

	Peak Day	Passenger	Freight	Total
Existing Volumes (2009)	Friday	2	24	26
Forecast Volumes (2029 No Build)	Friday	4	23	27
Forecast Volumes (2029 Build Alternative)	Saturday	4	44	48

Source: CREATE 75th Street Corridor Improvement Project train model. In this table, "No Build" and "Build Alternative" refer to the CREATE Project.

Freight volumes would increase substantially by the forecasted 2029 build year. Because the UPRR tracks would remain in the East Option, freight trains may have potential impacts on pedestrian and vehicular traffic near the proposed stations. This could affect travel times for bus transit servicing the station and increase delays for commuters who choose to park & ride.

5.4.3.2 Segment UB

There would be no adverse cumulative impacts on Segment UB of the East Option.

5.5 Union Pacific Railroad Rail Alternative - West Option

The UPRR Rail Alternative West Option would include construction of an elevated structure following a similar alignment to the UPRR ROW Option. The difference is that CTA tracks would be placed immediately adjacent to and west of the UPRR ROW. Four stations would be included at 103rd Street, 111th Street, Michigan Avenue, and 130th Street.

5.5.1 Permanent Impacts and Mitigations - Union Pacific Railroad Rail Alternative - West Option

5.5.1.1 Public Transportation

The UPRR Rail Alternative option alignments are in similar locations. See Section 5.3.1.1 for permanent impacts on public transportation in Segment UA and Segment UB.

5.5.1.2 Traffic

The UPRR Rail Alternative option alignments are in similar locations. See Section 5.3.1.2 for permanent traffic impacts. Delays waiting for freight trains to pass through the at-grade crossings would be similar to the No Build Alternative. (The UPRR West Option would not receive the same benefit as the UPRR ROW Option with regard to removal of delay due to freight trains on the UPRR tracks.)

5.5.1.3 Freight Transportation

Rail

As part of the West Option, the UPRR tracks would continue to be operational. Because the proposed rail would be elevated, there would be no permanent impacts on the UPRR train operations.

Truck

The West Option would have a similar impact on freight truck operations as the East Option. Because the track would be elevated, there would be no impact on truck routes. The 130th Street station park & ride facility may divert motorists from I-94 commuting into the city during these peak periods. This may help alleviate congestion on the expressway, reducing freight truck travel times and cost.

5.5.1.4 Bicycle Facilities

The UPRR Rail Alternative option alignments are in similar locations. See Section 5.3.1.4 for permanent impacts on bicyclists in Segment UA and Segment UB.

5.5.1.5 Pedestrians

The West Option would provide pedestrians with more choices, flexibility, and potentially reduced travel times as compared to No Build. The existing at-grade crossings at 101st Street, 103rd Street, 107th Street, 109th Street, 111th Street, 115th Street, and State Street would remain. All parking facilities for each station would be west of the UPRR tracks. Commuters who park & ride would not have to cross the UPRR tracks. Railroad crossing signals with road gates and railroad crossing pavement markings exist at all existing at-grade crossings. Some pedestrians traveling from the east would need to cross the UPRR tracks to access the station; therefore, during the design phase, additional pedestrian control devices, such as increased lighting and gates at the sidewalk, would be considered to improve pedestrian safety at the crossings. All railroad track crossings would be ADA-compliant.

Implementing the West Option would result in beneficial impacts at stations by upgrading intersections with ADA-compliant curb ramps and replacing deteriorated sidewalks. These improvements would provide access for all users and increase pedestrian safety.

Segment UA

103rd Street Station

Existing striped crosswalks at Eggleston Avenue and 103rd Street, and Harvard Avenue and 103rd Street, could be used to access the station. These crosswalks would be improved with the construction of the proposed bus turnaround and station. The auxiliary entrance to the station would be within the surface parking lot, allowing for a direct route from the platform to the parking lot. The parking lot on the south side of 103rd Street would have an entrance at 103rd Place, allowing cars to leave the parking lot farther away from the station, where the majority of pedestrian traffic would occur. All of these improvements would contribute to convenient, safe, and secure access for all users.

111th Street Station

Because the majority of the existing properties adjacent to the existing railroad tracks are undeveloped, proposed sidewalks would need to be provided for pedestrian access to the primary and auxiliary entrances of the proposed station. Existing striped crosswalks are not close to the location of the primary entrance of the station. It would be beneficial to add a striped crosswalk on 111th Street at the location of the primary entrance, as this is likely to be the area that passengers would cross to access the south side of 111th Street. The surface parking lot would be on the west side of the station, which would allow for a direct route from the platform to the parking lot in which users could avoid crossing 111th Street. The west surface parking lot would have an entrance at Eggleston Avenue. This entrance would be away from the proposed station location, where the majority of pedestrian traffic would occur. Eggleston Avenue is currently a dead-end street and has little traffic. The majority of traffic on the street would occur from the surface parking lot. All of these improvements would contribute to convenient, safe, and secure access for all users.

Michigan Avenue Station

The existing pedestrian access on 116th Street east of Michigan Avenue would be improved with the construction of the station. The sidewalk under and adjacent to the existing viaduct for the UPRR tracks would be replaced, providing a continuous ADA-accessible route east of the station and sidewalk connectivity to the existing residential homes east of the station on 116th Street. The parking garage would be close to the primary entrance of the station. Commuters who park in this garage would not have to cross Michigan Avenue or 116th Street. There would be an entrance on State Street and 116th Street, which are a good distance from the station, where pedestrian traffic would be concentrated.

Segment UB

The UPRR Rail Alternative option alignments are in similar locations. See Section 5.3.1.5 for permanent impacts on Segment UB.

5.5.1.6 Parking

Each of the station locations would have surface parking lots and/or parking garages. These parking facilities would expand the reach of the RLE and provide an opportunity for commuters to access the station by car. These commuters may benefit from reduced travel time and reduced travel cost by riding the Red Line. Another benefit would be that motorists could be diverted from congested sections of roadway. Sufficient parking capacity would be provided in all locations to avoid spillover parking into the residential areas near the station locations. Table 5-15 provides a summary of the proposed parking for each of the stations.

Segment UA

Table 5-15: Union Pacific Railroad Rail Alternative West Option Park & Ride Facilities

Station	Parking Type	Capacity	Location	Description
103rd Street	Surface Lot	200	North of 104th Street adjacent to proposed station	Bus turnaround east of proposed station and north of 103rd Street for route #9. No parking provided.
111th Street	Surface Lot	200	West of proposed station. North side of 111th Street	Bus turnaround within the lot for route #352
Michigan Avenue	Five-Story Parking Garage	1000	Southwest of proposed station	Parking garage with ground level available for retail and/or community facilities. Bus turnaround on the ground level for route #119 and #359

Segment UB

130th Street Station

The 130th Street South Station Option and West Station Option would be the same for all of the UPRR Rail Alternatives. Refer to Section 5.3.1.6, for permanent impacts on segment UB parking facilities.

5.5.2 Construction Impacts and Mitigations - Union Pacific Railroad Rail Alternative - West Option

5.5.2.1 Public Transportation

Bus Transit

The construction activities associated with the West Option would temporarily affect the physical capacity of roadways and intersections requiring detours. This may lead to increased travel times and possible shift in traffic volumes, increasing travel times for bus transit users. Bus stop locations may be eliminated or relocated temporarily and buses rerouted during construction

activities. With adherence to local, state, and federal construction and temporary traffic and public transportation management guidelines, no adverse impacts would result from the West Option.

Commuter Rail

Segment UA

The West Option would consist of new construction of dual-track, elevated structure immediately adjacent to and east of the UPRR ROW, branching off and running along the east side of the corridor and over existing CN/ME tracks.

Segment UB

Refer to Section 5.3.2.1 for construction impacts on Segment UB.

5.5.2.2 Traffic

The construction activities associated with this alternative would temporarily affect the physical capacity of local roadways and intersections. This may lead to increased travel times and possible shift in traffic volumes and the need to reroute traffic patterns during construction.

Work within the median of I-94 would require temporary lane closures. Proposed structure construction would be sequenced to minimally affect traffic flow on I-94. Increased traffic congestion due to construction activities may temporarily increase travel times along this portion of I-94.

Dual-track, elevated structures would be constructed through the I-94/I-57 interchange, across the westbound I-57 entrance ramp from northbound I-94, and within the I-57 corridor. For superstructure erection over expressway traffic lanes, intermittent, temporary shutdown of all traffic would be required at nighttime, per IDOT approval. Temporary shutdown of other traffic would occur at nighttime and low traffic volume intervals per IDOT approval. Proposed structure construction would be sequenced to minimally affect traffic flow on I-57. Increased traffic congestion due to construction activities may temporarily increase travel times along this portion of I-57.

With adherence to local, state, and federal construction and temporary traffic management guidelines, no adverse traffic impacts would result from the West Option.

5.5.2.3 Freight Transportation

Segment UA

Rail

The West Option would consist of new construction of dual-track, elevated structure crossing over the UPRR at Fernwood Parkway just south of I-57 and continuing immediately adjacent to and west of the UPRR ROW, crossing over the UPRR tracks again at Prairie Avenue and running

along the east side of the corridor and over existing CN/ME tracks. The West Option would require the construction activities to occur while UPRR tracks are operational. This alternative would have two additional crossings over the active UPRR tracks at Fernwood Parkway and Prairie Avenue that the East option would not have. Construction at this crossing would be phased to minimize impacts on UPRR freight operations. Construction adjacent to railroads would require flagging operations and scheduled track closures. Signal devices would need to be moved or temporary signals installed to replace existing signals during construction of viaducts for the following at-grade crossings: 101st Street, 103rd Street, 107th Street, 109th Street, 111th Street, 115th Street, and State Street. Construction activities would be phased to reduce construction impacts on the UPRR operations as much as possible.

Truck

Work within the median of I-94 would require temporary lane closures. Proposed structure construction would be sequenced to minimally affect traffic flow on I-94. Increased traffic congestion due to construction activities may temporarily increase freight truck travel times for shipping routes that include this portion of I-94.

Dual-track, elevated structures would be constructed through the I-94/I-57 interchange, across the westbound I-57 entrance ramp from northbound I-94, and within the I-57 corridor. For superstructure erection over expressway traffic lanes, intermittent, temporary shutdown of all traffic would be required at nighttime, per IDOT approval. Temporary shutdown of other traffic would occur at nighttime and low traffic volume intervals per IDOT approval. Proposed structure construction would be sequenced to minimally affect traffic flow on I-57. Increased traffic congestion due to construction activities may temporarily increase freight truck travel times for shipping routes that include this portion of I-57.

Segment UB

Refer to Section 5.3.2.3 for construction impacts on Segment UB related to freight transportation.

5.5.2.4 Bicycle Facilities

The UPRR Rail Alternative options would have similar alignments. See Section 5.3.2.4 for construction impacts on bicyclists.

5.5.2.5 Pedestrians

The UPRR Rail Alternative options would have similar alignments. See Section 5.3.2.5 for construction impacts on pedestrians.

5.5.2.6 Parking

The UPRR Rail Alternative options would have similar alignments. See Section 5.3.2.6 for construction impacts on parking facilities.

5.5.3 Cumulative Impacts and Mitigations - Union Pacific Railroad Rail Alternative - West Option

See Section 5.4.3 for cumulative impacts on freight transportation. Because the UPRR tracks would still be in operation under both the East and West Options, the impacts would be the same under the East and West Options.

5.6 Halsted Rail Alternative

The proposed Halsted Rail Alternative is a 5-mile extension of the existing Red Line. It would operate on an elevated structure running south from 95th Street along I-57 until Halsted Street. It would then turn south and continue along Halsted Street to the intersection of Halsted Street and Vermont Avenue near 127th Street. Four stations would be at 103rd Street, 111th Street, 119th Street, and Vermont Avenue.

5.6.1 Permanent Impacts and Mitigations - Halsted Rail Alternative

Figure 5-3 shows the Halsted Rail Alternative. The impact analysis was conducted for two segments within the Halsted Rail Alternative. Segments HA and HB are shown on Figure 5-3. Because the traffic analysis was conducted on a regional basis, the traffic discussion was not divided into segments.

5.6.1.1 Public Transportation

Currently the 95th Street Terminal is the southern terminus of the Red Line. Many of the existing bus routes within the project area terminate at this location. From this station, passengers continue to travel north on the Red Line or connect to a different bus route. With the expansion of the Red Line, some existing bus routes would be rerouted to feed into the proposed stations. Passengers would benefit from reduced travel times to connecting rail service, further south of the 95th Street Terminal. The transportation model indicates approximately 5,980 new riders for the Halsted Rail Alternative and total project weekday boardings of 35,300 (AECOM 2009).

The following describes changes to existing bus routes as a result of the Halsted Rail Alternative:

Segment HA

- CTA route #9 Ashland would terminate at the 103rd Street station, allowing passengers to continue to travel south of 104th Street where the existing route #9 currently terminates.
- CTA route #103 West 103rd and #106 East 103rd would be combined into one route operating between a west terminal at Pulaski Road and an east terminal at Stony Island Avenue. This change would reduce the number of bus routes that terminate at 95th Street while still providing service to the Red Line.
- The CTA route #108 Halsted/95th would be eliminated because the rail extension would replace this bus route.

- Routes #112 Vincennes/111th and #111 111th/King Drive would be reconstructed to simplify route paths and better serve the new alignment. Route #111 would operate on 111th Street between 111th Street/Pulaski Road and 111th Street/Corliss Avenue, serving the new 111th Street station. A new route #115 would operate as a two-directional loop on 115th Street, Cottage Grove Avenue, 95th Street, and Vincennes Avenue. Route #112 would be eliminated.

- Route# 119 Michigan Avenue/119th Street would terminate at the 119th Street station.

Segment HB

- Pace route #348 would terminate at the Vermont Avenue station.

- Pace route #352 Halsted would terminate at the Vermont Avenue station. Route #359 Robbins/South Kedzie would terminate at the 119th Street station instead of the 95th Street Terminal.

"User benefit" is a measure of travel time improvement for each person boarding the system. This measure indicates the overall reduction in travel time including travel to the station, wait time, transfer time, and on-transit time. For the Halsted Rail Alternative, the average user benefit per boarding passenger would be 14 minutes (AECOM 2009). With expansion of the Red Line, some existing bus routes would be rerouted to feed into the proposed stations. Passengers would benefit from reduced travel times to connecting rail service, further south of the 95th Street Terminal. Congestion at 95th Street Terminal would be reduced as fewer buses would be routed to the 95th Street Terminal for transfers to the Red Line. There would be no adverse impacts on public transportation from the Halsted Rail Alternative.

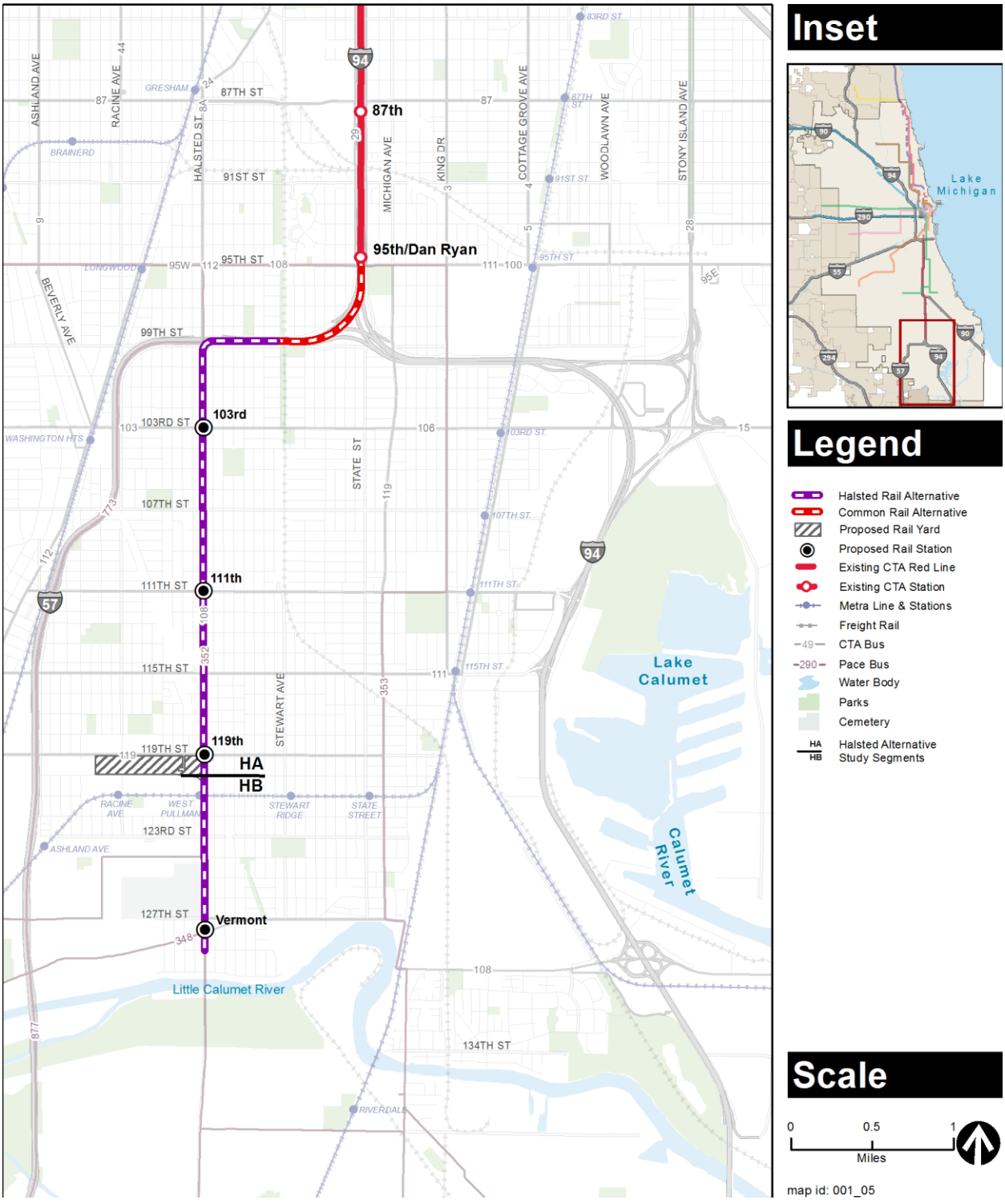


Figure 5-3: Halsted Rail Alternative

5.6.1.2 Traffic

Under Halsted Rail Alternative (2026) conditions, 75 percent of the study intersections within the API would operate at LOS "D" or better in both the AM and PM peak hours, as shown in Table 5-16. Appendix E contains the traffic data and Synchro results for the Halsted Rail Alternative. All increases in traffic volumes are related to vehicle access to park & ride facilities at stations. Under Halsted Rail Alternative (2026) conditions, 19 of the 76 study intersections would operate at an unacceptable LOS (LOS "E" or "F") in either or both the AM and PM peak hours. Of those 19 intersections, 13 would operate at conditions worse than the No Build conditions. The intersections that operate at worse than the No Build conditions are shown in bold in Table 5-16 and are listed below:

- 103rd Street and Halsted Street - AM LOS = F; **PM LOS = E**
- 115th Street and Cottage Grove Avenue East - **AM LOS = F**
- 119th Street and Ashland Avenue - **AM LOS = E**; PM LOS = F
- 119th Street and Halsted Street - **PM LOS = E**
- 127th Street and Paulina Street - **PM LOS = E**
- 127th Street and Marshfield Avenue - **AM LOS = E**
- 127th Street and Ashland Avenue - **PM LOS = F**
- 127th Street and Halsted Street - **AM LOS = F; PM LOS = F**
- Vermont Avenue and Halsted Street - **AM LOS = F; PM LOS = F**
- 127th Street and Vermont Avenue and Wallace Street - **AM LOS = F; PM LOS = F**
- 127th Street and State Street - **PM LOS = F**
- 127th Street and Michigan Avenue - **PM LOS = F**
- 130th Street and Indiana Avenue - **PM LOS = F**

Under Halsted Rail Alternative (2030) conditions, most of the study intersections within the API would operate at LOS "D" or better in both the AM and PM peak hours, as shown in Table 5-16. Under Halsted Rail Alternative (2030) conditions, there would be 22 intersections that would operate at LOS "E" or "F" in either or both the AM and PM peak hours. Of the 22 intersections, 15 would operate at worse than the No Build conditions. The 15 intersections that would operate at worse than the No Build conditions are shown in Table 5-16 in bold text and are listed below:

- 103rd Street and Halsted Street - AM LOS = F; **PM LOS = F**
- 111th Street and Cottage Grove Avenue - **PM LOS = E**

- 115th Street and Cottage Grove Avenue– **AM LOS = E**
- 115th Street and Cottage Grove Avenue East - **AM LOS = F**
- 119th Street and Ashland Avenue - **AM LOS = E**; PM LOS = F
- 119th Street and Halsted Street - **PM LOS = E**
- 127th Street and Paulina Street - **PM LOS = E**
- 127th Street and Marshfield Avenue - **AM LOS = F**
- 127th Street and Ashland Avenue - **PM LOS = F**
- 127th Street and Halsted Street - **AM LOS = F; PM LOS = F**
- Vermont Avenue and Halsted Street - **AM LOS = F; PM LOS = F**
- 127th Street and Vermont Avenue and Wallace Street - **AM LOS = F; PM LOS = F**
- 127th Street and State Street - **PM LOS = F**
- 127th Street and Michigan Avenue - **PM LOS = F**
- 130th Street and Indiana Avenue - **PM LOS = F**

Table 5-16: Halsted Rail Alternative (2026 and 2030) Intersection Level of Service

ID	Intersection	Control Type	2026 Halsted Rail Alternative		2030 Halsted Rail Alternative	
			AM Peak-Hour LOS	PM Peak-Hour LOS	AM Peak-Hour LOS	PM Peak-Hour LOS
1	95th Street and Wentworth Avenue	Signalized	B	B	B	B
2	95th Street and Lafayette Avenue	Signalized	D	D	D	D
3	95th Street and State Street	Signalized	D	C	D	C
4	95th Street and Michigan Avenue	Signalized	B	B	B	B
5	98th Place and Halsted Street	Signalized	F	F	F	F
6	99th Street and Halsted Street	Signalized	D	C	D	C
7	98th Place and Wentworth Avenue	Signalized	B	B	B	B
8	99th Street and Wentworth Avenue	Signalized	B	B	B	B
9	99th Street and State Street	Signalized	A	B	A	B
10	99th Street and Michigan Avenue	Signalized	C	B	C	B
11	99th Place and Martin Luther King Drive	Signalized	B	B	B	B

ID	Intersection	Control Type	2026 Halsted Rail Alternative		2030 Halsted Rail Alternative	
			AM Peak-Hour LOS	PM Peak-Hour LOS	AM Peak-Hour LOS	PM Peak-Hour LOS
12	100th Street and Martin Luther King Drive	Signalized	B	A	B	A
13	100th Street and Cottage Grove Avenue	Unsignalized	A	C	A	C
14	103rd Street and Vincennes Avenue and Beverly Avenue	Signalized	E	F	E	F
15	103rd Street and Morgan Street	Signalized	B	B	B	B
16	103rd Street and Halsted Street	Signalized	F	**E**	F	**F**
17	103rd Street and Normal Avenue	Signalized	B	B	B	C
18	103rd Street and Wentworth Avenue	Signalized	B	B	B	B
19	103rd Street and State Street	Signalized	B	B	B	B
20	103rd Street and Michigan Avenue	Signalized	B	B	B	B
21	103rd Street and Martin Luther King Drive	Signalized	C	C	C	C
22	103rd Street and Cottage Grove Avenue	Signalized	B	B	B	B
23	103rd Street and Woodlawn Avenue	Signalized	A	A	A	A
24	107th Street and Halsted Street	Signalized	F	C	F	C
25	107th Street and Wentworth Avenue	Signalized	B	B	B	B
26	107th Street and State Street	Signalized	A	A	A	A
27	107th Street and Michigan Avenue	Signalized	B	B	B	B
28	107th Street and Martin Luther King Drive	Signalized	B	B	B	B
29	107th Street and Cottage Grove Avenue	Signalized	B	B	B	B
30	111th Street and Marshfield Avenue	Signalized	C	C	C	C
31	111th Street and Hamlet Avenue	Signalized	D	D	D	D
32	112th Place and Marshfield Avenue	Signalized	C	C	C	C
33	112th Place and Hamlet Avenue	Signalized	E	C	E	C
34	111th Street and Halsted Street	Signalized	C	C	C	C
35	111th Street and Normal Avenue	Signalized	B	B	B	B
36	111th Street and Wentworth Avenue	Signalized	B	A	B	A
37	111th Street and State Street	Signalized	A	B	A	B
38	111th Street and Michigan Avenue	Signalized	B	B	B	B
39	111th Street and Indiana Avenue	Signalized	B	B	B	B
40	111th Street and Martin Luther King Drive	Signalized	B	A	B	A

ID	Intersection	Control Type	2026 Halsted Rail Alternative		2030 Halsted Rail Alternative	
			AM Peak-Hour LOS	PM Peak-Hour LOS	AM Peak-Hour LOS	PM Peak-Hour LOS
41	111th Street and Cottage Grove Avenue	Signalized	C	D	C	**E**
42a	111th Street and Langley Avenue	Signalized	B	C	B	C
42b	111th Street and Ellis Avenue	Signalized	C	C	D	C
43	111th Street and Doty Avenue	Signalized	C	C	C	C
44	111th Street and Bishop Ford eastbound Ramps	Unsignalized	D	C	E	C
45	111th Street and Bishop Ford westbound Ramps	Unsignalized	E	C	E	C
46	115th Street and Marshfield Avenue	Signalized	B	B	B	B
47	115th Street and Ashland Avenue	Signalized	B	B	B	B
48	115th Street and Racine Avenue	Signalized	B	C	B	C
49	115th Street and Halsted Street	Signalized	C	C	C	C
50	115th Street and Wentworth Avenue	Signalized	B	B	B	B
51	115th Street and State Street	Signalized	B	B	B	B
52	115th Street and Michigan Avenue	Signalized	B	D	B	D
53	115th Street and Indiana Avenue	Signalized	B	B	B	B
54	115th Street and Martin Luther King Drive	Unsignalized	D	F	D	F
55a	115th Street and Cottage Grove Avenue	Signalized	D	D	**E**	D
55b	115th Street and Cottage Grove Avenue East	Signalized	**F**	D	**F**	D
56	115th Street and Bishop Ford Freeway eastbound Ramps	Unsignalized	D	C	D	C
57	115th Street and Bishop Ford Freeway westbound Ramps	Unsignalized	D	C	D	C
58	119th Street and Marshfield Avenue	Signalized	D	D	D	D
59	119th Street and Ashland Avenue	Signalized	**E**	F	**E**	F
60	119th Street and Halsted Street	Signalized	C	**E**	D	**E**
61	119th Street and Wentworth Avenue	Signalized	B	B	B	B
62	119th Street and State Street	Signalized	B	C	B	C
63	119th Street and Michigan Avenue	Signalized	A	A	A	A
64	127th Street and Paulina Street	Signalized	C	**E**	C	**E**
65	127th Street and Marshfield Avenue	Signalized	**E**	C	**F**	D
66	127th Street and Ashland Avenue	Signalized	C	**F**	D	**F**
67	Ashland Avenue and Vermont Avenue	Signalized	C	C	C	C

ID	Intersection	Control Type	2026 Halsted Rail Alternative		2030 Halsted Rail Alternative	
			AM Peak-Hour LOS	PM Peak-Hour LOS	AM Peak-Hour LOS	PM Peak-Hour LOS
68	127th Street and Halsted Street	Signalized	**F**	**F**	**F**	**F**
69	Vermont Avenue and Halsted Street	Signalized	**F**	**F**	**F**	**F**
70	127th Street and Vermont Avenue and Wallace Street	Signalized	**F**	**F**	**F**	**F**
71	127th Street and State Street	Signalized	C	**F**	C	**F**
72	127th Street and Michigan Avenue	Signalized	B	**F**	B	**F**
73	130th Street and Indiana Avenue	Signalized	D	**F**	D	**F**
74	130th Street and Ellis Avenue	Signalized	B	B	B	B

Notes:
LOS = level of service
Signalized intersection LOS reported as the average for all movements. Unsignalized LOS reported is the LOS of the worst movement. LOS "E" and "F" are shown in bold.

Mitigation measures to reduce or minimize the impacts were evaluated for the transportation network surrounding the Halsted Rail Alternative. Mitigation measures for intersections near the affected intersection may also be necessary to provide better flow of traffic; therefore, the mitigation measures include the affected intersections as well as adjacent or nearby intersections. Table 5-17 lists the mitigation measures that would address impacts on the study intersections under Halsted Rail Alternative (2030) conditions:

Table 5-17: Mitigation Measures for the Halsted Rail Alternative (2030) Conditions

ID	Intersection	Mitigation Measure
14	103rd Street and Vincennes Avenue and Beverly Avenue	PM: Optimize cycle length/splits.
16	103rd Street and Halsted Street	AM/PM: Optimize cycle length/splits.
41	111th Street and Cottage Grove Avenue	PM: Optimize splits.
55a	115th Street and Cottage Grove Avenue	AM/PM: Increase cycle length, Optimize splits
55b	115th Street and Cottage Grove Avenue East	AM/PM: Increase cycle length, Optimize splits
59	119th Street and Ashland Avenue	PM: Optimize splits.
60	119th Street and Halsted Street	PM: Optimize splits
64	127th Street and Paulina Street	AM: Decrease cycle length. Optimize splits. PM: Increase cycle length. Optimize splits. Add westbound turn lane take from eastbound turn lane in other direction. There does appear to be sufficient width on bridge to have double left turns in both directions.
65	127th Street and Marshfield Avenue	AM: Decrease cycle length. Optimize splits. PM: Increase cycle length. Optimize splits.

ID	Intersection	Mitigation Measure
66	127th Street and Ashland Avenue	AM: Decrease cycle length. Optimize splits. PM: Increase cycle length. Optimize splits.
68	127th Street and Halsted Street	Add eastbound left turn lane. Add northbound left turn lane (remove parking). AM: Optimize cycle length. PM: Increase cycle length. Optimize splits. Actuate and coordinate signal.
69	Vermont Avenue and Halsted Street	Add eastbound right turn lane. Add westbound left turn lane. Add southbound right turn lane. Increase cycle length. Optimize splits. Actuate and coordinate signal.
70	127th Street and Vermont Avenue and Wallace Street	Add additional NE right turn lane. Change westbound through/left to dedicated westbound left turn lane. Restrict northeast bound to northbound movement. Actuate signal. Optimize cycle length/splits.
71	127th Street and State Street	Add eastbound left turn lane.
72	127th Street and Michigan Avenue	PM: Increase cycle length. Optimize splits.
73	130th Street and Indiana Avenue	Add northbound right turn lane. PM: Increase cycle length. Optimize splits.

Under Halsted Rail mitigated (2030) conditions, most of the study intersections within the API would operate at LOS "D" or better in both the AM and PM peak hours, as shown in Table 5-18. Under Halsted Rail mitigated (2030) conditions, some intersections would operate at "E" or "F;" however, these intersections would be no worse than No Build (2030) conditions. Mitigated conditions would not result in additional intersections with unacceptable LOS. As such, there would be no adverse permanent traffic impacts for this alternative. LOS D is considered to be acceptable for an urban area.

Table 5-18: Halsted Rail Alternative Mitigated (2030) Intersection Level of Service

ID	Intersection	Control Type	2030 No Build Alternative		2030 Halsted Rail Alternative Mitigated	
			AM Peak-Hour LOS	PM Peak-Hour LOS	AM Peak-Hour LOS	PM Peak-Hour LOS
1	95th Street and Wentworth Avenue	Signalized	B	B	B	B
2	95th Street and Lafayette Avenue	Signalized	D	D	D	D
3	95th Street and State Street	Signalized	D	C	D	C
4	95th Street and Michigan Avenue	Signalized	B	B	B	B
5	98th Place and Halsted Street	Signalized	**F**	**F**	**F**	**F**
6	99th Street and Halsted Street	Signalized	D	D	D	C
7	98th Place and Wentworth Avenue	Signalized	B	B	B	B
8	99th Street and Wentworth Avenue	Signalized	B	B	B	B
9	99th Street and State Street	Signalized	A	B	A	B
10	99th Street and Michigan Avenue	Signalized	C	B	C	B
11	99th Place and Martin Luther King Drive	Signalized	B	B	B	B

ID	Intersection	Control Type	2030 No Build Alternative		2030 Halsted Rail Alternative Mitigated	
			AM Peak-Hour LOS	PM Peak-Hour LOS	AM Peak-Hour LOS	PM Peak-Hour LOS
12	100th Street and Martin Luther King Drive	Signalized	B	A	B	A
13	100th Street and Cottage Grove Avenue	Unsignalized	A	C	A	C
14	103rd Street and Vincennes Avenue and Beverly Avenue	Signalized	**E**	**F**	**E**	**F**
15	103rd Street and Morgan Street	Signalized	B	B	B	B
16	103rd Street and Halsted Street	Signalized	**F**	D	**F**	C
17	103rd Street and Normal Avenue	Signalized	B	B	B	C
18	103rd Street and Wentworth Avenue	Signalized	B	B	B	B
19	103rd Street and State Street	Signalized	B	B	B	B
20	103rd Street and Michigan Avenue	Signalized	B	B	B	B
21	103rd Street and Martin Luther King Drive	Signalized	C	C	C	C
22	103rd Street and Cottage Grove Avenue	Signalized	B	B	B	B
23	103rd Street and Woodlawn Avenue	Signalized	A	A	A	A
24	107th Street and Halsted Street	Signalized	**F**	C	**F**	C
25	107th Street and Wentworth Avenue	Signalized	B	B	B	B
26	107th Street and State Street	Signalized	A	A	A	A
27	107th Street and Michigan Avenue	Signalized	B	B	B	B
28	107th Street and Martin Luther King Drive	Signalized	B	B	B	B
29	107th Street and Cottage Grove Avenue	Signalized	B	B	B	B
30	111th Street and Marshfield Avenue	Signalized	C	C	C	C
31	111th Street and Hamlet Avenue	Signalized	D	D	D	D
32	112th Place and Marshfield Avenue	Signalized	B	C	C	C
33	112th Place and Hamlet Avenue	Signalized	**E**	C	**E**	C
34	111th Street and Halsted Street	Signalized	C	C	C	C
35	111th Street and Normal Avenue	Signalized	B	A	B	B
36	111th Street and Wentworth Avenue	Signalized	B	A	B	A
37	111th Street and State Street	Signalized	A	B	B	B
38	111th Street and Michigan Avenue	Signalized	B	B	B	B
39	111th Street and Indiana Avenue	Signalized	B	B	B	B
40	111th Street and Martin Luther King Drive	Signalized	B	A	B	A
41	111th Street and Cottage Grove Avenue	Signalized	C	D	C	C
42a	111th Street and Langley Avenue	Signalized	B	C	B	C

ID	Intersection	Control Type	2030 No Build Alternative		2030 Halsted Rail Alternative Mitigated	
			AM Peak-Hour LOS	PM Peak-Hour LOS	AM Peak-Hour LOS	PM Peak-Hour LOS
42b	111th Street and Ellis Avenue	Signalized	C	C	D	D
43	111th Street and Doty Avenue	Signalized	C	C	C	C
44	111th Street and Bishop Ford eastbound Ramps	Unsignalized	**E**	C	**E**	C
45	111th Street and Bishop Ford westbound Ramps	Unsignalized	**E**	B	**E**	C
46	115th Street and Marshfield Avenue	Signalized	B	B	B	B
47	115th Street and Ashland Avenue	Signalized	B	B	B	B
48	115th Street and Racine Avenue	Signalized	B	C	B	C
49	115th Street and Halsted Street	Signalized	C	C	C	C
50	115th Street and Wentworth Avenue	Signalized	B	B	B	B
51	115th Street and State Street	Signalized	B	B	B	B
52	115th Street and Michigan Avenue	Signalized	B	D	B	C
53	115th Street and Indiana Avenue	Signalized	B	B	B	C
54	115th Street and Martin Luther King Drive	Unsignalized	D	**F**	D	**F**
55a	115th Street and Cottage Grove Avenue	Signalized	D	C	B	D
55b	115th Street and Cottage Grove Avenue East	Signalized	**E**	C	C	B
56	115th Street and Bishop Ford Freeway eastbound Ramps	Unsignalized	D	C	D	C
57	115th Street and Bishop Ford Freeway westbound Ramps	Unsignalized	D	C	D	C
58	119th Street and Marshfield Avenue	Signalized	D	D	D	D
59	119th Street and Ashland Avenue	Signalized	D	**F**	D	**F**
60	119th Street and Halsted Street	Signalized	C	C	C	D
61	119th Street and Wentworth Avenue	Signalized	B	B	B	B
62	119th Street and State Street	Signalized	B	B	C	B
63	119th Street and Michigan Avenue	Signalized	A	A	C	B
64	127th Street and Paulina Street	Signalized	C	C	C	C
65	127th Street and Marshfield Avenue	Signalized	C	C	C	C
66	127th Street and Ashland Avenue	Signalized	C	C	C	C
67	Ashland Avenue and Vermont Avenue	Signalized	C	C	C	C
68	127th Street and Halsted Street	Signalized	C	C	C	D
69	Vermont Avenue and Halsted Street	Signalized	B	B	B	B
70	127th Street and Vermont Avenue and Wallace Street	Signalized	D	D	C	D
71	127th Street and State Street	Signalized	B	B	B	C
72	127th Street and Michigan Avenue	Signalized	A	B	B	C

ID	Intersection	Control Type	2030 No Build Alternative		2030 Halsted Rail Alternative Mitigated	
			AM Peak-Hour LOS	PM Peak-Hour LOS	AM Peak-Hour LOS	PM Peak-Hour LOS
73	130th Street and Indiana Avenue	Signalized	C	C	D	D
74	130th Street and Ellis Avenue	Signalized	A	A	B	B

Notes:
LOS = level of service
Signalized intersection LOS reported as the average for all movements. Unsignalized LOS reported is the LOS of the worst movement. LOS "E" and "F" are shown in bold.

5.6.1.3 Freight Transportation

Rail

The Halsted Rail Alternative alignment crosses over the UPRR at Fernwood Parkway and I-57. Because this would be an aerial structure, there would be no permanent impact on UPRR freight operations.

Truck

Because the rail line would be elevated, there would be no impacts on freight truck traffic on Halsted Street. The minimum clearance between the aerial structure and the roadway is 14 feet 9 inches, the minimum clearance required for local roadways.

5.6.1.4 Bicycle Facilities

The existing off-street bike trail, Major Taylor Trail, runs north/south from 83rd Street to the Cal-Sag Channel. The trail is divided by Halsted Street at 119th Street. Currently, the portion of the trail west of Halsted Street ends at the existing sidewalk north of the 119th Street and Halsted Street intersection. Bike riders must use approximately 170 feet of existing sidewalk along the west side of Halsted Street to access the intersection of 119th Street and Halsted Street. The existing crosswalks are used to cross to the continuation of the bike trail east of Halsted Street near the southeast corner of the intersection. Because the Halsted Rail Alternative would use an elevated structure, the existing trail would not be permanently affected by the operation of the station. Careful attention to the entrance location and location of the stair/escalator would be made to ensure that there would be no disconnect created in the existing bike route. Enough space would be provided to avoid a conflict with bicycle and pedestrian traffic.

Due to the close proximity of the existing off-street bike trail and Halsted Street, bicyclists would easily be able to access the Red Line. Bicyclists would have the option to park & ride or to bring their bicycles on the trains. Bicyclists are currently restricted from bringing bicycles onto trains during weekday rush periods, which would increase the need for bicycle parking at stations for weekday work commuters.

5.6.1.5 Pedestrians

The Halsted Rail Alternative would provide pedestrians with more choices, flexibility and potentially reduced travel times as compared to No Build. Implementing the Halsted Rail Alternative would result in beneficial impacts at stations by upgrading intersections with ADA-compliant curb ramps and replacing deteriorated sidewalks. These improvements would provide access for all users and increase pedestrian safety.

Segment HA

103rd Street Station

The curb ramps and sidewalks would be improved with the construction of the proposed surface lots and aerial structure. Entrances to the station would be near the surface parking lot, allowing for a direct route from the platform to the parking lot. The entrance to the parking lot would be on the north side of 103rd Street and west of the proposed station, allowing cars to leave the parking lot farther away from the station, where the majority of pedestrian traffic would occur. All of these improvements would contribute to convenient, safe, and secure access for all users.

111th Street Station

The curb ramps and sidewalks would be improved with the construction of the proposed surface lots and aerial structure. The surface parking lot would be west of the station, allowing for a direct route from the platform to the parking lot. The parking lot entrances would be located on 111th Street and Green Street, a safe distance from the majority of pedestrian traffic. All of these improvements would contribute to convenient, safe, and secure access for all users.

119th Street Station

The curb ramps and sidewalks would be improved with the construction of the proposed surface lots and aerial structure. The surface parking lot would be at the southwest corner of the intersection, which is south of the station. Access to the station would require the crossing of 119th Street and/or Halsted Street. Because the intersection is signalized and has marked cross walks, pedestrians would have a safe route between the parking lot and the platform. The parking lot entrances would be located at 119th Street and Green Street, a safe distance from the majority of pedestrian traffic. All of these improvements would contribute to convenient, safe, and secure access for all users.

Segment HB

Vermont Avenue Station

The curb ramps (including the intersections of Halsted Street with 128th Street and with Vermont Avenue) and sidewalks would be improved with the construction of the aerial structure, the Vermont Avenue station, the proposed surface lot to the east of Halsted Street, and the parking structure to the west of Halsted Street. Bus bays for connecting CTA and Pace buses would be included at the station. These improvements would contribute to convenient, safe, and secure access for all users.

5.6.1.6 Parking

Each of the station locations would have surface parking lots and/or parking garages. These parking facilities would expand the reach of the RLE and provide an opportunity for commuters to access the station by car. These users may benefit from reduced travel time and reduced travel cost by riding the Red Line. Another benefit would be that motorists could be diverted from congested sections of roadway. Sufficient parking capacity would be provided in all locations to avoid spillover parking into the residential areas near the station locations. Table 5-19 presents a summary of the proposed parking for each of the stations.

Segment HA

Table 5-19: Halsted Rail Alternative Park & Ride Facilities Segment UA

Station	Parking Type	Capacity	Location	Description
103rd Street	Surface lot	200	North of 103rd Street west of proposed station	Bus turnaround East of proposed station and north of 103rd for route #9. No parking provided.
111th Street	Surface lot	200	North of 111th Street west of proposed station	Bus turnaround within the lot for route #352
119th Street	Surface lot	1,000	South of 119th Street west of proposed station	Bus turnaround within the lot for route #359

Segment HB

The park & ride facility at Vermont Avenue station would be near the I-57 Expressway and 127th Street interchange. It would be just over 3 miles from the I-94 Bishop Ford Freeway and 130th Street interchange. This facility would expand the reach of the RLE to the south suburban and northwest Indiana automobile commuters. These commuters could benefit from decreases in travel times and cost by riding the Red Line and avoiding congestion and travel delays on the Dan Ryan Expressway and I-57 Expressway. Table 5-20 presents a summary of the parking for the Vermont Avenue station.

Table 5-20: Halsted Rail Alternative Park & Ride Facilities Segment UB

Station	Parking Type	Capacity	Location	Description
Vermont Avenue	7 Story Parking Garage	2,000	West of proposed station	Parking garage with ground level available for retail and/or community facilities. Bus bays located on Halsted for route #8A, #348 and #352

On-street parking is provided all along Halsted Street with parking restrictions at locations of bus stops, fire hydrants, and driveway entrances. On-street parking is allowed from I-57 to 129th Street. Permits are not required for on-street parking. The straddle bent beam column locations would decrease the number of on-street parking spots on Halsted Street. Bump-outs in the

concrete sidewalk would provide protection to the columns and allow for parking in the current parking lane between column spans. The adverse impact on on-street parking would be minimal.

The mitigation measure to expand the left-turn lane for the intersection of 127th Street and Halsted Street may require the removal of on-street parking to accommodate the left turn and shift the intersection back to a typical alignment. The removal of these spaces would not be adverse. Parking is available on adjacent streets (and at the Vermont Avenue parking garage). The frequency of driveways near this intersection limits the parking availability and current use of the street for parking.

5.6.2 Construction Impacts and Mitigations - Halsted Rail Alternative

5.6.2.1 Public Transportation

The construction activities associated with the Halsted Rail Alternative would temporarily affect the physical capacity of roadways and intersections requiring detours. Superstructure erection would require temporary shutdown of all traffic on Halsted Street. This may lead to increased travel times and possible shift in traffic volumes, increasing travel times for bus transit users. Bus stop locations may be eliminated or relocated temporarily and buses rerouted during construction activities. Bus stops for routes along Halsted Street (#8A, #108, and Pace #352) will have changes in stops as construction work progresses along the corridor. Bus stops for routes intersecting with Halsted Street (#103, #111, #115, #119, and Pace #348) will have changes only when construction activities are in the vicinity of the applicable intersection. With adherence to local, state, and federal construction and temporary traffic and public transportation management guidelines, no adverse construction impacts would result from the Halsted Rail Alternative.

The ME Blue Island line crosses Halsted Street between 120th Street and 122nd Street. The West Pullman Station is west of Halsted Street. Construction of the aerial structure would require temporary scheduled track closures. Construction would be phased to minimize impacts on Metra operations.

5.6.2.2 Traffic

The construction activities associated with this alternative would temporarily affect the physical capacity of local roadways and intersections. This may lead to increased travel times, possible shift in traffic volumes, and the need to reroute traffic patterns during construction.

Work within the median of I-94 would require temporary lane closures. Proposed structure construction would be sequenced to minimally affect traffic flow on I-94. Increased traffic congestion due to construction activities may temporarily increase travel times along this portion of I-94.

Dual-track, elevated structures would be constructed through the I-94/I-57 interchange, across the westbound I-57 entrance ramp from northbound I-94, and within the I-57 corridor. For superstructure erection over expressway traffic lanes, intermittent, temporary shutdown of all traffic would be required at nighttime, per IDOT approval. Proposed structure construction

would be sequenced to minimally affect traffic flow on I-57. Increased traffic congestion due to construction activities may temporarily increase travel times along this portion of I-57.

The construction activities associated with the Halsted Rail Alternative would temporarily affect the physical capacity of roadways and intersections. This may lead to increased travel times and possible shift in traffic volumes, increasing travel times for traffic using Halsted Street. Steel beam placement transverse to Halsted Street or across intersections would require temporary shutdown of all traffic on Halsted Street and/or the intersecting street. Beam placement is typically done during late night hours to minimize traffic impacts. Temporary traffic stoppage usually occurs in 15-minute intervals as beams are lifted off trucks and secured in position. Marked alternate routes would likely include Vincennes Road on the west and Wentworth Avenue on the east, although local drivers will likely use nearby streets. With adherence to local, state, and federal construction and temporary traffic management guidelines, no adverse traffic impacts would result from the Halsted Rail Alternative.

5.6.2.3 Freight Transportation

Rail

There would be no construction impacts on rail freight transportation, because no freight train tracks are near or cross the Halsted Rail Alternative alignment.

Truck

Work within the median of I-94 would require temporary lane closures. Proposed structure construction would be sequenced to minimally affect traffic flow on I-94. Increased traffic congestion due to construction activities may temporarily increase freight truck travel times for shipping routes that include this portion of I-94.

The Halsted Rail Alternative alignment crosses over the UPRR at Fernwood Parkway and I-57. Dual-track, elevated structures would be constructed through the I-94/I-57 interchange, across the westbound I-57 entrance ramp from northbound I-94, and within the I-57 corridor. For superstructure erection over expressway traffic lanes, intermittent, temporary shutdown of all traffic would be required at nighttime, per IDOT approval. Proposed structure construction would be sequenced to minimally affect traffic flow on I-57. Increased traffic congestion due to construction activities may temporarily increase freight truck travel times for shipping routes that include this portion of I-57.

The construction activities associated with the Halsted Rail Alternative would temporarily affect the physical capacity of roadways and intersections requiring detours. Superstructure erection would require temporary shutdown of all traffic on Halsted Street. This may lead to increased travel times and possible shift in traffic volumes, increasing travel times for freight trucks using Halsted Street.

5.6.2.4 Bicycle

Portions of the Major Taylor Trail would need to be closed temporarily during the construction of the 119th Street station and the aerial structure. Bicycle travel times may increase due to detours or shifting of routes.

5.6.2.5 Pedestrian

Due to the construction of the aerial structure and stations sidewalks would need to be temporarily closed. Increased travel distance and time may be incurred due to pedestrian traffic reroutes.

5.6.2.6 Parking

On-street parking would be temporarily affected during construction of the aerial structure and stations. Parking would potentially be eliminated from Halsted Street during construction to increase traffic flow. Construction of park & ride lots would also contribute to temporary on-street parking loss due to maintenance of traffic during construction activities.

5.6.3 Cumulative Impacts and Mitigations - Halsted Rail Alternative

There would be no adverse cumulative impacts for the Halsted Rail Alternative.

5.6.4 119th Street Yard and Shop

The 119th Street yard and shop would be located south of the 119th Street station and north of Vermont Avenue station to the west of Halsted Street. The parcel on which the yard and shop would be constructed is west of the park & ride facility location at the 119th Street station. Track height would transition from elevated at station height to at-grade between Halsted Street and Morgan Street, through the proposed park & ride facility. The yard would be entirely at grade.

5.6.4.1 Permanent Impacts and Mitigations

Under the Halsted Rail Alternative there would be no adverse permanent impacts on bicycle or pedestrian access. Pedestrian access by the general public would be restricted and discouraged. Existing sidewalks within the ROW of 119th Street, 120th Street, and Peoria Street would remain. Because of the location of the yard no public transportation would be affected. Existing on-street parking on Peoria Street would not be affected. Some parking would be provided for yard employees.

5.6.4.2 Construction Impacts and Mitigations

The construction activities associated with the 119th Street yard and shop would temporarily affect the physical capacity of roadways and intersections requiring detours at 120th Street and Halsted Street. Superstructure erection would require temporary shutdown of all traffic on Halsted Street. This may lead to increased travel times and possible shift in traffic volumes, increasing travel times for bus transit users. Bus stop locations may be eliminated or relocated temporarily and buses rerouted during construction activities. Lane closure on 119th Street and 120th Street may occur due to maintenance of traffic activities during construction. With adherence to local, state, and federal construction and temporary traffic and public transportation

management guidelines, no adverse construction impacts would result from the Halsted Rail Alternative.

Section 6
Impacts Remaining After Mitigation

Impacts can be adverse or beneficial. In the category of transportation, as summarized for each alternative below, there would be no adverse impacts after mitigation. The project will provide transportation benefits by improving travel times and transit access. Existing average travel times to work are higher in the RLE API than many other parts of Chicago. Within the API, some sections (particularly along 130th Street) are somewhat isolated from transit access. Benefits which directly address needs within the API are summarized below for each alternative.

6.1 No Build Alternative

There would be no impacts for the No Build Alternative.

6.2 Bus Rapid Transit Alternative

After mitigation, there would be no adverse impacts on transportation facilities.

Benefits of the BRT Alternative include:

- more frequent service throughout the day along the BRT alignment (4 minutes versus existing 12 minutes);
- approximately 3 minutes faster travel time from 130th Street to the 95th Street Terminal compared to existing bus service; and
- routing of service along and south of 130th Street to areas currently isolated from transportation connectivity.

6.3 Union Pacific Railroad Rail Alternative - Right-of-Way Option

Benefits applicable to all options for the UPRR Alternative include:

- an average "user benefit" (a measure of the combined time savings of travel time to stations, wait time at stations, transfer time, and on-transit time) of 12 minutes per boarding; and
- direct rail service (without requiring one or more bus transfers) from 130th Street, an area currently isolated from transportation connectivity.

6.3.1 Segment UA

After mitigation, there would be no adverse impacts on transportation facilities.

6.3.2 Segment UB

After mitigation, there would be no adverse impacts on transportation facilities.

6.3.3 120th Street Yard and Shop

There would be no impacts on transportation facilities from the 120th Street yard and shop.

6.4 Union Pacific Railroad Rail Alternative - East Option

6.4.1 Segment UA

After mitigation, there would be no adverse impacts on transportation facilities.

6.4.2 Segment UB

After mitigation, there would be no adverse impacts on transportation facilities.

6.4.3 120th Street Yard and Shop

There would be no impacts on transportation facilities from the 120th Street yard and shop

6.5 Union Pacific Railroad Rail Alternative - West Option

6.5.1 Segment UA

After mitigation, there would be no adverse impacts on transportation facilities.

6.5.2 Segment UB

After mitigation, there would be no adverse impacts on transportation facilities.

6.5.3 120th Street Yard and Shop

There would be no impacts on transportation facilities.

6.6 Halsted Rail Alternative

Benefits for the Halsted Rail Alternative include:

- an average "user benefit" of 14 minutes per boarding (which is a savings in travel time to stations, wait time, transfer time, and on-transit time); and
- direct rail service from the area surrounding Halsted Street. (Note that the area surrounding Halsted Street and Vermont Avenue currently has among the longest travel times to work in Chicago, ranging from 45 to 60 minutes.)

6.6.1 Segment HA

After mitigation, there would be no adverse impacts on transportation facilities.

6.6.2 Segment HB

After mitigation, there would be no adverse impacts on transportation facilities.

6.6.3 119th Street Yard and Shop

There would be no impacts on transportation facilities.

Section 7
References

AECOM. 2009. Red, Orange, Yellow (ROY) Line Extension Alternatives Analysis (AA) Travel Demand Forecasting Report. December 2009

Chicago Metropolis 2020. 2004. The Metropolis Freight Plan: Delivering the Goods. December 2004.

City of Chicago. 2006. Chicago Bike 2015 Plan. January 2006.

City of Chicago. 2012a. Bicycling Program. http://www.cityofchicago.org/content/city/en/depts/cdot/provdrs/bike.html. Accessed on April 11, 2012.

City of Chicago. 2012b. Chicago Pedestrian Plan. Available at: http://chicagopedestrianplan.org/. Accessed on November 1, 2012.

City of Chicago. 2012c. Chicago Streets for Cycling Plan 2020. Available at http://www.chicagobikes.org/public/SFC.php. Accessed on November 1, 2012.

Chicago Metropolitan Agency for Planning (CMAP). 2010a. Designated Trucks Routes in Metropolitan Chicago. Available at: http://www.cmap.illinois.gov/c/document_library/get_file?uuid=83abdfe7-55b1-4760-b5c7-14ed9bab9dcd&groupId=20583. Accessed on November 2012.

CMAP. 2010b. GO TO 2040 Regional Plan.

CMAP. 2012a. Regional Freight System Planning. Available at http://www.cmap.illinois.gov/freight-system-planning. Accessed on November 2012.

CMAP. 2012b. Regional Travel Demand Model. Results for the regional 2030 vehicle-miles traveled were used in combination with traffic modeling for the project alternatives to approximate the change in regional vehicle-miles traveled.

CREATE. 2009. CREATE 75th Street Corridor Improvement Project Train Model Volumes.

CTA. 2009a. CTA Red Line Extension Alternatives Analysis Locally Preferred Alternative Report. August 2009.

CTA. 2009b. CTA Red Line Extension Bus Rapid Transit Alignment Traffic Impacts. March 5, 2009.

CTA. 2009c. CTA Red Line Extension Heavy Rail Transit Alignments Traffic Impacts. March 5, 2009.

CTA. 2012 and 2013. Monthly Ridership Reports from May 2012 to April 2013, and 2012 Annual Ridership Report. Various dates.

Federal Highway Administration. 2005. Office of Legislation and Intergovernmental Affairs. Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users – A Summary of Highway Provisions. August 25, 2005.

Institute of Transportation Engineers (ITE). 2012. Trip Generation Manual, 9th Edition, Volume 2. September 2012.

Regional Transportation Asset Management System (RTAMS). 2013. Pace Bus Route Ridership Tables and Metra Rail Station data.

Transportation Research Board. 2010. Highway Capacity Manual 2010.

United States Census Bureau. 2010. American Community Survey 2010 5-year estimates.

United States Department of Transportation, Urban Mass Transportation Administration (now FTA). 1979. Guidelines for Preparing Environmental Assessments. Circular C 5620.1. October 16, 1979.

Appendix A
Existing Conditions

Red Line Extension Traffic Methodology

Existing Volumes

Intersection turning movement volumes were taken from two sources, existing counts from other studies and new counts conducted for this study. Adjustments were made when appropriate to match existing count volumes to volumes gathered from new counts. For locations with adjacent signalized intersections, such as frontage road intersection pairs along the interstates, counts were balanced to reflect more accurate traffic flow patterns.

Peak hour time periods used in this analysis are between 7:30 and 8:30 A.M. and 5:00 and 6:00 P.M. Peak hour factors for each individual intersection were used based on the existing 15-minute peak volume distributions.

There were several minor intersections where turning movement counts were not conducted. Turning movement volumes were estimated using adjacent intersection volume counts as approach and departure volumes and then applying a simple distribution assumption to generate turning movement volumes.

2026 and 2030 Base Volumes

Growth rates for 2030 traffic volumes were calculated from CMAP regional AM and PM peak models for existing, 2030 without-project, and 2030 with-project. To account for growth in the traffic between existing and future scenarios, existing intersection turning movement volumes for each intersection approach were adjusted based on the proportional change of volume between the corresponding CMAP model links. For intersection approaches without corresponding CMAP model links, the proportional change for these approaches was taken from the approaches at the same intersection that did have corresponding CMAP links. A floor of 1.0 and a ceiling of 1.3 were applied to the proportional changes. To estimate 2026 volumes, a simple linear growth rate from existing to 2030 base volumes was assumed.

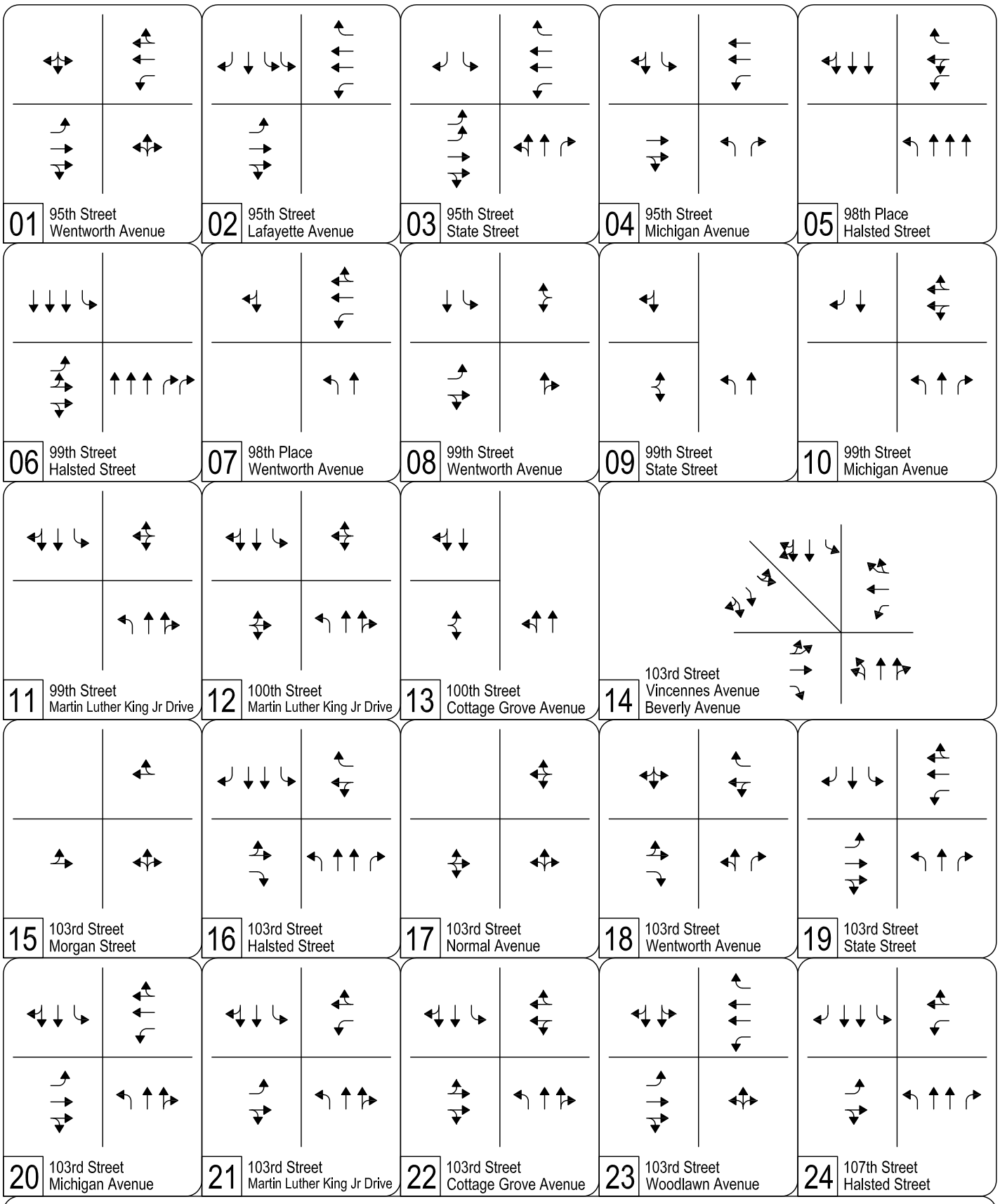
2026 and 2030 With-Project Volumes

Trip generation rates from the ITE Trip Generation Manual are used to estimate the number of AM and PM peak traffic entering and exiting the park and ride locations for each project scenario based on the number of parking spaces that are to be constructed for the corresponding year of analysis. The project trips are then distributed across the transportation network based on an assumed distribution pattern.
The project traffic was added to the 2026 and 2030 base volumes to get the 2026 and 2030 with-project traffic for each project scenario.

Future peak hour factors (PHF) of 0.9 were used for all intersections with existing PHFs of 0.9 or less. A PHF of 0.95 was used for all intersections with existing PHFs of 0.9 to 0.95. If the existing peak hour factor was greater than 0.95, then the existing PHF was used as the future PHF.

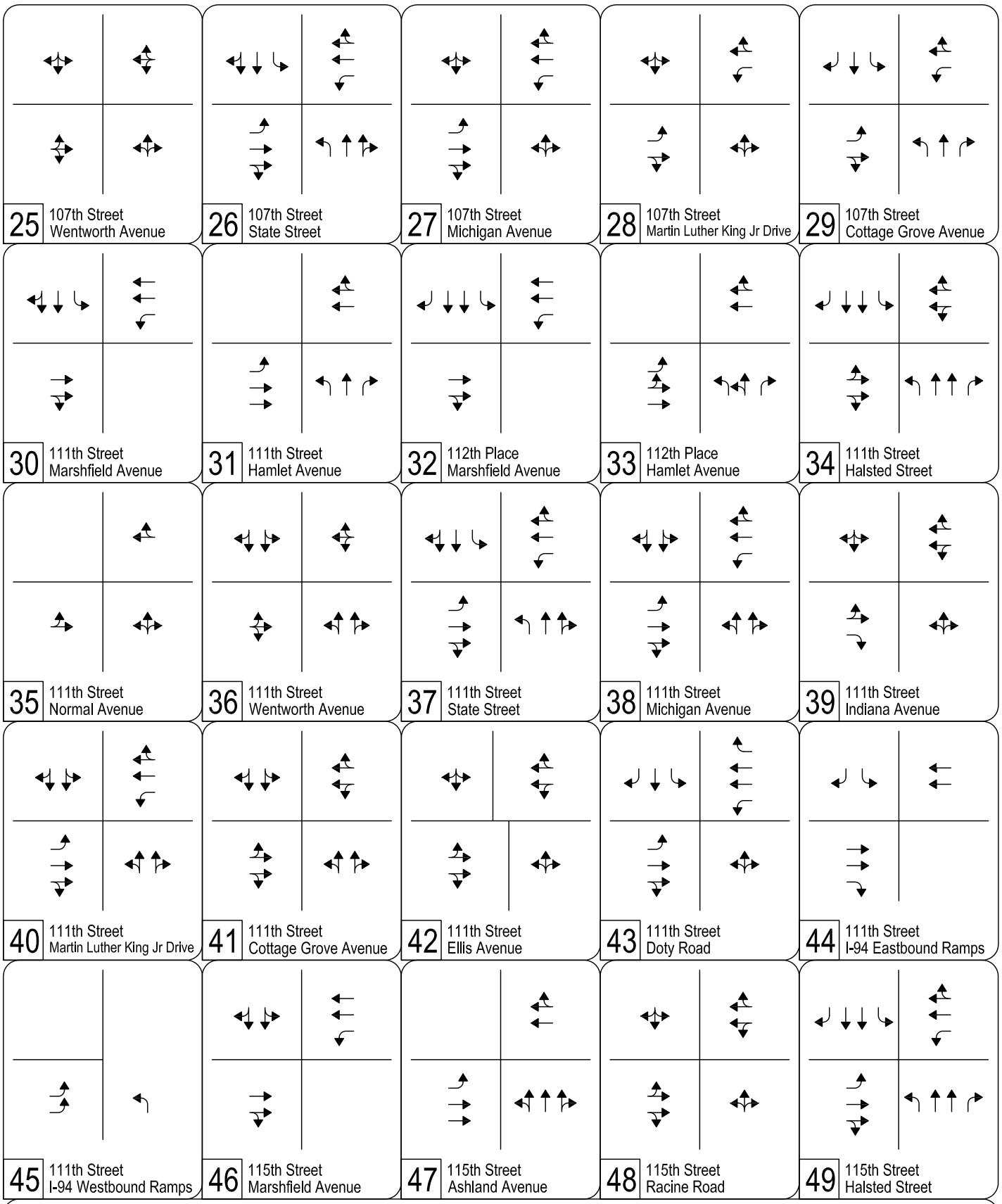
Synchro Analysis and Mitigation

An analysis of each year and each project scenario was performed using Synchro 7. The results of the Synchro analysis were used to determine which intersections were impacted by each project scenario. Potential mitigation for impacted intersections included signal modifications, such as optimization or actuation; additional lanes or lane configuration modifications within existing pavement; and as a last resort, adding turn lanes that would require pavement widening.



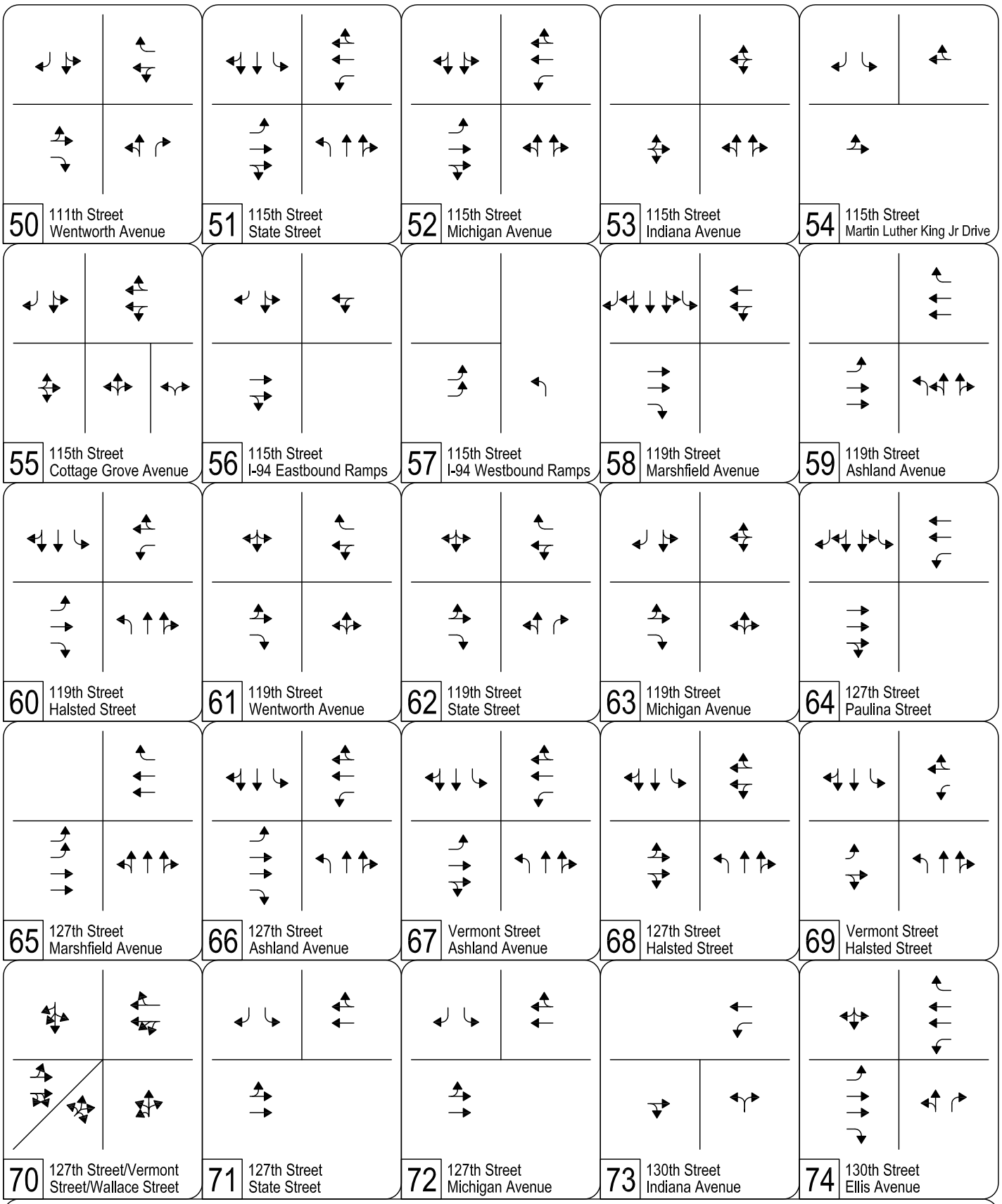
Existing (2012) Intersection Lane Geometry

Page 1 of 3



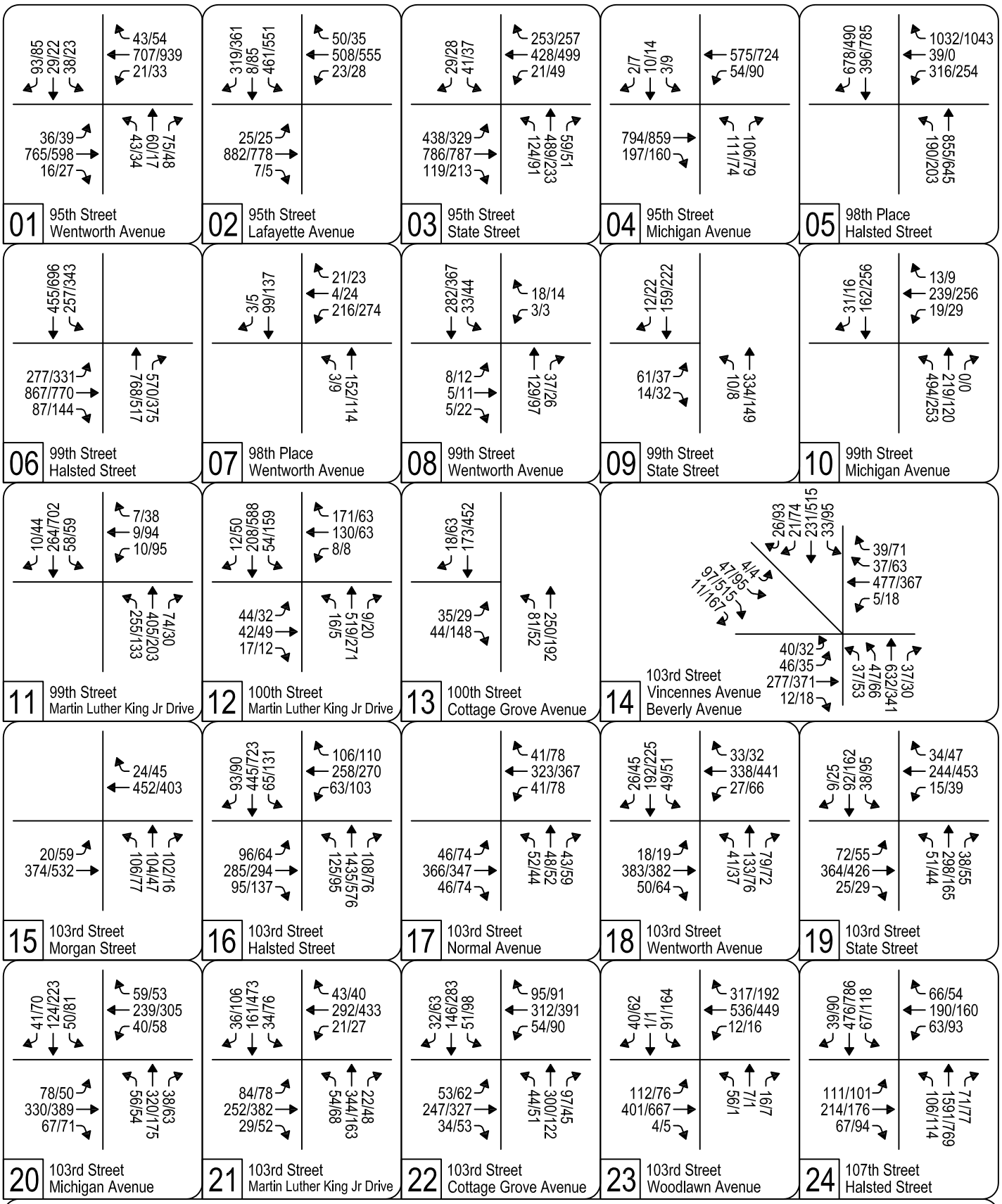
Existing (2012) Intersection Lane Geometry

Page 2 of 3



Existing (2012) Intersection Lane Geometry

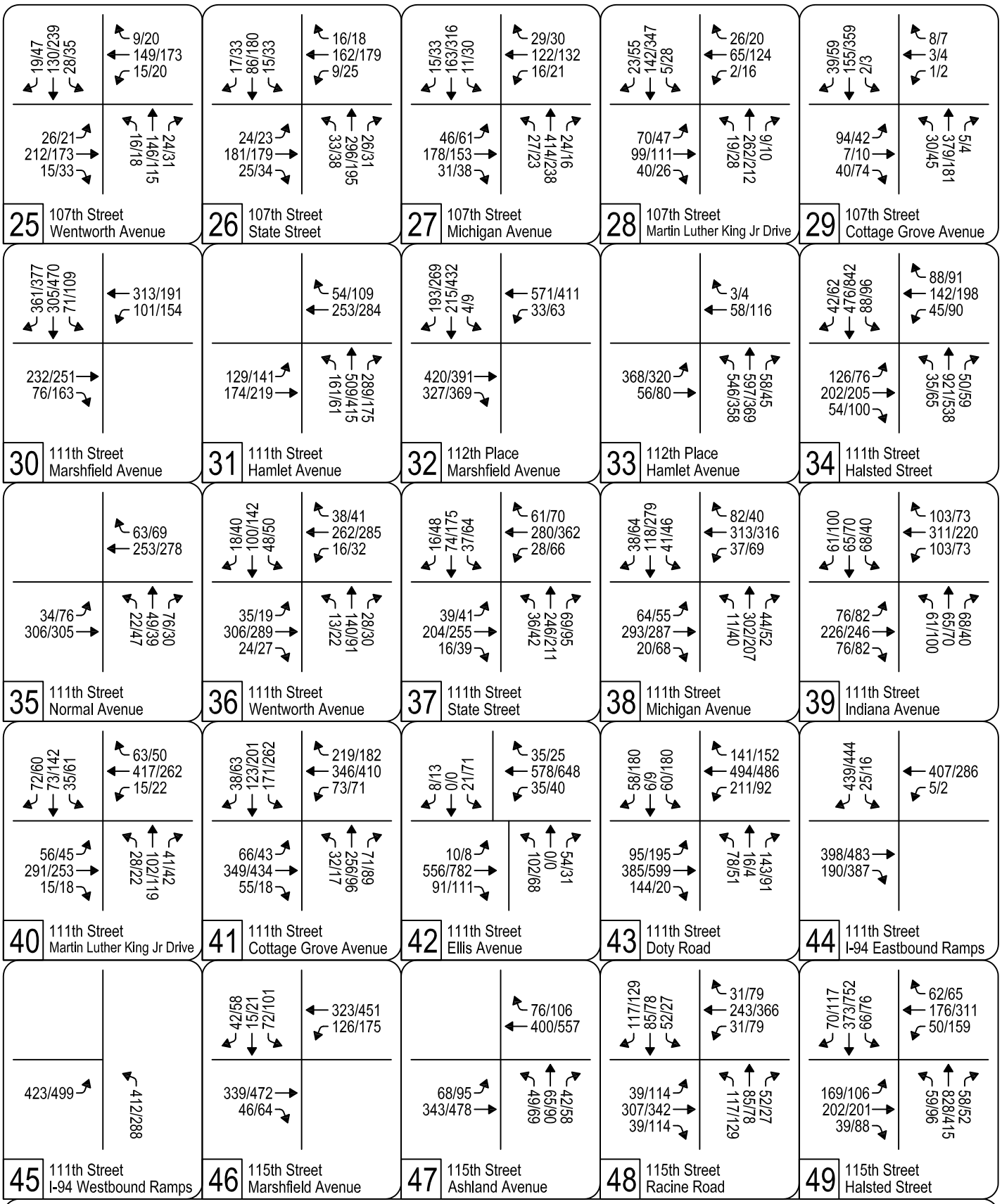
Page 3 of 3



Existing (2012) Intersection Traffic Volumes

Page 1 of 3

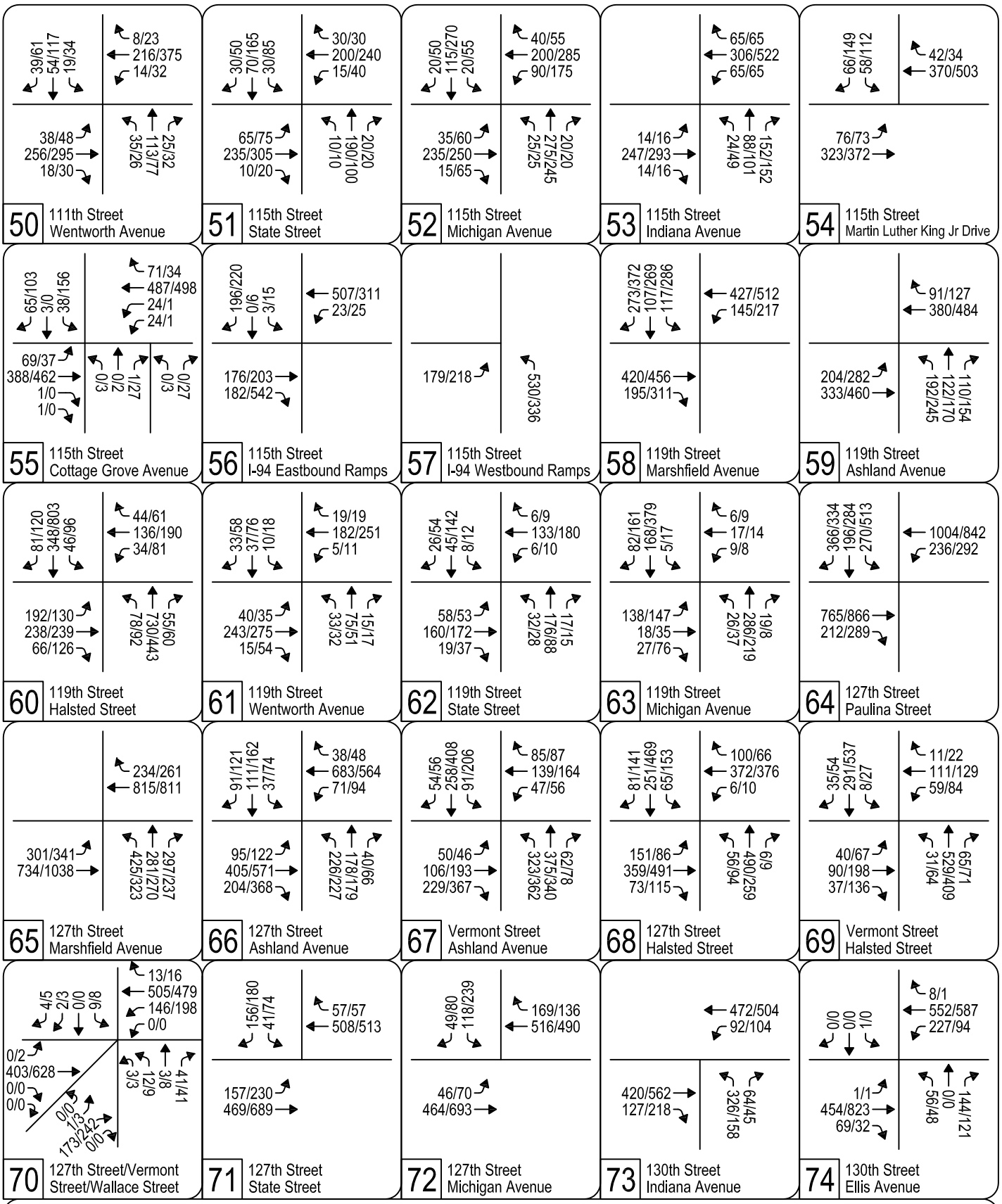
Legend: AM/PM Peak Hour Volumes



Existing (2012) Intersection Traffic Volumes

Page 2 of 3

Legend: AM/PM Peak Hour Volumes



Existing (2012) Intersection Traffic Volumes

Page 3 of 3

Legend: AM/PM Peak Hour Volumes

Fish Transportation Group
801 South Blvd Suite 5
Oak Park, IL 60302

Chicago
Halsted & 99th Street
Combined (All Vechiles + Peds)

File Name : Halsted & 99th St
Site Code : 00002423
Start Date : 9/23/2008
Page No : 1

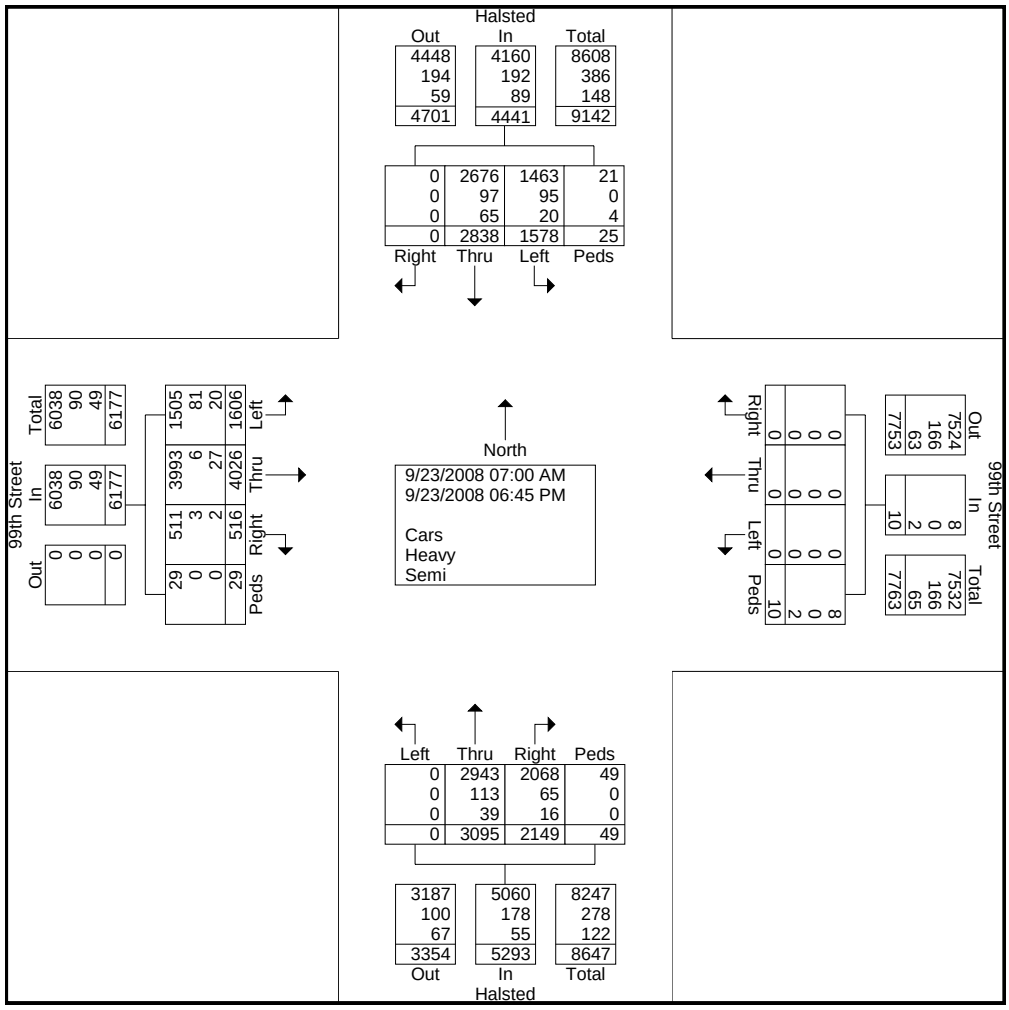
Groups Printed- Cars - Heavy - Semi

	Halsted From North (SB)				99th Street From East (WB)				Halsted From South (NB)				99th Street From West (EB)				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Int. Total
07:00 AM	78	84	0	0	0	0	0	0	0	190	106	5	78	258	6	0	805
07:15 AM	105	86	0	0	0	0	0	0	0	219	138	1	81	244	4	1	879
07:30 AM	93	118	0	1	0	0	0	0	0	194	150	11	71	205	9	1	853
07:45 AM	62	143	0	1	0	0	0	0	0	243	155	0	70	212	16	2	904
Total	338	431	0	2	0	0	0	0	0	846	549	17	300	919	35	4	3441
08:00 AM	97	150	0	0	0	0	0	2	0	156	135	2	68	258	19	0	887
08:15 AM	68	156	0	2	0	0	0	1	0	211	130	1	81	192	43	1	886
08:30 AM	76	138	0	0	0	0	0	1	0	173	142	21	81	191	26	0	849
08:45 AM	68	160	0	0	0	0	0	0	0	137	90	0	96	215	18	0	784
Total	309	604	0	2	0	0	0	4	0	677	497	24	326	856	106	1	3406
*** BREAK ***																	
04:00 PM	64	112	0	2	0	0	0	1	0	150	98	1	62	160	32	5	687
04:15 PM	78	132	0	3	0	0	0	0	0	114	64	0	86	226	32	1	736
04:30 PM	69	171	0	4	0	0	0	0	0	161	104	2	103	210	27	2	853
04:45 PM	79	135	0	3	0	0	0	0	0	85	76	0	53	183	26	0	640
Total	290	550	0	12	0	0	0	1	0	510	342	3	304	779	117	8	2916
05:00 PM	80	150	0	0	0	0	0	0	0	147	97	0	83	177	27	1	762
05:15 PM	54	140	0	3	0	0	0	0	0	138	99	0	93	208	42	2	779
05:30 PM	84	159	0	3	0	0	0	0	0	129	79	1	108	202	46	1	812
05:45 PM	96	189	0	0	0	0	0	0	0	159	100	0	82	183	29	2	840
Total	314	638	0	6	0	0	0	0	0	573	375	1	366	770	144	6	3193
06:00 PM	80	186	0	1	0	0	0	0	0	128	96	0	62	185	31	4	773
06:15 PM	73	161	0	1	0	0	0	1	0	121	104	0	88	163	31	1	744
06:30 PM	86	128	0	0	0	0	0	3	0	115	86	2	79	159	22	1	681
06:45 PM	88	140	0	1	0	0	0	1	0	125	100	2	81	195	30	4	767
Total	327	615	0	3	0	0	0	5	0	489	386	4	310	702	114	10	2965
Grand Total	1578	2838	0	25	0	0	0	10	0	3095	2149	49	1606	4026	516	29	15921
Apprch %	35.5	63.9	0	0.6	0	0	0	100	0	58.5	40.6	0.9	26	65.2	8.4	0.5	
Total %	9.9	17.8	0	0.2	0	0	0	0.1	0	19.4	13.5	0.3	10.1	25.3	3.2	0.2	
Cars	1463	2676	0	21	0	0	0	8	0	2943	2068	49	1505	3993	511	29	15266
% Cars	92.7	94.3	0	84	0	0	0	80	0	95.1	96.2	100	93.7	99.2	99	100	95.9
Heavy	95	97	0	0	0	0	0	0	0	113	65	0	81	6	3	0	460
% Heavy	6	3.4	0	0	0	0	0	0	0	3.7	3	0	5	0.1	0.6	0	2.9
Semi	20	65	0	4	0	0	0	2	0	39	16	0	20	27	2	0	195
% Semi	1.3	2.3	0	16	0	0	0	20	0	1.3	0.7	0	1.2	0.7	0.4	0	1.2

Fish Transportation Group
801 South Blvd Suite 5
Oak Park, IL 60302

Chicago
Halsted & 99th Street
Combined (All Vechiles + Peds)

File Name : Halsted & 99th St
Site Code : 00002423
Start Date : 9/23/2008
Page No : 2

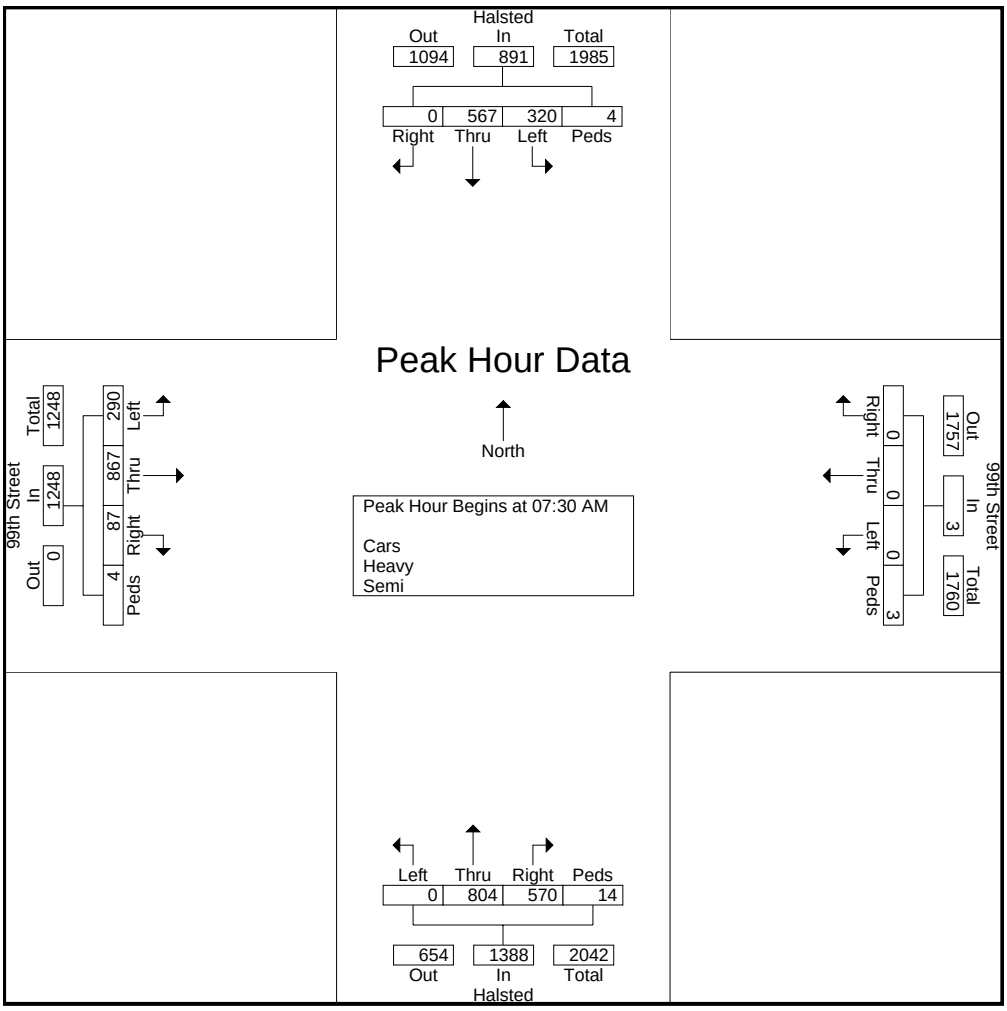


Fish Transportation Group
801 South Blvd Suite 5
Oak Park, IL 60302

Chicago
Halsted & 99th Street
Combined (All Vechiles + Peds)

File Name : Halsted & 99th St
Site Code : 00002423
Start Date : 9/23/2008
Page No : 3

	Halsted From North (SB)					99th Street From East (WB)					Halsted From South (NB)					99th Street From West (EB)					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	93	118	0	1	212	0	0	0	0	0	0	194	150	11	355	71	205	9	1	286	853
07:45 AM	62	143	0	1	206	0	0	0	0	0	0	243	155	0	398	70	212	16	2	300	904
08:00 AM	97	150	0	0	247	0	0	0	2	2	0	156	135	2	293	68	258	19	0	345	887
08:15 AM	68	156	0	2	226	0	0	0	1	1	0	211	130	1	342	81	192	43	1	317	886
Total Volume	320	567	0	4	891	0	0	0	3	3	0	804	570	14	1388	290	867	87	4	1248	3530
% App. Total	35.9	63.6	0	0.4		0	0	0	100		0	57.9	41.1	1		23.2	69.5	7	0.3		
PHF	.825	.909	.000	.500	.902	.000	.000	.000	.375	.375	.000	.827	.919	.318	.872	.895	.840	.506	.500	.904	.976

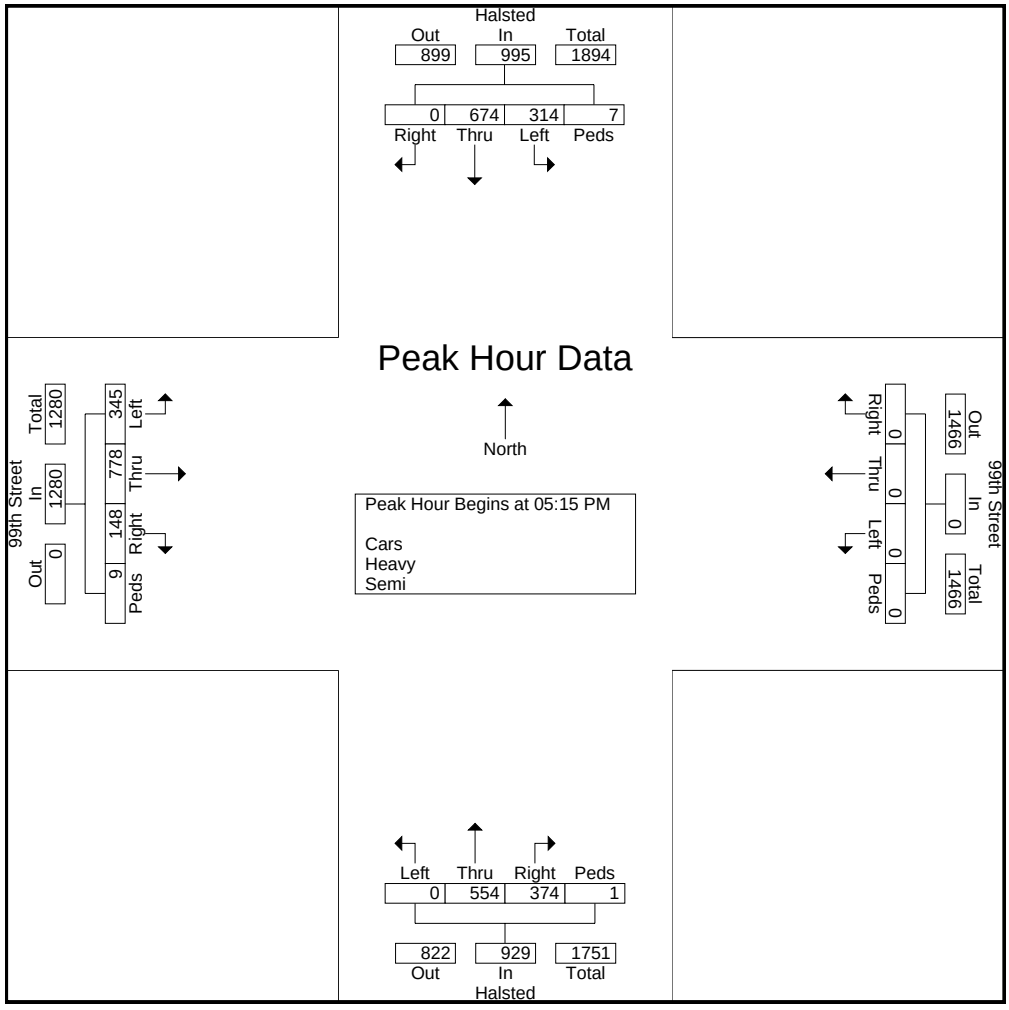


Fish Transportation Group
801 South Blvd Suite 5
Oak Park, IL 60302

Chicago
Halsted & 99th Street
Combined (All Vechiles + Peds)

File Name : Halsted & 99th St
Site Code : 00002423
Start Date : 9/23/2008
Page No : 4

	Halsted From North (SB)					99th Street From East (WB)					Halsted From South (NB)					99th Street From West (EB)					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:15 PM																					
05:15 PM	54	140	0	3	197	0	0	0	0	0	0	138	99	0	237	93	208	42	2	345	779
05:30 PM	84	159	0	3	246	0	0	0	0	0	0	129	79	1	209	108	202	46	1	357	812
05:45 PM	96	189	0	0	285	0	0	0	0	0	0	159	100	0	259	82	183	29	2	296	840
06:00 PM	80	186	0	1	267	0	0	0	0	0	0	128	96	0	224	62	185	31	4	282	773
Total Volume	314	674	0	7	995	0	0	0	0	0	0	554	374	1	929	345	778	148	9	1280	3204
% App. Total	31.6	67.7	0	0.7		0	0	0	0		0	59.6	40.3	0.1		27	60.8	11.6	0.7		
PHF	.818	.892	.000	.583	.873	.000	.000	.000	.000	.000	.000	.871	.935	.250	.897	.799	.935	.804	.563	.896	.954



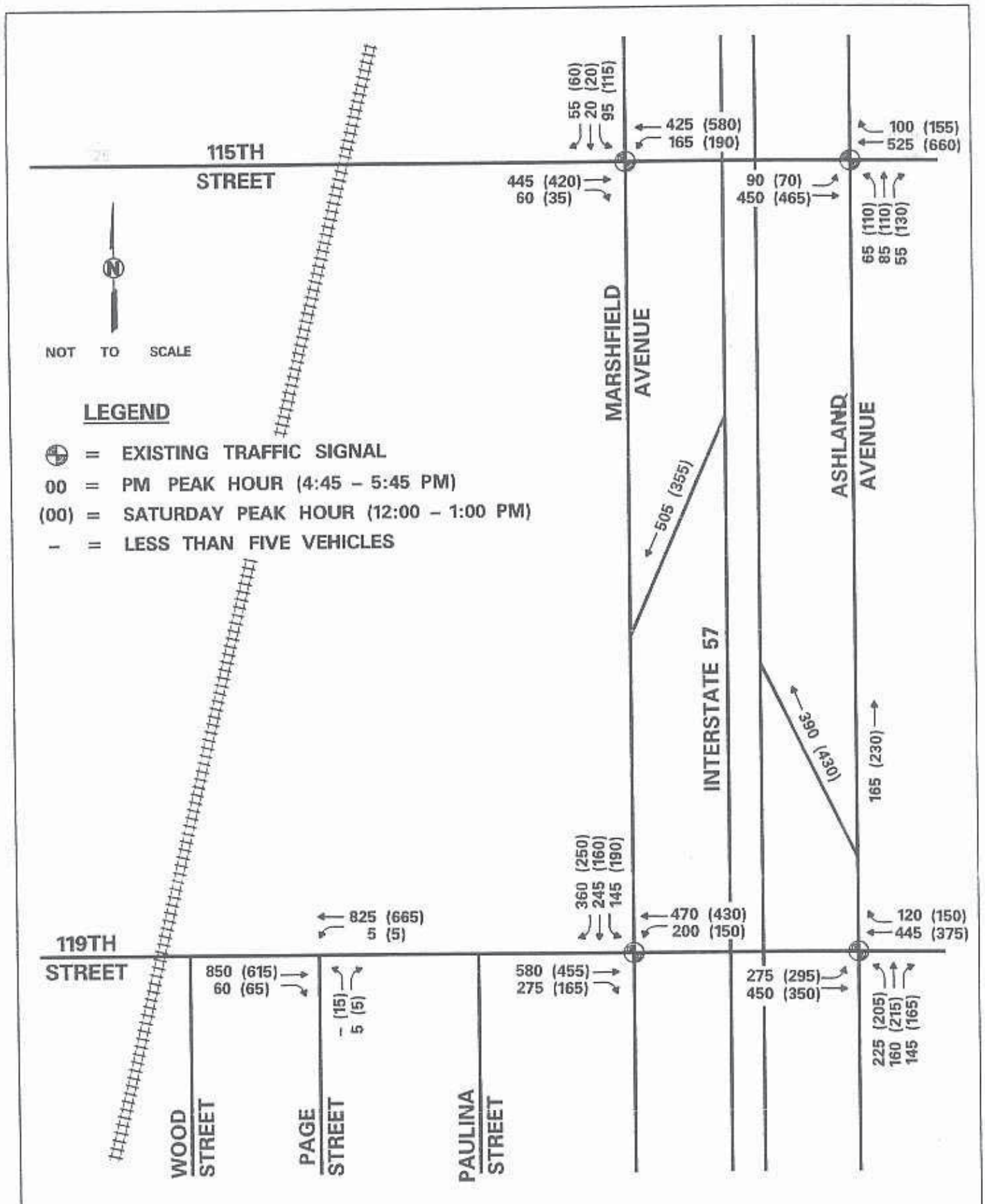
Cottage Grove Ave. & 100th St.
City: **Chicago**
County: **Cook**
District: **1**

Summary
State Of Illinois
Department of Transportation
Bureau of Traffic
Summary of Traffic Survey

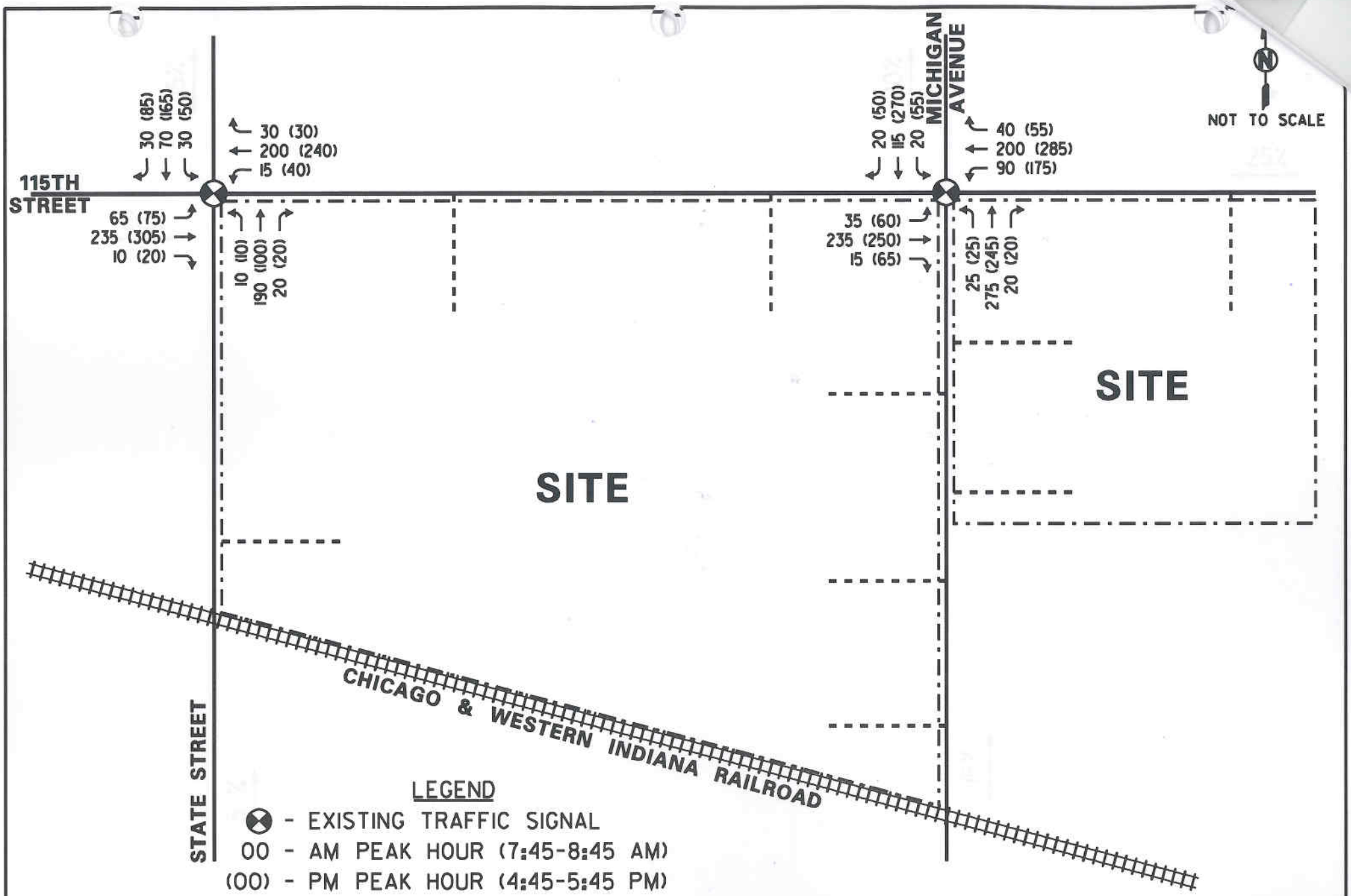
Dates: 7/25/2008 **(AM)**
7/21/2008 **(PM)**

Route	Traffic From: **Cottage Grove** Going				Traffic From: **Cottage Grove** Going				TOTAL NORTH	Traffic From: **100th St.** Going				Traffic From: **100th St.** Going				TOTAL EAST	GRAND TOTAL
Start Hour		**S**	**W**	**TOTAL**	**W**	**N**		**TOTAL**	**SOUTH**	**S**	**W**	**N**	**TOTAL**	**N**		**S**	**TOTAL**	**WEST**	
6:00	0	56	16	72	72	152	0	224	**296**	0	0	0	0	16	0	19	35	**35**	**331**
7:00	0	128	22	150	68	285	0	353	**503**	0	0	0	0	25	0	27	52	**52**	**555**
8:00	0	173	18	191	81	250	0	331	**522**	0	0	0	0	35	0	44	79	**79**	**601**
9:00	0	147	22	169	60	200	0	260	**429**	0	0	0	0	29	0	45	74	**74**	**503**
10:00	0	161	32	193	47	219	0	266	**459**	0	0	0	0	36	0	49	85	**85**	**544**
11:00	0	144	32	176	47	183	0	230	**406**	0	0	0	0	38	0	28	66	**66**	**472**
12:00	0	212	60	272	59	205	0	264	**536**	0	0	0	0	31	0	72	103	**103**	**639**
13:00	0	219	48	267	57	203	0	260	**527**	0	0	0	0	35	0	73	108	**108**	**635**
14:00	0	267	48	315	55	191	0	246	**561**	0	0	0	0	24	0	72	96	**96**	**657**
15:00	0	287	50	337	53	217	0	270	**607**	0	0	0	0	19	0	60	79	**79**	**686**
16:00	0	391	62	453	51	220	0	271	**724**	0	0	0	0	17	0	105	122	**122**	**846**
17:00	0	452	63	515	52	192	0	244	**759**	0	0	0	0	29	0	148	177	**177**	**936**

Property of Illinois Department of Transportation
Traffic Report 4 leg Version 2.5



PROJECT:	TITLE:	PROJECT NO: 05-402
PROPOSED SHOPPING CENTER CHICAGO, ILLINOIS	EXISTING PEAK HOUR VOLUMES	KLOA FIGURE NO: 2



PROJECT:	TITLE:	PROJECT NO: 08-293
PROPOSED ROSELAND PLAZA CHICAGO, ILLINOIS	EXISTING PEAK HOUR TRAFFIC VOLUMES	KLOA
		FIGURE NO: 2

Fish Transportation Group

801 South Blvd Suite 5
Oak Park,IL 60302

Chicago
Vincennes - 103rd St - Beverly
Combined (All Vehicles + Pedestrians)

File Name : Vincennes - Beverly & 103rd Rpt
Site Code : 00002244
Start Date : 12/20/2006
Page No : 1

Groups Printed- Cars - Single - Multi

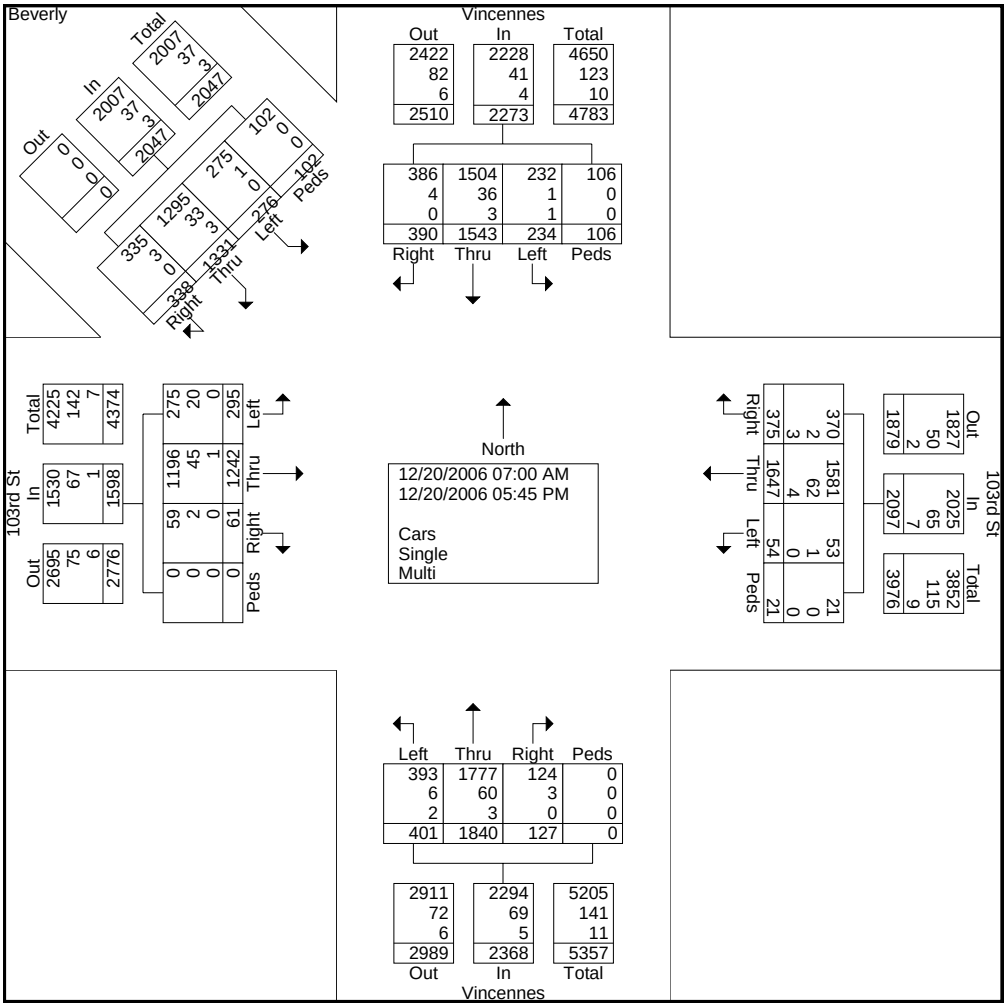
	Vincennes From North				103rd St From East				Vincennes From South				103rd St From West				Beverly From Northwest				
Start Time	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Int. Total
07:00 AM	3	6	26	5	1	14	60	1	0	5	93	12	0	2	44	25	0	5	22	9	333
07:15 AM	1	6	25	1	1	8	104	1	0	11	154	8	0	0	59	22	2	2	20	8	433
07:30 AM	1	6	37	6	1	18	98	1	0	1	101	14	0	0	41	17	1	4	19	10	376
07:45 AM	2	16	53	6	0	14	124	2	0	11	222	20	0	3	91	28	2	3	23	13	633
Total	7	34	141	18	3	54	386	5	0	28	570	54	0	5	235	92	5	14	84	40	1775
08:00 AM	2	13	58	4	4	34	139	1	0	15	167	13	0	9	102	26	1	3	26	14	631
08:15 AM	0	12	83	17	1	10	116	1	0	10	142	37	0	0	43	15	0	1	29	10	527
08:30 AM	1	6	68	5	1	13	119	5	0	7	127	47	0	0	52	13	1	3	30	11	509
08:45 AM	1	15	66	7	2	15	113	5	0	8	138	19	0	4	82	21	0	7	35	18	556
Total	4	46	275	33	8	72	487	12	0	40	574	116	0	13	279	75	2	14	120	53	2223
*** BREAK ***																					
04:00 PM	42	31	98	21	2	19	61	4	0	3	67	20	0	3	50	9	42	31	98	21	622
04:15 PM	16	34	172	15	3	25	112	7	0	9	92	34	0	8	87	14	16	34	172	15	865
04:30 PM	0	24	171	26	2	33	127	6	0	3	114	32	0	7	115	12	0	24	171	26	893
04:45 PM	12	54	171	26	0	38	107	2	0	14	82	26	0	7	105	26	12	54	171	26	933
Total	70	143	612	88	7	115	407	19	0	29	355	112	0	25	357	61	70	143	612	88	3313
05:00 PM	3	39	104	16	3	37	94	4	0	7	84	25	0	6	106	20	3	39	104	16	710
05:15 PM	6	40	126	26	0	24	81	5	0	7	86	40	0	3	87	23	6	40	126	26	752
05:30 PM	11	48	157	35	0	45	115	4	0	8	88	29	0	3	89	10	11	48	157	35	893
05:45 PM	5	40	128	18	0	28	77	5	0	8	83	25	0	6	89	14	5	40	128	18	717
Total	25	167	515	95	3	134	367	18	0	30	341	119	0	18	371	67	25	167	515	95	3072
Grand Total	106	390	1543	234	21	375	1647	54	0	127	1840	401	0	61	1242	295	102	338	1331	276	10383
Apprch %	4.7	17.2	67.9	10.3	1	17.9	78.5	2.6	0	5.4	77.7	16.9	0	3.8	77.7	18.5	5	16.5	65	13.5	
Total %	1	3.8	14.9	2.3	0.2	3.6	15.9	0.5	0	1.2	17.7	3.9	0	0.6	12	2.8	1	3.3	12.8	2.7	
Cars	106	386	1504	232	21	370	1581	53	0	124	1777	393	0	59	1196	275	102	335	1295	275	10084
% Cars	100	99	97.5	99.1	100	98.7	96	98.1	0	97.6	96.6	98	0	96.7	96.3	93.2	100	99.1	97.3	99.6	97.1
Single	0	4	36	1	0	2	62	1	0	3	60	6	0	2	45	20	0	3	33	1	279
% Single	0	1	2.3	0.4	0	0.5	3.8	1.9	0	2.4	3.3	1.5	0	3.3	3.6	6.8	0	0.9	2.5	0.4	2.7
Multi	0	0	3	1	0	3	4	0	0	0	3	2	0	0	1	0	0	0	3	0	20
% Multi	0	0	0.2	0.4	0	0.8	0.2	0	0	0	0.2	0.5	0	0	0.1	0	0	0	0.2	0	0.2

Fish Transportation Group

801 South Blvd Suite 5
Oak Park,IL 60302

Chicago
Vincennes - 103rd St - Beverly
Combined (All Vehicles + Pedestrians)

File Name : Vincennes - Beverly & 103rd Rpt
Site Code : 00002244
Start Date : 12/20/2006
Page No : 2



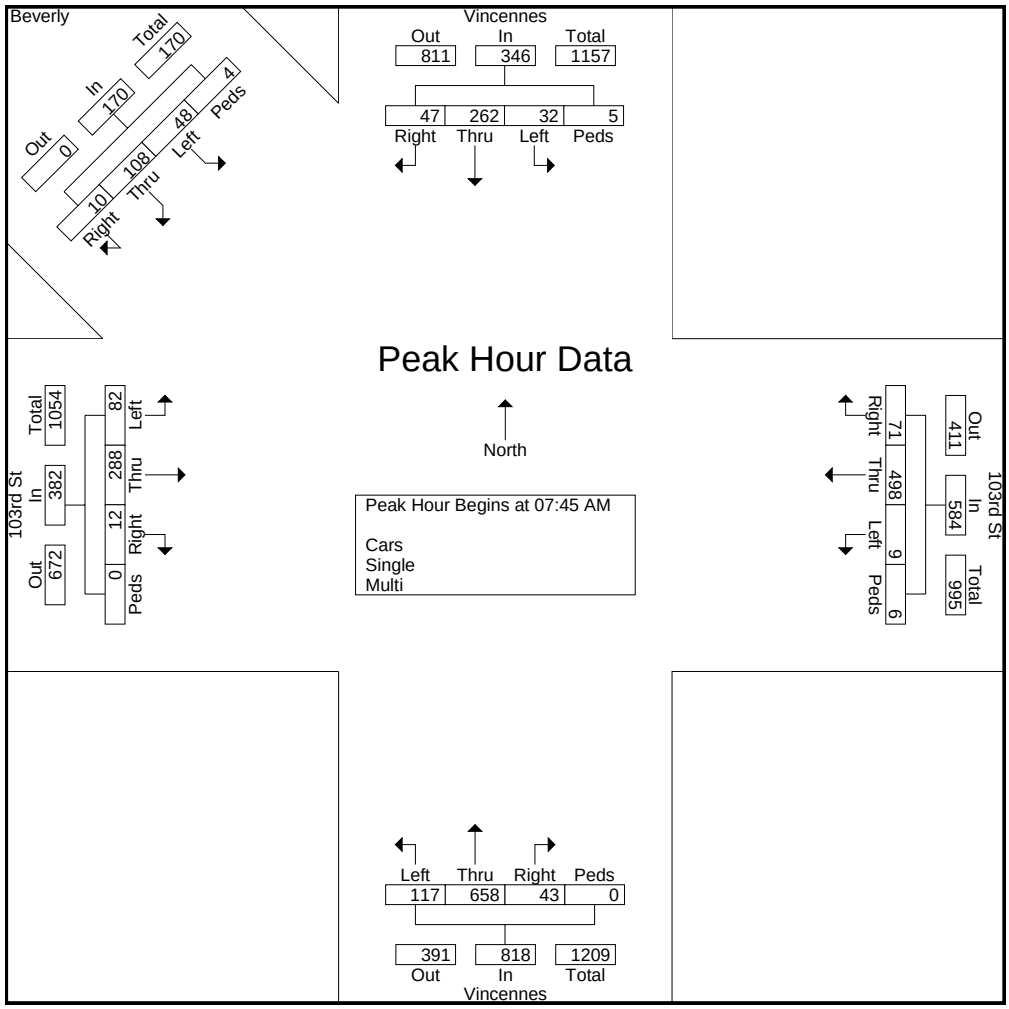
Fish Transportation Group

801 South Blvd Suite 5
Oak Park,IL 60302

Chicago
Vincennes - 103rd St - Beverly
Combined (All Vehicles + Pedestrians)

File Name : Vincennes - Beverly & 103rd Rpt
Site Code : 00002244
Start Date : 12/20/2006
Page No : 3

	Vincennes From North					103rd St From East					Vincennes From South					103rd St From West					Beverly From Northwest					
Start Time	Peds	Right	Thru	Left	App. Total	Peds	Right	Thru	Left	App. Total	Peds	Right	Thru	Left	App. Total	Peds	Right	Thru	Left	App. Total	Peds	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1																										
Peak Hour for Entire Intersection Begins at 07:45 AM																										
07:45 AM	2	16	53	6	77	0	14	124	2	140	0	11	222	20	253	0	3	91	28	122	2	3	23	13	41	633
08:00 AM	2	13	58	4	77	4	34	139	1	178	0	15	167	13	195	0	9	102	26	137	1	3	26	14	44	631
08:15 AM	0	12	83	17	112	1	10	116	1	128	0	10	142	37	189	0	0	43	15	58	0	1	29	10	40	527
08:30 AM	1	6	68	5	80	1	13	119	5	138	0	7	127	47	181	0	0	52	13	65	1	3	30	11	45	509
Total Volume	5	47	262	32	346	6	71	498	9	584	0	43	658	117	818	0	12	288	82	382	4	10	108	48	170	2300
% App. Total	1.4	13.6	75.7	9.2		1	12.2	85.3	1.5		0	5.3	80.4	14.3		0	3.1	75.4	21.5		2.4	5.9	63.5	28.2		
PHF	.625	.734	.789	.471	.772	.375	.522	.896	.450	.820	.000	.717	.741	.622	.808	.000	.333	.706	.732	.697	.500	.833	.900	.857	.944	.908



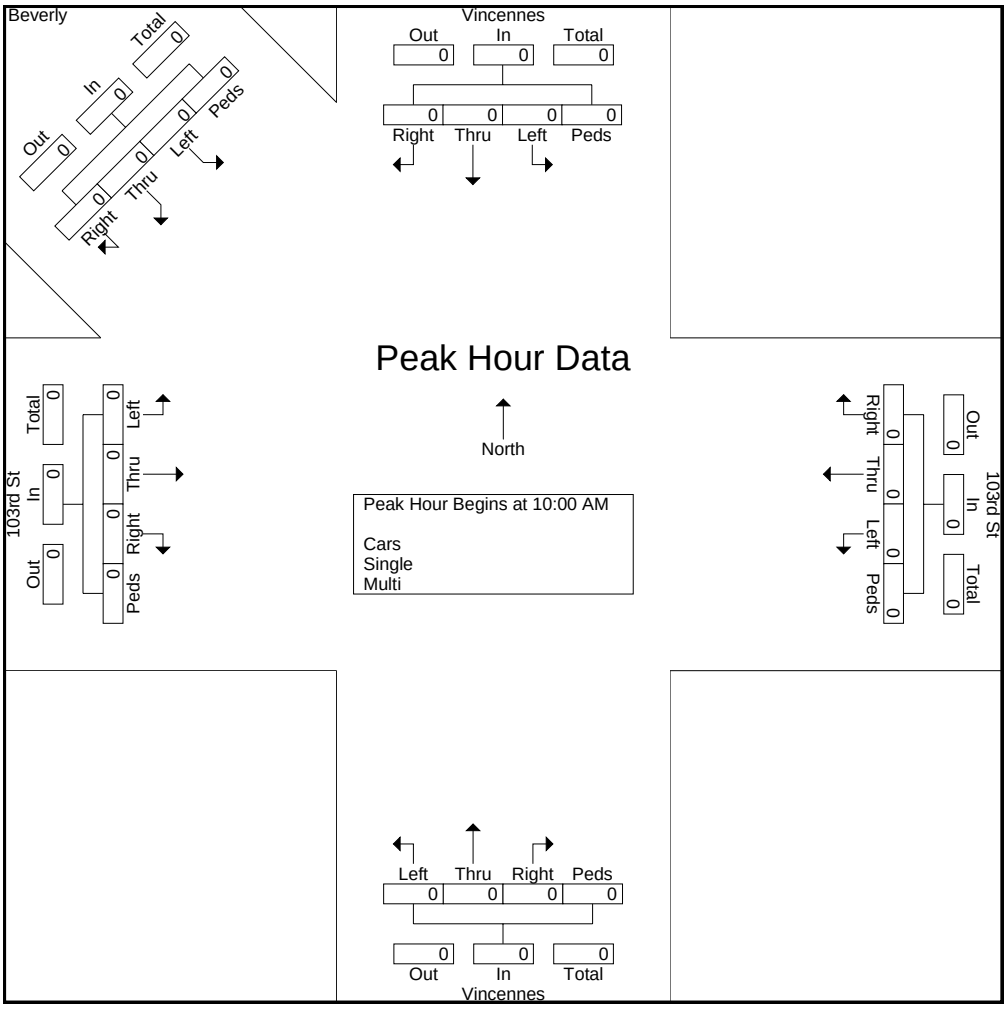
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801 South Blvd Suite 5
Oak Park,IL 60302

Chicago
Vincennes - 103rd St - Beverly
Combined (All Vehicles + Pedestrians)

File Name : Vincennes - Beverly & 103rd Rpt
Site Code : 00002244
Start Date : 12/20/2006

	Vincennes From North					103rd St From East					Vincennes From South					103rd St From West					Beverly From Northwest					
Start Time	Peds	Right	Thru	Left	App. Total	Peds	Right	Thru	Left	App. Total	Peds	Right	Thru	Left	App. Total	Peds	Right	Thru	Left	App. Total	Peds	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																										
Peak Hour for Entire Intersection Begins at 10:00 AM																										
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000



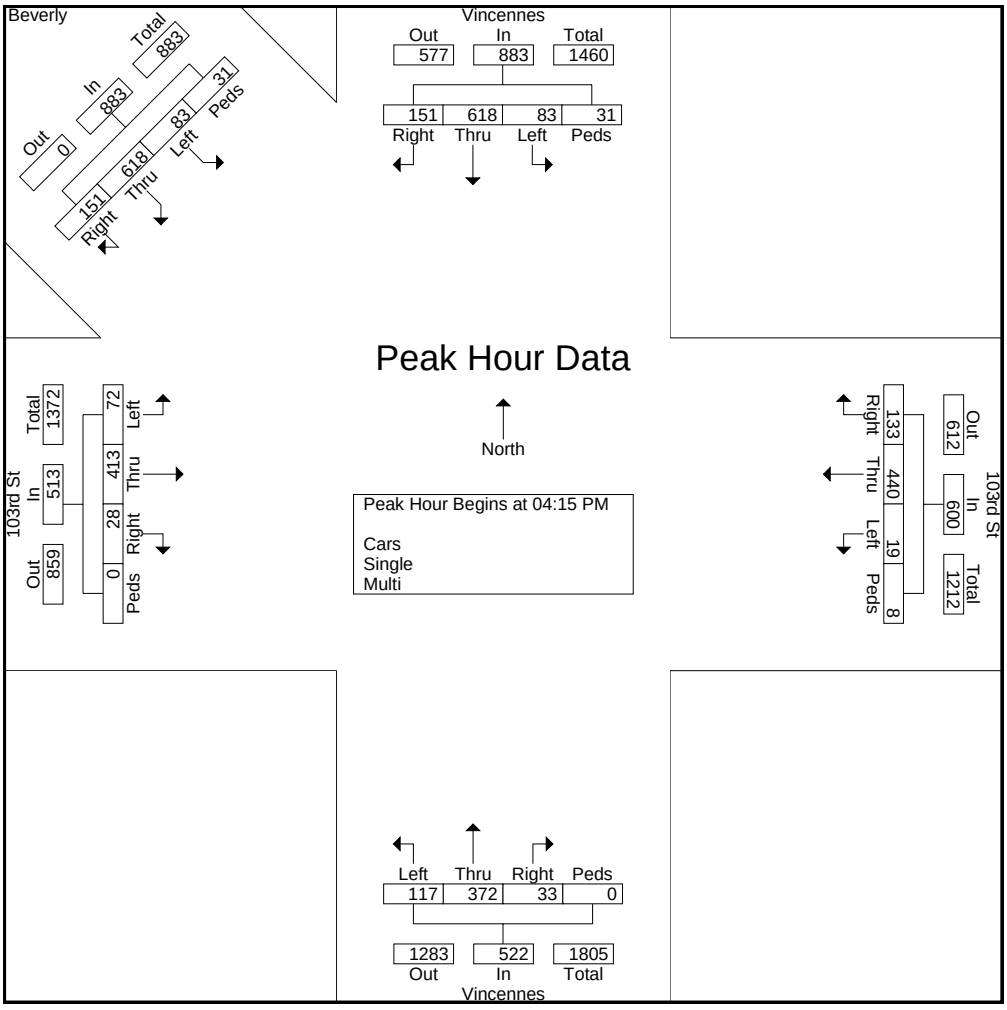
Fish Transportation Group

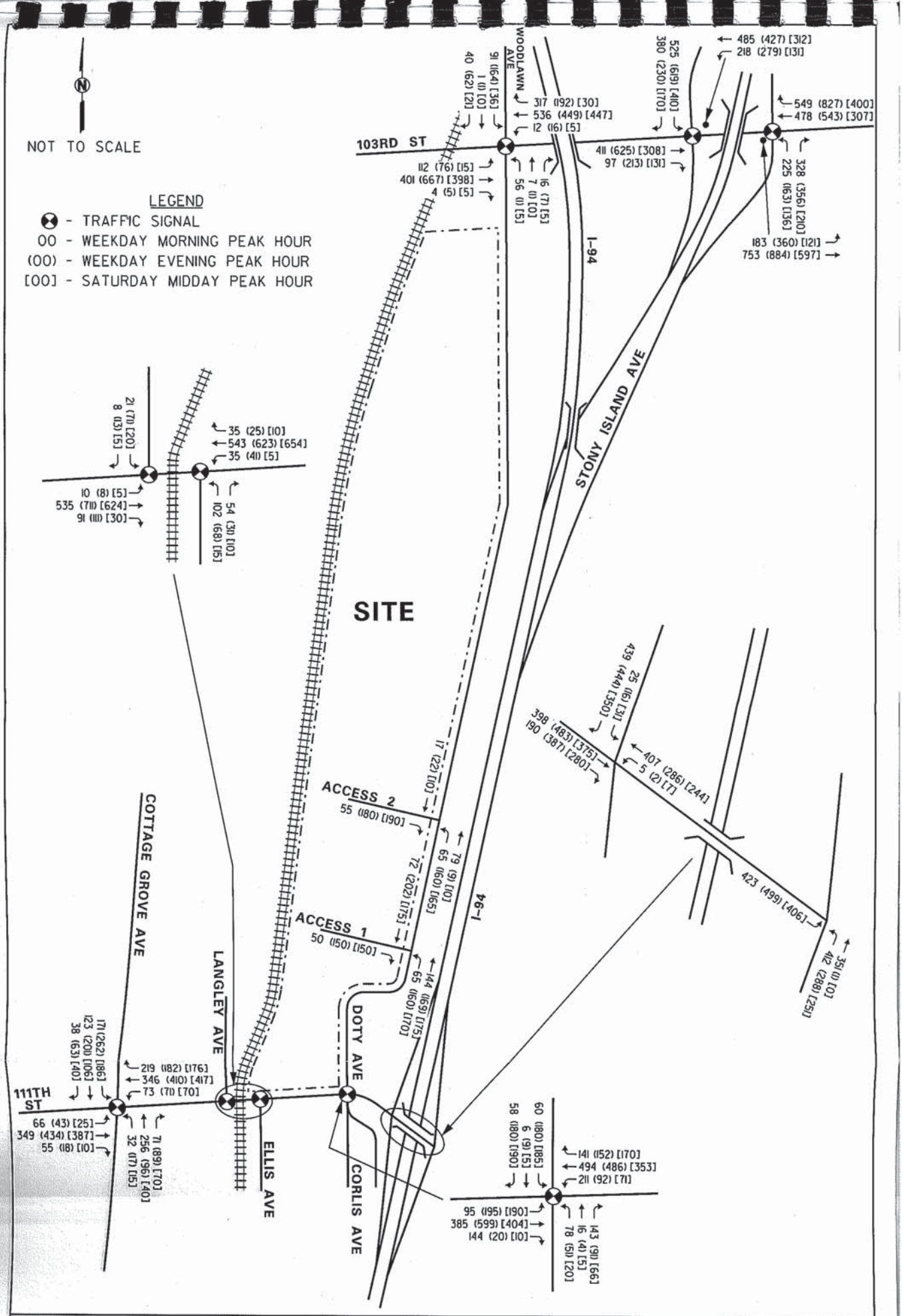
801 South Blvd Suite 5
Oak Park,IL 60302

Chicago
Vincennes - 103rd St - Beverly
Combined (All Vehicles + Pedestrians)

File Name : Vincennes - Beverly & 103rd Rpt
Site Code : 00002244
Start Date : 12/20/2006

	Vincennes From North					103rd St From East					Vincennes From South					103rd St From West					Beverly From Northwest					
Start Time	Peds	Right	Thru	Left	App. Total	Peds	Right	Thru	Left	App. Total	Peds	Right	Thru	Left	App. Total	Peds	Right	Thru	Left	App. Total	Peds	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 05:45 PM - Peak 1 of 1																										
Peak Hour for Entire Intersection Begins at 04:15 PM																										
04:15 PM	16	34	172	15	237	3	25	112	7	147	0	9	92	34	135	0	8	87	14	109	16	34	172	15	237	865
04:30 PM	0	24	171	26	221	2	33	127	6	168	0	3	114	32	149	0	7	115	12	134	0	24	171	26	221	893
04:45 PM	12	54	171	26	263	0	38	107	2	147	0	14	82	26	122	0	7	105	26	138	12	54	171	26	263	933
05:00 PM	3	39	104	16	162	3	37	94	4	138	0	7	84	25	116	0	6	106	20	132	3	39	104	16	162	710
Total Volume	31	151	618	83	883	8	133	440	19	600	0	33	372	117	522	0	28	413	72	513	31	151	618	83	883	3401
% App. Total	3.5	17.1	70	9.4		1.3	22.2	73.3	3.2		0	6.3	71.3	22.4		0	5.5	80.5	14		3.5	17.1	70	9.4		
PHF	.484	.699	.898	.798	.839	.667	.875	.866	.679	.893	.000	.589	.816	.860	.876	.000	.875	.898	.692	.929	.484	.699	.898	.798	.839	.911





PROJECT:
PULLMAN REDEVELOPMENT PROJECT
CHICAGO, ILLINOIS

TITLE:
YEAR 2012 - PHASE I TOTAL PEAK HOUR VOLUMES
(WAL-MART STORE ONLY)

PROJECT NO: 10-075

KLOA

FIGURE NO: 9

Regina Webster & Associates, Inc.
8619 West Bryn Mawr Avenue, Suite 602, Chicago, Illinois 60631
773-283-2600 Fax: 773-283-2602
www.RWAengineers.com

100th St and Martin Luther King Dr
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012
Page No : 1

Groups Printed- PC - SU - MU

	Martin Luther King Dr From North				100th St From East				Martin Luther King Dr From South				100th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	3	24	7	34	27	28	2	57	0	73	3	76	2	5	4	11	178
07:15 AM	2	39	5	46	30	27	0	57	2	110	3	115	2	6	6	14	232
07:30 AM	2	47	13	62	39	37	2	78	4	118	4	126	2	3	6	11	277
07:45 AM	1	45	10	56	52	40	3	95	1	132	3	136	5	13	11	29	316
Total	8	155	35	198	148	132	7	287	7	433	13	453	11	27	27	65	1003
08:00 AM	3	47	15	65	41	32	3	76	1	142	4	147	7	12	14	33	321
08:15 AM	5	54	12	71	39	21	0	60	3	125	5	133	3	14	13	30	294
08:30 AM	7	67	11	85	42	24	0	66	3	125	1	129	1	15	15	31	311
08:45 AM	1	87	24	112	47	34	2	83	2	125	1	128	3	14	33	50	373
Total	16	255	62	333	169	111	5	285	9	517	11	537	14	55	75	144	1299
Grand Total	24	410	97	531	317	243	12	572	16	950	24	990	25	82	102	209	2302
Apprch %	4.5	77.2	18.3		55.4	42.5	2.1		1.6	96	2.4		12	39.2	48.8		
Total %	1	17.8	4.2	23.1	13.8	10.6	0.5	24.8	0.7	41.3	1	43	1.1	3.6	4.4	9.1	
PC	24	390	94	508	313	236	11	560	16	920	24	960	25	80	101	206	2234
% PC	100	95.1	96.9	95.7	98.7	97.1	91.7	97.9	100	96.8	100	97	100	97.6	99	98.6	97
SU	0	19	3	22	4	7	1	12	0	28	0	28	0	2	1	3	65
% SU	0	4.6	3.1	4.1	1.3	2.9	8.3	2.1	0	2.9	0	2.8	0	2.4	1	1.4	2.8
MU	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
% MU	0	0.2	0	0.2	0	0	0	0	0	0.2	0	0.2	0	0	0	0	0.1

	Martin Luther King Dr From North				100th St From East				Martin Luther King Dr From South				100th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	3	47	15	65	41	32	**3**	76	1	**142**	4	**147**	**7**	12	14	33	321
08:15 AM	5	54	12	71	39	21	0	60	**3**	125	**5**	133	3	14	13	30	294
08:30 AM	**7**	67	11	85	42	24	0	66	3	125	1	129	1	**15**	15	31	311
08:45 AM	1	**87**	**24**	**112**	**47**	**34**	2	**83**	2	125	1	128	3	14	**33**	**50**	**373**
Total Volume	16	255	62	333	169	111	5	285	9	517	11	537	14	55	75	144	1299
% App. Total	4.8	76.6	18.6		59.3	38.9	1.8		1.7	96.3	2		9.7	38.2	52.1		
PHF	.571	.733	.646	.743	.899	.816	.417	.858	.750	.910	.550	.913	.500	.917	.568	.720	.871

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100th St and Martin Luther King Dr
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012
Page No : 2

Groups Printed- SU

	Martin Luther King Dr From North				100th St From East				Martin Luther King Dr From South				100th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	1	0	1	0	1	0	1	0	5	0	5	0	0	0	0	7
07:15 AM	0	4	0	4	0	0	0	0	0	5	0	5	0	1	0	1	10
07:30 AM	0	4	0	4	0	0	0	0	0	1	0	1	0	0	0	0	5
07:45 AM	0	1	1	2	0	2	0	2	0	7	0	7	0	0	0	0	11
Total	0	10	1	11	0	3	0	3	0	18	0	18	0	1	0	1	33
08:00 AM	0	1	0	1	1	1	1	3	0	4	0	4	0	0	0	0	8
08:15 AM	0	3	1	4	2	0	0	2	0	0	0	0	0	0	0	0	6
08:30 AM	0	2	0	2	0	1	0	1	0	4	0	4	0	0	1	1	8
08:45 AM	0	3	1	4	1	2	0	3	0	2	0	2	0	1	0	1	10
Total	0	9	2	11	4	4	1	9	0	10	0	10	0	1	1	2	32
Grand Total	0	19	3	22	4	7	1	12	0	28	0	28	0	2	1	3	65
Apprch %	0	86.4	13.6		33.3	58.3	8.3		0	100	0		0	66.7	33.3		
Total %	0	29.2	4.6	33.8	6.2	10.8	1.5	18.5	0	43.1	0	43.1	0	3.1	1.5	4.6	

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100th St and Martin Luther King Dr
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012
Page No : 3

Groups Printed- MU

	Martin Luther King Dr From North				100th St From East				Martin Luther King Dr From South				100th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Grand Total	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
Apprch %	0	100	0		0	0	0		0	100	0		0	0	0		
Total %	0	33.3	0	33.3	0	0	0	0	0	66.7	0	66.7	0	0	0	0	

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100th St and Martin Luther King Dr
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 6/5/2012

Groups Printed- Peds & Bikes

	Martin Luther King Dr Crossing North Leg			100th St Crossing East Leg			Martin Luther King Dr Crossing South Leg			100th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	2	2	0	2	2	0	0	0	0	0	0	4
07:15 AM	0	0	0	0	2	2	0	3	3	0	1	1	6
07:30 AM	0	0	0	0	1	1	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	1	1	0	0	0	0	0	0	1
Total	0	2	2	0	6	6	0	3	3	0	1	1	12
08:00 AM	0	0	0	0	2	2	0	0	0	0	0	0	2
08:15 AM	0	0	0	0	2	2	1	0	1	0	0	0	3
08:30 AM	0	1	1	1	4	5	0	0	0	0	0	0	6
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	1	1	8	9	1	0	1	0	0	0	11
Grand Total	0	3	3	1	14	15	1	3	4	0	1	1	23
Apprch %	0	100		6.7	93.3		25	75		0	100		
Total %	0	13	13	4.3	60.9	65.2	4.3	13	17.4	0	4.3	4.3	

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100th St and Martin Luther King Dr
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012
Page No : 5

Groups Printed- PC - SU - MU

	Martin Luther King Dr From North				100th St From East				Martin Luther King Dr From South				100th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	8	154	33	195	11	12	0	23	5	69	0	74	5	13	14	32	324
04:15 PM	14	145	33	192	15	19	0	34	7	77	2	86	2	8	9	19	331
04:30 PM	4	137	26	167	20	15	1	36	3	73	0	76	2	24	7	33	312
04:45 PM	14	152	30	196	16	17	0	33	5	77	3	85	1	12	11	24	338
Total	40	588	122	750	62	63	1	126	20	296	5	321	10	57	41	108	1305
05:00 PM	12	160	45	217	20	14	1	35	7	53	0	60	6	11	10	27	339
05:15 PM	14	145	26	185	15	23	2	40	3	74	1	78	1	9	6	16	319
05:30 PM	9	103	39	151	11	14	3	28	7	67	0	74	3	17	9	29	282
05:45 PM	7	88	24	119	15	12	2	29	3	67	4	74	2	12	6	20	242
Total	42	496	134	672	61	63	8	132	20	261	5	286	12	49	31	92	1182
Grand Total	82	1084	256	1422	123	126	9	258	40	557	10	607	22	106	72	200	2487
Apprch %	5.8	76.2	18		47.7	48.8	3.5		6.6	91.8	1.6		11	53	36		
Total %	3.3	43.6	10.3	57.2	4.9	5.1	0.4	10.4	1.6	22.4	0.4	24.4	0.9	4.3	2.9	8	
PC	82	1071	256	1409	123	123	9	255	40	545	10	595	22	105	72	199	2458
% PC	100	98.8	100	99.1	100	97.6	100	98.8	100	97.8	100	98	100	99.1	100	99.5	98.8
SU	0	9	0	9	0	2	0	2	0	12	0	12	0	0	0	0	23
% SU	0	0.8	0	0.6	0	1.6	0	0.8	0	2.2	0	2	0	0	0	0	0.9
MU	0	4	0	4	0	1	0	1	0	0	0	0	0	1	0	1	6
% MU	0	0.4	0	0.3	0	0.8	0	0.4	0	0	0	0	0	0.9	0	0.5	0.2

	Martin Luther King Dr From North				100th St From East				Martin Luther King Dr From South				100th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	**14**	145	33	192	15	**19**	0	34	**7**	**77**	2	**86**	2	8	9	19	331
04:30 PM	4	137	26	167	**20**	15	**1**	**36**	3	73	0	76	2	**24**	7	**33**	312
04:45 PM	14	152	30	196	16	17	0	33	5	77	**3**	85	1	12	**11**	24	338
05:00 PM	12	**160**	**45**	**217**	20	14	1	35	7	53	0	60	**6**	11	10	27	**339**
Total Volume	44	594	134	772	71	65	2	138	22	280	5	307	11	55	37	103	1320
% App. Total	5.7	76.9	17.4		51.4	47.1	1.4		7.2	91.2	1.6		10.7	53.4	35.9		
PHF	.786	.928	.744	.889	.888	.855	.500	.958	.786	.909	.417	.892	.458	.573	.841	.780	.973

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100th St and Martin Luther King Dr
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012
Page No : 6

Groups Printed- SU

	Martin Luther King Dr From North				100th St From East				Martin Luther King Dr From South				100th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
04:15 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
04:30 PM	0	1	0	1	0	1	0	1	0	1	0	1	0	0	0	0	3
04:45 PM	0	1	0	1	0	0	0	0	0	3	0	3	0	0	0	0	4
Total	0	5	0	5	0	1	0	1	0	5	0	5	0	0	0	0	11
05:00 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
05:15 PM	0	1	0	1	0	1	0	1	0	3	0	3	0	0	0	0	5
05:30 PM	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
05:45 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
Total	0	4	0	4	0	1	0	1	0	7	0	7	0	0	0	0	12
Grand Total	0	9	0	9	0	2	0	2	0	12	0	12	0	0	0	0	23
Apprch %	0	100	0		0	100	0		0	100	0		0	0	0		
Total %	0	39.1	0	39.1	0	8.7	0	8.7	0	52.2	0	52.2	0	0	0	0	

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100th St and Martin Luther King Dr
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012
Page No : 7

Groups Printed- MU

	Martin Luther King Dr From North				100th St From East				Martin Luther King Dr From South				100th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	2	0	1	0	1	0	0	0	0	0	1	0	1	4
05:00 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Grand Total	0	4	0	4	0	1	0	1	0	0	0	0	0	1	0	1	6
Apprch %	0	100	0		0	100	0		0	0	0		0	100	0		
Total %	0	66.7	0	66.7	0	16.7	0	16.7	0	0	0	0	0	16.7	0	16.7	

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100th St and Martin Luther King Dr
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 6/5/2012
Page No : 8

Groups Printed- Peds & Bikes

	Martin Luther King Dr Crossing North Leg			100th St Crossing East Leg			Martin Luther King Dr Crossing South Leg			100th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	1	1	0	0	0	0	0	0	0	1	1	2
04:15 PM	0	2	2	0	1	1	0	0	0	0	0	0	3
04:30 PM	0	0	0	0	3	3	0	0	0	0	0	0	3
04:45 PM	0	0	0	0	1	1	0	0	0	0	0	0	1
Total	0	3	3	0	5	5	0	0	0	0	1	1	9
05:00 PM	0	0	0	0	1	1	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	1	0	1	3	0	3	4
05:30 PM	0	2	2	0	4	4	0	0	0	0	1	1	7
05:45 PM	0	0	0	0	1	1	0	0	0	0	0	0	1
Total	0	2	2	0	6	6	1	0	1	3	1	4	13
Grand Total	0	5	5	0	11	11	1	0	1	3	2	5	22
Apprch %	0	100		0	100		100	0		60	40		
Total %	0	22.7	22.7	0	50	50	4.5	0	4.5	13.6	9.1	22.7	

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103rd St & Michigan Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM No Peds
Site Code : 00000000
Start Date : 5/2/2012
Page No : 1

Groups Printed- PC - SU - MU

	Michigan Ave From North				103rd St From East				Michigan Ave From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	6	16	4	26	14	37	2	53	7	67	8	82	11	31	20	62	223
07:15 AM	8	31	3	42	10	60	13	83	10	85	12	107	9	48	11	68	300
07:30 AM	7	24	7	38	18	52	11	81	10	101	8	119	10	70	17	97	335
07:45 AM	14	36	11	61	11	65	8	84	12	65	10	87	23	80	17	120	352
Total	35	107	25	167	53	214	34	301	39	318	38	395	53	229	65	347	1210
08:00 AM	12	37	17	66	16	61	12	89	6	83	18	107	18	87	17	122	384
08:15 AM	8	27	15	50	14	61	9	84	10	71	20	101	16	93	27	136	371
08:30 AM	12	33	10	55	15	53	8	76	12	80	14	106	12	101	21	134	371
08:45 AM	14	34	22	70	18	69	7	94	18	62	16	96	16	98	11	125	385
Total	46	131	64	241	63	244	36	343	46	296	68	410	62	379	76	517	1511
Grand Total	81	238	89	408	116	458	70	644	85	614	106	805	115	608	141	864	2721
Apprch %	19.9	58.3	21.8		18	71.1	10.9		10.6	76.3	13.2		13.3	70.4	16.3		
Total %	3	8.7	3.3	15	4.3	16.8	2.6	23.7	3.1	22.6	3.9	29.6	4.2	22.3	5.2	31.8	
PC	69	211	78	358	101	436	64	601	79	571	105	755	111	572	129	812	2526
% PC	85.2	88.7	87.6	87.7	87.1	95.2	91.4	93.3	92.9	93	99.1	93.8	96.5	94.1	91.5	94	92.8
SU	12	27	11	50	15	19	5	39	5	42	1	48	4	30	12	46	183
% SU	14.8	11.3	12.4	12.3	12.9	4.1	7.1	6.1	5.9	6.8	0.9	6	3.5	4.9	8.5	5.3	6.7
MU	0	0	0	0	0	3	1	4	1	1	0	2	0	6	0	6	12
% MU	0	0	0	0	0	0.7	1.4	0.6	1.2	0.2	0	0.2	0	1	0	0.7	0.4

	Michigan Ave From North				103rd St From East				Michigan Ave From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	12	**37**	17	66	16	61	**12**	89	6	**83**	18	**107**	**18**	87	17	122	384
08:15 AM	8	27	15	50	14	61	9	84	10	71	**20**	101	16	93	**27**	**136**	371
08:30 AM	12	33	10	55	15	53	8	76	12	80	14	106	12	**101**	21	134	371
08:45 AM	**14**	34	**22**	**70**	**18**	**69**	7	**94**	**18**	62	16	96	16	98	11	125	**385**
Total Volume	46	131	64	241	63	244	36	343	46	296	68	410	62	379	76	517	1511
% App. Total	19.1	54.4	26.6		18.4	71.1	10.5		11.2	72.2	16.6		12	73.3	14.7		
PHF	.821	.885	.727	.861	.875	.884	.750	.912	.639	.892	.850	.958	.861	.938	.704	.950	.981

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103rd St & Michigan Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM No Peds
Site Code : 00000000
Start Date : 5/2/2012
Page No : 2

Groups Printed- SU

	Michigan Ave From North				103rd St From East				Michigan Ave From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	1	3	1	5	2	3	0	5	0	10	0	10	0	1	2	3	23
07:15 AM	1	4	1	6	4	1	2	7	0	6	0	6	0	3	2	5	24
07:30 AM	4	3	1	8	0	4	0	4	0	4	0	4	1	5	1	7	23
07:45 AM	2	4	2	8	2	2	0	4	1	5	0	6	1	2	1	4	22
Total	8	14	5	27	8	10	2	20	1	25	0	26	2	11	6	19	92
08:00 AM	1	3	1	5	1	3	0	4	2	2	1	5	0	3	1	4	18
08:15 AM	1	4	1	6	1	2	0	3	2	7	0	9	1	4	1	6	24
08:30 AM	1	2	1	4	1	1	2	4	0	3	0	3	1	6	3	10	21
08:45 AM	1	4	3	8	4	3	1	8	0	5	0	5	0	6	1	7	28
Total	4	13	6	23	7	9	3	19	4	17	1	22	2	19	6	27	91
Grand Total	12	27	11	50	15	19	5	39	5	42	1	48	4	30	12	46	183
Apprch %	24	54	22		38.5	48.7	12.8		10.4	87.5	2.1		8.7	65.2	26.1		
Total %	6.6	14.8	6	27.3	8.2	10.4	2.7	21.3	2.7	23	0.5	26.2	2.2	16.4	6.6	25.1	

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103rd St & Michigan Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM No Peds
Site Code : 00000000
Start Date : 5/2/2012
Page No : 3

Groups Printed- MU

	Michigan Ave From North				103rd St From East				Michigan Ave From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
07:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	1	0	1	1	0	0	1	0	1	0	1	3
08:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
08:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2
08:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	3	0	3	4
08:45 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	2	1	3	0	1	0	1	0	5	0	5	9
Grand Total	0	0	0	0	0	3	1	4	1	1	0	2	0	6	0	6	12
Apprch %	0	0	0		0	75	25		50	50	0		0	100	0		
Total %	0	0	0	0	0	25	8.3	33.3	8.3	8.3	0	16.7	0	50	0	50	

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103rd St & Michigan Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds + Bikes
Site Code : 00000000
Start Date : 5/2/2012

Groups Printed- Peds & Bikes

	Michigan Ave Crossing North Leg			103rd St Crossing East Leg			Michigan Ave Crossing South Leg			103rd St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	28	28	0	14	14	0	3	3	0	9	9	54
07:15 AM	0	32	32	0	23	23	0	6	6	0	2	2	63
07:30 AM	0	21	21	0	11	11	0	1	1	0	7	7	40
07:45 AM	0	36	36	0	5	5	0	1	1	0	7	7	49
Total	0	117	117	0	53	53	0	11	11	0	25	25	206
08:00 AM	0	23	23	0	2	2	0	2	2	0	7	7	34
08:15 AM	0	18	18	0	34	34	0	6	6	0	7	7	65
08:30 AM	0	43	43	0	21	21	0	2	2	0	8	8	74
08:45 AM	0	35	35	0	9	9	0	7	7	0	8	8	59
Total	0	119	119	0	66	66	0	17	17	0	30	30	232
Grand Total	0	236	236	0	119	119	0	28	28	0	55	55	438
Apprch %	0	100		0	100		0	100		0	100		
Total %	0	53.9	53.9	0	27.2	27.2	0	6.4	6.4	0	12.6	12.6	

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103rd St & Michigan Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : PM No Peds
Site Code : 00000000
Start Date : 5/2/2012
Page No : 5

Groups Printed- PC - SU - MU

	Michigan Ave From North				103rd St From East				Michigan Ave From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	16	71	12	99	11	68	13	92	13	55	11	79	14	74	15	103	373
04:15 PM	20	47	12	79	19	79	17	115	10	49	8	67	26	73	14	113	374
04:30 PM	16	69	19	104	15	71	16	102	10	40	14	64	26	98	13	137	407
04:45 PM	10	54	16	80	20	63	9	92	7	40	16	63	30	111	14	155	390
Total	62	241	59	362	65	281	55	401	40	184	49	273	96	356	56	508	1544
05:00 PM	22	50	23	95	17	85	12	114	10	43	15	68	13	109	12	134	411
05:15 PM	17	50	18	85	14	72	14	100	17	38	12	67	20	102	18	140	392
05:30 PM	15	54	20	89	14	79	14	107	17	50	14	81	21	89	10	120	397
05:45 PM	16	69	20	105	8	69	18	95	19	44	13	76	17	89	10	116	392
Total	70	223	81	374	53	305	58	416	63	175	54	292	71	389	50	510	1592
Grand Total	132	464	140	736	118	586	113	817	103	359	103	565	167	745	106	1018	3136
Apprch %	17.9	63	19		14.4	71.7	13.8		18.2	63.5	18.2		16.4	73.2	10.4		
Total %	4.2	14.8	4.5	23.5	3.8	18.7	3.6	26.1	3.3	11.4	3.3	18	5.3	23.8	3.4	32.5	
PC	120	441	133	694	108	580	113	801	102	335	102	539	167	738	91	996	3030
% PC	90.9	95	95	94.3	91.5	99	100	98	99	93.3	99	95.4	100	99.1	85.8	97.8	96.6
SU	12	23	7	42	10	6	0	16	1	24	1	26	0	6	14	20	104
% SU	9.1	5	5	5.7	8.5	1	0	2	1	6.7	1	4.6	0	0.8	13.2	2	3.3
MU	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2
% MU	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.9	0.2	0.1

	Michigan Ave From North				103rd St From East				Michigan Ave From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	16	**69**	19	**104**	15	71	**16**	102	10	40	14	64	26	98	13	137	407
04:45 PM	10	54	16	80	**20**	63	9	92	7	40	**16**	63	**30**	**111**	14	**155**	390
05:00 PM	**22**	50	**23**	95	17	**85**	12	**114**	10	**43**	15	**68**	13	109	12	134	**411**
05:15 PM	17	50	18	85	14	72	14	100	**17**	38	12	67	20	102	**18**	140	392
Total Volume	65	223	76	364	66	291	51	408	44	161	57	262	89	420	57	566	1600
% App. Total	17.9	61.3	20.9		16.2	71.3	12.5		16.8	61.5	21.8		15.7	74.2	10.1		
PHF	.739	.808	.826	.875	.825	.856	.797	.895	.647	.936	.891	.963	.742	.946	.792	.913	.973

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103rd St & Michigan Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : PM No Peds
Site Code : 00000000
Start Date : 5/2/2012
Page No : 6

Groups Printed- SU

	Michigan Ave From North				103rd St From East				Michigan Ave From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	2	4	0	6	1	2	0	3	0	3	0	3	0	0	3	3	15
04:15 PM	3	0	0	3	1	0	0	1	0	3	0	3	0	0	1	1	8
04:30 PM	1	3	2	6	1	1	0	2	0	2	0	2	0	0	1	1	11
04:45 PM	1	5	1	7	2	0	0	2	0	2	1	3	0	2	2	4	16
Total	7	12	3	22	5	3	0	8	0	10	1	11	0	2	7	9	50
05:00 PM	1	3	1	5	1	1	0	2	0	4	0	4	0	0	1	1	12
05:15 PM	1	3	1	5	1	0	0	1	1	2	0	3	0	0	3	3	12
05:30 PM	2	3	1	6	1	2	0	3	0	5	0	5	0	3	1	4	18
05:45 PM	1	2	1	4	2	0	0	2	0	3	0	3	0	1	2	3	12
Total	5	11	4	20	5	3	0	8	1	14	0	15	0	4	7	11	54
Grand Total	12	23	7	42	10	6	0	16	1	24	1	26	0	6	14	20	104
Apprch %	28.6	54.8	16.7		62.5	37.5	0		3.8	92.3	3.8		0	30	70		
Total %	11.5	22.1	6.7	40.4	9.6	5.8	0	15.4	1	23.1	1	25	0	5.8	13.5	19.2	

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103rd St & Michigan Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : PM No Peds
Site Code : 00000000
Start Date : 5/2/2012
Page No : 7

Groups Printed- MU

	Michigan Ave From North				103rd St From East				Michigan Ave From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2
Apprch %	0	0	0		0	0	0		0	0	0		0	50	50		
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	50	50	100	

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103rd St & Michigan Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds + Bikes
Site Code : 00000000
Start Date : 5/2/2012

Groups Printed- Peds & Bikes

	Michigan Ave Crossing North Leg			103rd St Crossing East Leg			Michigan Ave Crossing South Leg			103rd St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	48	48	0	23	23	0	19	19	0	0	0	90
04:15 PM	0	39	39	0	23	23	0	22	22	0	4	4	88
04:30 PM	0	27	27	0	6	6	0	27	27	0	8	8	68
04:45 PM	0	35	35	0	20	20	0	18	18	0	11	11	84
Total	0	149	149	0	72	72	0	86	86	0	23	23	330
05:00 PM	0	25	25	1	8	9	0	26	26	0	5	5	65
05:15 PM	0	36	36	0	14	14	0	30	30	0	2	2	82
05:30 PM	0	23	23	0	12	12	0	21	21	0	7	7	63
05:45 PM	0	28	28	0	19	19	0	22	22	0	9	9	78
Total	0	112	112	1	53	54	0	99	99	0	23	23	288
Grand Total	0	261	261	1	125	126	0	185	185	0	46	46	618
Apprch %	0	100		0.8	99.2		0	100		0	100		
Total %	0	42.2	42.2	0.2	20.2	20.4	0	29.9	29.9	0	7.4	7.4	

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103rd St and Cottage Grove Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/8/2012
Page No : 1

Groups Printed- PC - SU - MU

	Cottage Grove Ave From North				103rd St From East				Cottage Grove Ave From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	11	23	5	39	19	57	2	78	17	48	9	74	3	37	4	44	235
07:15 AM	6	24	12	42	14	90	12	116	14	71	15	100	8	42	13	63	321
07:30 AM	10	33	6	49	19	59	15	93	26	65	8	99	9	41	13	63	304
07:45 AM	7	44	21	72	25	90	17	132	32	97	17	146	12	65	15	92	442
Total	34	124	44	202	77	296	46	419	89	281	49	419	32	185	45	262	1302
08:00 AM	6	39	11	56	17	76	9	102	25	78	12	115	8	74	16	98	371
08:15 AM	9	30	13	52	34	87	13	134	14	60	7	81	5	67	9	81	348
08:30 AM	9	38	12	59	17	81	10	108	22	93	4	119	13	80	4	97	383
08:45 AM	11	54	11	76	26	100	14	140	22	70	9	101	10	71	9	90	407
Total	35	161	47	243	94	344	46	484	83	301	32	416	36	292	38	366	1509
Grand Total	69	285	91	445	171	640	92	903	172	582	81	835	68	477	83	628	2811
Apprch %	15.5	64	20.4		18.9	70.9	10.2		20.6	69.7	9.7		10.8	76	13.2		
Total %	2.5	10.1	3.2	15.8	6.1	22.8	3.3	32.1	6.1	20.7	2.9	29.7	2.4	17	3	22.3	
PC	66	268	89	423	160	584	74	818	166	552	79	797	65	438	76	579	2617
% PC	95.7	94	97.8	95.1	93.6	91.2	80.4	90.6	96.5	94.8	97.5	95.4	95.6	91.8	91.6	92.2	93.1
SU	3	17	2	22	7	40	13	60	5	29	1	35	3	38	6	47	164
% SU	4.3	6	2.2	4.9	4.1	6.2	14.1	6.6	2.9	5	1.2	4.2	4.4	8	7.2	7.5	5.8
MU	0	0	0	0	4	16	5	25	1	1	1	3	0	1	1	2	30
% MU	0	0	0	0	2.3	2.5	5.4	2.8	0.6	0.2	1.2	0.4	0	0.2	1.2	0.3	1.1

	Cottage Grove Ave From North				103rd St From East				Cottage Grove Ave From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	7	**44**	**21**	**72**	25	**90**	**17**	132	**32**	**97**	**17**	**146**	12	65	15	92	**442**
08:00 AM	6	39	11	56	17	76	9	102	25	78	12	115	8	74	**16**	**98**	371
08:15 AM	**9**	30	13	52	**34**	87	13	**134**	14	60	7	81	5	67	9	81	348
08:30 AM	9	38	12	59	17	81	10	108	22	93	4	119	**13**	**80**	4	97	383
Total Volume	31	151	57	239	93	334	49	476	93	328	40	461	38	286	44	368	1544
% App. Total	13	63.2	23.8		19.5	70.2	10.3		20.2	71.1	8.7		10.3	77.7	12		
PHF	.861	.858	.679	.830	.684	.928	.721	.888	.727	.845	.588	.789	.731	.894	.688	.939	.873

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103rd St and Cottage Grove Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/8/2012
Page No : 2

Groups Printed- SU

	Cottage Grove Ave From North				103rd St From East				Cottage Grove Ave From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	1	0	1	1	12	1	14	1	2	1	4	1	4	1	6	25
07:15 AM	0	1	1	2	0	7	1	8	1	2	0	3	0	4	1	5	18
07:30 AM	2	1	0	3	1	2	5	8	1	2	0	3	0	6	1	7	21
07:45 AM	0	1	0	1	0	4	0	4	0	5	0	5	0	5	0	5	15
Total	2	4	1	7	2	25	7	34	3	11	1	15	1	19	3	23	79
08:00 AM	0	3	0	3	0	5	1	6	0	3	0	3	0	3	2	5	17
08:15 AM	1	3	0	4	4	3	3	10	1	1	0	2	0	8	1	9	25
08:30 AM	0	2	0	2	1	3	1	5	0	2	0	2	1	5	0	6	15
08:45 AM	0	5	1	6	0	4	1	5	1	12	0	13	1	3	0	4	28
Total	1	13	1	15	5	15	6	26	2	18	0	20	2	19	3	24	85
Grand Total	3	17	2	22	7	40	13	60	5	29	1	35	3	38	6	47	164
Apprch %	13.6	77.3	9.1		11.7	66.7	21.7		14.3	82.9	2.9		6.4	80.9	12.8		
Total %	1.8	10.4	1.2	13.4	4.3	24.4	7.9	36.6	3	17.7	0.6	21.3	1.8	23.2	3.7	28.7	

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103rd St and Cottage Grove Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/8/2012
Page No : 3

Groups Printed- MU

	Cottage Grove Ave From North				103rd St From East				Cottage Grove Ave From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
07:15 AM	0	0	0	0	1	3	1	5	0	1	0	1	0	1	0	1	7
07:30 AM	0	0	0	0	0	2	1	3	0	0	0	0	0	0	0	0	3
07:45 AM	0	0	0	0	1	2	3	6	0	0	0	0	0	0	0	0	6
Total	0	0	0	0	2	7	5	14	1	1	0	2	0	1	0	1	17
08:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	2	0	2	0	0	1	1	0	0	1	1	4
08:30 AM	0	0	0	0	1	3	0	4	0	0	0	0	0	0	0	0	4
08:45 AM	0	0	0	0	1	3	0	4	0	0	0	0	0	0	0	0	4
Total	0	0	0	0	2	9	0	11	0	0	1	1	0	0	1	1	13
Grand Total	0	0	0	0	4	16	5	25	1	1	1	3	0	1	1	2	30
Apprch %	0	0	0		16	64	20		33.3	33.3	33.3		0	50	50		
Total %	0	0	0	0	13.3	53.3	16.7	83.3	3.3	3.3	3.3	10	0	3.3	3.3	6.7	

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103rd St and Cottage Grove Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/8/2012

Groups Printed- Peds & Bikes

	Cottage Grove Ave Crossing North Leg			103rd St Crossing East Leg			Cottage Grove Ave Crossing South Leg			103rd St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	3	3	0	2	2	0	2	2	0	2	2	9
07:15 AM	0	2	2	0	8	8	0	1	1	0	0	0	11
07:30 AM	0	4	4	0	3	3	0	1	1	0	4	4	12
07:45 AM	2	2	4	2	6	8	0	6	6	0	0	0	18
Total	2	11	13	2	19	21	0	10	10	0	6	6	50
08:00 AM	0	6	6	0	6	6	0	3	3	0	1	1	16
08:15 AM	0	8	8	0	18	18	0	6	6	0	0	0	32
08:30 AM	0	11	11	0	5	5	0	10	10	0	11	11	37
08:45 AM	0	18	18	0	11	11	0	10	10	0	1	1	40
Total	0	43	43	0	40	40	0	29	29	0	13	13	125
Grand Total	2	54	56	2	59	61	0	39	39	0	19	19	175
Apprch %	3.6	96.4		3.3	96.7		0	100		0	100		
Total %	1.1	30.9	32	1.1	33.7	34.9	0	22.3	22.3	0	10.9	10.9	

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103rd St and Cottage Grove Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/8/2012
Page No : 5

Groups Printed- PC - SU - MU

	Cottage Grove Ave From North				103rd St From East				Cottage Grove Ave From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	18	70	21	109	35	145	24	204	11	29	18	58	18	69	14	101	472
04:15 PM	11	46	24	81	18	83	13	114	19	38	15	72	15	72	19	106	373
04:30 PM	12	65	27	104	29	118	14	161	15	40	7	62	17	88	9	114	441
04:45 PM	18	76	33	127	28	72	20	120	12	31	9	52	15	84	18	117	416
Total	59	257	105	421	110	418	71	599	57	138	49	244	65	313	60	438	1702
05:00 PM	21	62	22	105	26	101	29	156	15	29	10	54	13	79	15	107	422
05:15 PM	11	86	28	125	22	97	18	137	10	44	21	75	18	82	14	114	451
05:30 PM	10	79	23	112	17	89	13	119	8	25	13	46	10	87	18	115	392
05:45 PM	21	56	25	102	26	104	30	160	12	24	7	43	12	79	15	106	411
Total	63	283	98	444	91	391	90	572	45	122	51	218	53	327	62	442	1676
Grand Total	122	540	203	865	201	809	161	1171	102	260	100	462	118	640	122	880	3378
Apprch %	14.1	62.4	23.5		17.2	69.1	13.7		22.1	56.3	21.6		13.4	72.7	13.9		
Total %	3.6	16	6	25.6	6	23.9	4.8	34.7	3	7.7	3	13.7	3.5	18.9	3.6	26.1	
PC	120	522	200	842	200	788	155	1143	101	252	99	452	117	619	122	858	3295
% PC	98.4	96.7	98.5	97.3	99.5	97.4	96.3	97.6	99	96.9	99	97.8	99.2	96.7	100	97.5	97.5
SU	2	18	3	23	1	13	5	19	1	7	1	9	1	21	0	22	73
% SU	1.6	3.3	1.5	2.7	0.5	1.6	3.1	1.6	1	2.7	1	1.9	0.8	3.3	0	2.5	2.2
MU	0	0	0	0	0	8	1	9	0	1	0	1	0	0	0	0	10
% MU	0	0	0	0	0	1	0.6	0.8	0	0.4	0	0.2	0	0	0	0	0.3

	Cottage Grove Ave From North				103rd St From East				Cottage Grove Ave From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	7	**44**	**21**	**72**	25	**90**	**17**	132	**32**	**97**	**17**	**146**	12	65	15	92	**442**
08:00 AM	6	39	11	56	17	76	9	102	25	78	12	115	8	74	**16**	**98**	371
08:15 AM	**9**	30	13	52	**34**	87	13	**134**	14	60	7	81	5	67	9	81	348
08:30 AM	9	38	12	59	17	81	10	108	22	93	4	119	**13**	**80**	4	97	383
Total Volume	31	151	57	239	93	334	49	476	93	328	40	461	38	286	44	368	1544
% App. Total	13	63.2	23.8		19.5	70.2	10.3		20.2	71.1	8.7		10.3	77.7	12		
PHF	.861	.858	.679	.830	.684	.928	.721	.888	.727	.845	.588	.789	.731	.894	.688	.939	.873

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103rd St and Cottage Grove Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/8/2012
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Groups Printed- SU

	Cottage Grove Ave From North				103rd St From East				Cottage Grove Ave From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	3	0	3	0	2	3	5	0	1	1	2	1	4	0	5	15
04:15 PM	0	4	0	4	1	2	0	3	0	3	0	3	0	1	0	1	11
04:30 PM	0	3	0	3	0	2	0	2	1	1	0	2	0	3	0	3	10
04:45 PM	0	2	1	3	0	1	1	2	0	1	0	1	0	2	0	2	8
Total	0	12	1	13	1	7	4	12	1	6	1	8	1	10	0	11	44
05:00 PM	0	2	0	2	0	2	1	3	0	1	0	1	0	2	0	2	8
05:15 PM	2	2	0	4	0	1	0	1	0	0	0	0	0	2	0	2	7
05:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	4
05:45 PM	0	2	2	4	0	1	0	1	0	0	0	0	0	5	0	5	10
Total	2	6	2	10	0	6	1	7	0	1	0	1	0	11	0	11	29
Grand Total	2	18	3	23	1	13	5	19	1	7	1	9	1	21	0	22	73
Apprch %	8.7	78.3	13		5.3	68.4	26.3		11.1	77.8	11.1		4.5	95.5	0		
Total %	2.7	24.7	4.1	31.5	1.4	17.8	6.8	26	1.4	9.6	1.4	12.3	1.4	28.8	0	30.1	

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Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/8/2012
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Groups Printed- MU

	Cottage Grove Ave From North				103rd St From East				Cottage Grove Ave From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	1	0	1	0	1	0	1	0	0	0	0	2
04:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
04:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	5	0	5	0	1	0	1	0	0	0	0	6
05:00 PM	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	2
05:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	3	1	4	0	0	0	0	0	0	0	0	4
Grand Total	0	0	0	0	0	8	1	9	0	1	0	1	0	0	0	0	10
Apprch %	0	0	0		0	88.9	11.1		0	100	0		0	0	0		
Total %	0	0	0	0	0	80	10	90	0	10	0	10	0	0	0	0	

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103rd St and Cottage Grove Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/8/2012

Groups Printed- Peds & Bikes

	Cottage Grove Ave Crossing North Leg			103rd St Crossing East Leg			Cottage Grove Ave Crossing South Leg			103rd St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	1	46	47	0	20	20	0	65	65	0	13	13	145
04:15 PM	0	8	8	1	7	8	3	15	18	0	1	1	35
04:30 PM	0	9	9	0	5	5	2	11	13	0	0	0	27
04:45 PM	2	14	16	0	3	3	0	5	5	0	2	2	26
Total	3	77	80	1	35	36	5	96	101	0	16	16	233
05:00 PM	0	11	11	0	5	5	0	11	11	0	0	0	27
05:15 PM	0	4	4	0	2	2	0	5	5	0	0	0	11
05:30 PM	1	6	7	0	10	10	0	6	6	0	1	1	24
05:45 PM	2	2	4	0	3	3	0	8	8	0	0	0	15
Total	3	23	26	0	20	20	0	30	30	0	1	1	77
Grand Total	6	100	106	1	55	56	5	126	131	0	17	17	310
Apprch %	5.7	94.3		1.8	98.2		3.8	96.2		0	100		
Total %	1.9	32.3	34.2	0.3	17.7	18.1	1.6	40.6	42.3	0	5.5	5.5	

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103rd St and Halsted St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/2/2012
Page No : 1

Groups Printed- PC - SU - MU

	Halsted St From North				103rd St From East				Halsted St From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	6	75	10	91	13	42	13	68	10	270	21	301	10	22	17	49	509
07:15 AM	17	80	15	112	24	60	11	95	16	244	24	284	11	43	21	75	566
07:30 AM	15	91	21	127	28	53	8	89	17	357	34	408	20	58	18	96	720
07:45 AM	25	114	10	149	24	75	16	115	30	384	39	453	19	69	27	115	832
Total	63	360	56	479	89	230	48	367	73	1255	118	1446	60	192	83	335	2627
08:00 AM	23	109	15	147	27	66	13	106	33	385	28	446	34	82	29	145	844
08:15 AM	30	131	19	180	27	64	26	117	28	309	24	361	22	76	22	120	778
08:30 AM	17	120	20	157	24	63	12	99	21	266	22	309	19	85	16	120	685
08:45 AM	19	111	38	168	14	52	13	79	21	233	20	274	29	53	17	99	620
Total	89	471	92	652	92	245	64	401	103	1193	94	1390	104	296	84	484	2927
Grand Total	152	831	148	1131	181	475	112	768	176	2448	212	2836	164	488	167	819	5554
Apprch %	13.4	73.5	13.1		23.6	61.8	14.6		6.2	86.3	7.5		20	59.6	20.4		
Total %	2.7	15	2.7	20.4	3.3	8.6	2	13.8	3.2	44.1	3.8	51.1	3	8.8	3	14.7	
PC	145	759	138	1042	173	444	111	728	169	2344	201	2714	156	465	158	779	5263
% PC	95.4	91.3	93.2	92.1	95.6	93.5	99.1	94.8	96	95.8	94.8	95.7	95.1	95.3	94.6	95.1	94.8
SU	7	67	7	81	7	30	1	38	5	97	11	113	7	23	9	39	271
% SU	4.6	8.1	4.7	7.2	3.9	6.3	0.9	4.9	2.8	4	5.2	4	4.3	4.7	5.4	4.8	4.9
MU	0	5	3	8	1	1	0	2	2	7	0	9	1	0	0	1	20
% MU	0	0.6	2	0.7	0.6	0.2	0	0.3	1.1	0.3	0	0.3	0.6	0	0	0.1	0.4

	Halsted St From North				103rd St From East				Halsted St From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	15	91	**21**	127	**28**	53	8	89	17	357	34	408	20	58	18	96	720
07:45 AM	25	114	10	149	24	**75**	16	115	30	384	**39**	**453**	19	69	27	115	832
08:00 AM	23	109	15	147	27	66	13	106	**33**	**385**	28	446	**34**	**82**	**29**	**145**	**844**
08:15 AM	**30**	**131**	19	**180**	27	64	**26**	**117**	28	309	24	361	22	76	22	120	778
Total Volume	93	445	65	603	106	258	63	427	108	1435	125	1668	95	285	96	476	3174
% App. Total	15.4	73.8	10.8		24.8	60.4	14.8		6.5	86	7.5		20	59.9	20.2		
PHF	.775	.849	.774	.838	.946	.860	.606	.912	.818	.932	.801	.921	.699	.869	.828	.821	.940

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103rd St and Halsted St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/2/2012
Page No : 2

Groups Printed- SU

	Halsted St From North				103rd St From East				Halsted St From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	1	13	0	14	1	3	0	4	0	20	2	22	0	1	0	1	41
07:15 AM	0	6	1	7	2	4	0	6	0	14	1	15	2	3	1	6	34
07:30 AM	1	6	2	9	2	1	0	3	0	14	0	14	1	2	0	3	29
07:45 AM	2	8	1	11	0	6	0	6	2	13	4	19	0	4	2	6	42
Total	4	33	4	41	5	14	0	19	2	61	7	70	3	10	3	16	146
08:00 AM	1	5	0	6	1	4	0	5	0	10	0	10	1	2	2	5	26
08:15 AM	0	12	0	12	1	4	0	5	1	7	3	11	1	3	2	6	34
08:30 AM	1	10	0	11	0	5	1	6	2	8	0	10	2	3	2	7	34
08:45 AM	1	7	3	11	0	3	0	3	0	11	1	12	0	5	0	5	31
Total	3	34	3	40	2	16	1	19	3	36	4	43	4	13	6	23	125
Grand Total	7	67	7	81	7	30	1	38	5	97	11	113	7	23	9	39	271
Apprch %	8.6	82.7	8.6		18.4	78.9	2.6		4.4	85.8	9.7		17.9	59	23.1		
Total %	2.6	24.7	2.6	29.9	2.6	11.1	0.4	14	1.8	35.8	4.1	41.7	2.6	8.5	3.3	14.4	

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Chicago, IL
7:00 AM - 9:00 AM
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File Name : AM + PM
Site Code : 00000000
Start Date : 5/2/2012
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Groups Printed- MU

	Halsted St From North				103rd St From East				Halsted St From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
07:30 AM	0	2	0	2	1	0	0	1	0	0	0	0	0	0	0	0	3
07:45 AM	0	0	1	1	0	0	0	0	0	2	0	2	0	0	0	0	3
Total	0	3	1	4	1	0	0	1	0	4	0	4	0	0	0	0	9
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	1	1	2	0	1	0	1	1	0	0	1	0	0	0	0	4
08:30 AM	0	0	1	1	0	0	0	0	0	2	0	2	0	0	0	0	3
08:45 AM	0	1	0	1	0	0	0	0	1	1	0	2	1	0	0	1	4
Total	0	2	2	4	0	1	0	1	2	3	0	5	1	0	0	1	11
Grand Total	0	5	3	8	1	1	0	2	2	7	0	9	1	0	0	1	20
Apprch %	0	62.5	37.5		50	50	0		22.2	77.8	0		100	0	0		
Total %	0	25	15	40	5	5	0	10	10	35	0	45	5	0	0	5	

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103rd St and Halsted St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/2/2012

Groups Printed- Peds & Bikes

	Halsted St Crossing North Leg			103rd St Crossing East Leg			Halsted St Crossing South Leg			103rd St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	10	10	0	2	2	0	1	1	0	1	1	14
07:15 AM	0	12	12	0	0	0	0	8	8	0	0	0	20
07:30 AM	0	11	11	0	0	0	0	15	15	0	4	4	30
07:45 AM	0	6	6	0	3	3	0	13	13	0	8	8	30
Total	0	39	39	0	5	5	0	37	37	0	13	13	94
08:00 AM	0	22	22	0	3	3	0	5	5	0	5	5	35
08:15 AM	0	3	3	1	2	3	0	6	6	0	3	3	15
08:30 AM	0	7	7	0	5	5	0	6	6	0	2	2	20
08:45 AM	0	3	3	0	4	4	0	4	4	0	5	5	16
Total	0	35	35	1	14	15	0	21	21	0	15	15	86
Grand Total	0	74	74	1	19	20	0	58	58	0	28	28	180
Apprch %	0	100		5	95		0	100		0	100		
Total %	0	41.1	41.1	0.6	10.6	11.1	0	32.2	32.2	0	15.6	15.6	

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103rd St and Halsted St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/2/2012
Page No : 5

Groups Printed- PC - SU - MU

	Halsted St From North				103rd St From East				Halsted St From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	26	149	33	208	18	54	22	94	17	166	19	202	30	62	18	110	614
04:15 PM	43	126	35	204	25	58	23	106	27	133	23	183	45	96	21	162	655
04:30 PM	16	194	19	229	20	66	17	103	21	155	24	200	32	77	16	125	657
04:45 PM	15	166	30	211	22	64	29	115	21	150	19	190	24	56	20	100	616
Total	100	635	117	852	85	242	91	418	86	604	85	775	131	291	75	497	2542
05:00 PM	20	150	32	202	27	75	26	128	18	141	27	186	45	86	16	147	663
05:15 PM	28	213	33	274	29	75	32	136	14	150	24	188	31	71	19	121	719
05:30 PM	13	184	32	229	25	69	20	114	22	133	19	174	32	69	20	121	638
05:45 PM	29	176	34	239	29	51	25	105	22	152	25	199	29	68	9	106	649
Total	90	723	131	944	110	270	103	483	76	576	95	747	137	294	64	495	2669
Grand Total	190	1358	248	1796	195	512	194	901	162	1180	180	1522	268	585	139	992	5211
Apprch %	10.6	75.6	13.8		21.6	56.8	21.5		10.6	77.5	11.8		27	59	14		
Total %	3.6	26.1	4.8	34.5	3.7	9.8	3.7	17.3	3.1	22.6	3.5	29.2	5.1	11.2	2.7	19	
PC	185	1300	245	1730	190	493	190	873	159	1121	174	1454	265	571	136	972	5029
% PC	97.4	95.7	98.8	96.3	97.4	96.3	97.9	96.9	98.1	95	96.7	95.5	98.9	97.6	97.8	98	96.5
SU	5	57	2	64	5	19	4	28	3	58	6	67	3	13	3	19	178
% SU	2.6	4.2	0.8	3.6	2.6	3.7	2.1	3.1	1.9	4.9	3.3	4.4	1.1	2.2	2.2	1.9	3.4
MU	0	1	1	2	0	0	0	0	0	1	0	1	0	1	0	1	4
% MU	0	0.1	0.4	0.1	0	0	0	0	0	0.1	0	0.1	0	0.2	0	0.1	0.1

	Halsted St From North				103rd St From East				Halsted St From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	15	91	**21**	127	**28**	53	8	89	17	357	34	408	20	58	18	96	720
07:45 AM	25	114	10	149	24	**75**	16	115	30	384	**39**	**453**	19	69	27	115	832
08:00 AM	23	109	15	147	27	66	13	106	**33**	**385**	28	446	**34**	**82**	**29**	**145**	**844**
08:15 AM	**30**	**131**	19	**180**	27	64	**26**	**117**	28	309	24	361	22	76	22	120	778
Total Volume	93	445	65	603	106	258	63	427	108	1435	125	1668	95	285	96	476	3174
% App. Total	15.4	73.8	10.8		24.8	60.4	14.8		6.5	86	7.5		20	59.9	20.2		
PHF	.775	.849	.774	.838	.946	.860	.606	.912	.818	.932	.801	.921	.699	.869	.828	.821	.940

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103rd St and Halsted St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/2/2012

Groups Printed- SU

	Halsted St From North				103rd St From East				Halsted St From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	6	0	6	1	3	0	4	1	9	1	11	0	3	1	4	25
04:15 PM	1	9	0	10	1	5	1	7	1	9	1	11	0	1	0	1	29
04:30 PM	1	8	0	9	0	1	1	2	0	7	0	7	0	2	0	2	20
04:45 PM	0	5	1	6	1	3	0	4	0	7	1	8	0	1	1	2	20
Total	2	28	1	31	3	12	2	17	2	32	3	37	0	7	2	9	94
05:00 PM	1	7	0	8	2	2	0	4	0	6	2	8	1	1	0	2	22
05:15 PM	0	9	0	9	0	1	0	1	0	5	0	5	1	2	1	4	19
05:30 PM	1	8	1	10	0	1	1	2	1	7	1	9	0	1	0	1	22
05:45 PM	1	5	0	6	0	3	1	4	0	8	0	8	1	2	0	3	21
Total	3	29	1	33	2	7	2	11	1	26	3	30	3	6	1	10	84
Grand Total	5	57	2	64	5	19	4	28	3	58	6	67	3	13	3	19	178
Apprch %	7.8	89.1	3.1		17.9	67.9	14.3		4.5	86.6	9		15.8	68.4	15.8		
Total %	2.8	32	1.1	36	2.8	10.7	2.2	15.7	1.7	32.6	3.4	37.6	1.7	7.3	1.7	10.7	

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Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/2/2012
Page No : 7

Groups Printed- MU

	Halsted St From North				103rd St From East				Halsted St From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	1	1	2	0	0	0	0	0	0	0	0	0	1	0	1	3
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	1	2	0	0	0	0	0	0	0	0	0	1	0	1	3
Grand Total	0	1	1	2	0	0	0	0	0	1	0	1	0	1	0	1	4
Apprch %	0	50	50		0	0	0		0	100	0		0	100	0		
Total %	0	25	25	50	0	0	0	0	0	25	0	25	0	25	0	25	

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103rd St and Halsted St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/2/2012

Groups Printed- Peds & Bikes

	Halsted St Crossing North Leg			103rd St Crossing East Leg			Halsted St Crossing South Leg			103rd St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	5	5	0	1	1	0	9	9	0	7	7	22
04:15 PM	0	12	12	1	3	4	0	12	12	0	4	4	32
04:30 PM	0	7	7	1	11	12	0	4	4	0	14	14	37
04:45 PM	1	2	3	1	6	7	0	2	2	0	8	8	20
Total	1	26	27	3	21	24	0	27	27	0	33	33	111
05:00 PM	0	2	2	0	6	6	0	14	14	0	5	5	27
05:15 PM	1	8	9	0	3	3	0	9	9	0	5	5	26
05:30 PM	0	2	2	0	9	9	0	14	14	0	12	12	37
05:45 PM	0	12	12	0	6	6	0	8	8	0	14	14	40
Total	1	24	25	0	24	24	0	45	45	0	36	36	130
Grand Total	2	50	52	3	45	48	0	72	72	0	69	69	241
Apprch %	3.8	96.2		6.2	93.8		0	100		0	100		
Total %	0.8	20.7	21.6	1.2	18.7	19.9	0	29.9	29.9	0	28.6	28.6	

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103rd St and Martin Luther King Dr
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/7/2012
Page No : 1

Groups Printed- PC - SU - MU

	Martin Luther King Dr From North				103rd St From East				Martin Luther King Dr From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	6	10	3	19	5	70	3	78	1	41	12	54	5	43	12	60	211
07:15 AM	13	21	2	36	9	67	3	79	6	84	9	99	4	39	25	68	282
07:30 AM	13	22	9	44	1	76	3	80	4	81	12	97	7	57	16	80	301
07:45 AM	12	56	4	72	18	66	4	88	7	95	17	119	12	48	16	76	355
Total	44	109	18	171	33	279	13	325	18	301	50	369	28	187	69	284	1149
08:00 AM	8	38	13	59	8	69	8	85	6	102	10	118	5	72	30	107	369
08:15 AM	3	45	8	56	16	81	6	103	5	66	15	86	5	75	22	102	347
08:30 AM	14	49	16	79	7	99	8	114	4	80	15	99	3	76	25	104	396
08:45 AM	9	46	13	68	8	88	7	103	5	86	11	102	10	73	22	105	378
Total	34	178	50	262	39	337	29	405	20	334	51	405	23	296	99	418	1490
Grand Total	78	287	68	433	72	616	42	730	38	635	101	774	51	483	168	702	2639
Apprch %	18	66.3	15.7		9.9	84.4	5.8		4.9	82	13		7.3	68.8	23.9		
Total %	3	10.9	2.6	16.4	2.7	23.3	1.6	27.7	1.4	24.1	3.8	29.3	1.9	18.3	6.4	26.6	
PC	76	268	64	408	70	570	42	682	37	616	99	752	48	444	163	655	2497
% PC	97.4	93.4	94.1	94.2	97.2	92.5	100	93.4	97.4	97	98	97.2	94.1	91.9	97	93.3	94.6
SU	2	17	4	23	2	41	0	43	1	19	1	21	3	37	5	45	132
% SU	2.6	5.9	5.9	5.3	2.8	6.7	0	5.9	2.6	3	1	2.7	5.9	7.7	3	6.4	5
MU	0	2	0	2	0	5	0	5	0	0	1	1	0	2	0	2	10
% MU	0	0.7	0	0.5	0	0.8	0	0.7	0	0	1	0.1	0	0.4	0	0.3	0.4

	Martin Luther King Dr From North				103rd St From East				Martin Luther King Dr From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	8	38	13	59	8	69	**8**	85	**6**	**102**	10	**118**	5	72	**30**	**107**	369
08:15 AM	3	45	8	56	**16**	81	6	103	5	66	**15**	86	5	75	22	102	347
08:30 AM	**14**	**49**	**16**	**79**	7	**99**	8	**114**	4	80	15	99	3	**76**	25	104	**396**
08:45 AM	9	46	13	68	8	88	7	103	5	86	11	102	**10**	73	22	105	378
Total Volume	34	178	50	262	39	337	29	405	20	334	51	405	23	296	99	418	1490
% App. Total	13	67.9	19.1		9.6	83.2	7.2		4.9	82.5	12.6		5.5	70.8	23.7		
PHF	.607	.908	.781	.829	.609	.851	.906	.888	.833	.819	.850	.858	.575	.974	.825	.977	.941

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103rd St and Martin Luther King Dr
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/7/2012
Page No : 2

Groups Printed- SU

	Martin Luther King Dr From North				103rd St From East				Martin Luther King Dr From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	2	0	2	0	7	0	7	0	3	0	3	0	4	1	5	17
07:15 AM	0	1	0	1	0	4	0	4	1	1	0	2	0	3	1	4	11
07:30 AM	2	3	2	7	0	6	0	6	0	4	0	4	0	3	1	4	21
07:45 AM	0	4	0	4	2	4	0	6	0	1	0	1	2	3	1	6	17
Total	2	10	2	14	2	21	0	23	1	9	0	10	2	13	4	19	66
08:00 AM	0	1	2	3	0	3	0	3	0	5	0	5	1	9	1	11	22
08:15 AM	0	2	0	2	0	9	0	9	0	0	0	0	0	4	0	4	15
08:30 AM	0	2	0	2	0	1	0	1	0	2	1	3	0	6	0	6	12
08:45 AM	0	2	0	2	0	7	0	7	0	3	0	3	0	5	0	5	17
Total	0	7	2	9	0	20	0	20	0	10	1	11	1	24	1	26	66
Grand Total	2	17	4	23	2	41	0	43	1	19	1	21	3	37	5	45	132
Apprch %	8.7	73.9	17.4		4.7	95.3	0		4.8	90.5	4.8		6.7	82.2	11.1		
Total %	1.5	12.9	3	17.4	1.5	31.1	0	32.6	0.8	14.4	0.8	15.9	2.3	28	3.8	34.1	

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103rd St and Martin Luther King Dr
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/7/2012
Page No : 3

Groups Printed- MU

	Martin Luther King Dr From North				103rd St From East				Martin Luther King Dr From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	1	0	1	0	0	1	1	0	0	0	0	2
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	2	0	2	0	0	1	1	0	0	0	0	3
08:00 AM	0	2	0	2	0	2	0	2	0	0	0	0	0	0	0	0	4
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
08:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	2	0	2	0	3	0	3	0	0	0	0	0	2	0	2	7
Grand Total	0	2	0	2	0	5	0	5	0	0	1	1	0	2	0	2	10
Apprch %	0	100	0		0	100	0		0	0	100		0	100	0		
Total %	0	20	0	20	0	50	0	50	0	0	10	10	0	20	0	20	

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103rd St and Martin Luther King Dr
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 6/7/2012

Groups Printed- Peds & Bikes

	Martin Luther King Dr Crossing North Leg			103rd St Crossing East Leg			Martin Luther King Dr Crossing South Leg			103rd St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	2	2	0	4	4	0	2	2	8
07:15 AM	0	1	1	0	0	0	1	3	4	0	4	4	9
07:30 AM	0	2	2	0	3	3	0	1	1	0	3	3	9
07:45 AM	0	0	0	1	4	5	0	7	7	0	0	0	12
Total	0	3	3	1	9	10	1	15	16	0	9	9	38
08:00 AM	0	3	3	0	1	1	1	8	9	0	5	5	18
08:15 AM	1	2	3	0	0	0	1	7	8	1	2	3	14
08:30 AM	0	6	6	0	0	0	1	27	28	1	8	9	43
08:45 AM	0	0	0	0	0	0	0	6	6	0	3	3	9
Total	1	11	12	0	1	1	3	48	51	2	18	20	84
Grand Total	1	14	15	1	10	11	4	63	67	2	27	29	122
Apprch %	6.7	93.3		9.1	90.9		6	94		6.9	93.1		
Total %	0.8	11.5	12.3	0.8	8.2	9	3.3	51.6	54.9	1.6	22.1	23.8	

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103rd St and Martin Luther King Dr
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/7/2012
Page No : 5

Groups Printed- PC - SU - MU

	Martin Luther King Dr From North				103rd St From East				Martin Luther King Dr From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	25	100	28	153	23	98	8	129	7	37	18	62	10	104	20	134	478
04:15 PM	27	121	20	168	6	108	12	126	14	45	20	79	11	105	23	139	512
04:30 PM	30	83	18	131	7	102	12	121	6	39	22	67	13	87	26	126	445
04:45 PM	21	82	27	130	14	107	11	132	10	45	14	69	15	71	14	100	431
Total	103	386	93	582	50	415	43	508	37	166	74	277	49	367	83	499	1866
05:00 PM	41	130	23	194	6	87	9	102	13	48	13	74	8	93	20	121	491
05:15 PM	26	114	22	162	23	109	9	141	11	43	15	69	15	98	28	141	513
05:30 PM	24	119	16	159	7	116	8	131	14	36	24	74	11	84	12	107	471
05:45 PM	15	110	15	140	4	121	1	126	10	36	16	62	18	107	18	143	471
Total	106	473	76	655	40	433	27	500	48	163	68	279	52	382	78	512	1946
Grand Total	209	859	169	1237	90	848	70	1008	85	329	142	556	101	749	161	1011	3812
Apprch %	16.9	69.4	13.7		8.9	84.1	6.9		15.3	59.2	25.5		10	74.1	15.9		
Total %	5.5	22.5	4.4	32.5	2.4	22.2	1.8	26.4	2.2	8.6	3.7	14.6	2.6	19.6	4.2	26.5	
PC	207	836	165	1208	84	830	68	982	84	316	142	542	101	727	161	989	3721
% PC	99	97.3	97.6	97.7	93.3	97.9	97.1	97.4	98.8	96	100	97.5	100	97.1	100	97.8	97.6
SU	2	12	2	16	3	9	1	13	1	12	0	13	0	19	0	19	61
% SU	1	1.4	1.2	1.3	3.3	1.1	1.4	1.3	1.2	3.6	0	2.3	0	2.5	0	1.9	1.6
MU	0	11	2	13	3	9	1	13	0	1	0	1	0	3	0	3	30
% MU	0	1.3	1.2	1.1	3.3	1.1	1.4	1.3	0	0.3	0	0.2	0	0.4	0	0.3	0.8

	Martin Luther King Dr From North				103rd St From East				Martin Luther King Dr From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**41**	**130**	**23**	**194**	6	87	**9**	102	13	**48**	13	**74**	8	93	20	121	491
05:15 PM	26	114	22	162	**23**	109	9	**141**	11	43	15	69	15	98	**28**	141	**513**
05:30 PM	24	119	16	159	7	116	8	131	**14**	36	**24**	74	11	84	12	107	471
05:45 PM	15	110	15	140	4	**121**	1	126	10	36	16	62	**18**	**107**	18	**143**	471
Total Volume	106	473	76	655	40	433	27	500	48	163	68	279	52	382	78	512	1946
% App. Total	16.2	72.2	11.6		8	86.6	5.4		17.2	58.4	24.4		10.2	74.6	15.2		
PHF	.646	.910	.826	.844	.435	.895	.750	.887	.857	.849	.708	.943	.722	.893	.696	.895	.948

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103rd St and Martin Luther King Dr
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/7/2012
Page No : 6

Groups Printed- SU

	Martin Luther King Dr From North				103rd St From East				Martin Luther King Dr From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	3	2	5	3	0	0	3	0	3	0	3	0	2	0	2	13
04:15 PM	0	3	0	3	0	2	0	2	0	2	0	2	0	5	0	5	12
04:30 PM	0	2	0	2	0	1	0	1	0	0	0	0	0	2	0	2	5
04:45 PM	1	0	0	1	0	2	0	2	1	2	0	3	0	3	0	3	9
Total	1	8	2	11	3	5	0	8	1	7	0	8	0	12	0	12	39
05:00 PM	1	1	0	2	0	0	0	0	0	1	0	1	0	2	0	2	5
05:15 PM	0	1	0	1	0	1	0	1	0	1	0	1	0	3	0	3	6
05:30 PM	0	1	0	1	0	2	1	3	0	0	0	0	0	1	0	1	5
05:45 PM	0	1	0	1	0	1	0	1	0	3	0	3	0	1	0	1	6
Total	1	4	0	5	0	4	1	5	0	5	0	5	0	7	0	7	22
Grand Total	2	12	2	16	3	9	1	13	1	12	0	13	0	19	0	19	61
Apprch %	12.5	75	12.5		23.1	69.2	7.7		7.7	92.3	0		0	100	0		
Total %	3.3	19.7	3.3	26.2	4.9	14.8	1.6	21.3	1.6	19.7	0	21.3	0	31.1	0	31.1	

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103rd St and Martin Luther King Dr
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/7/2012
Page No : 7

Groups Printed- MU

	Martin Luther King Dr From North				103rd St From East				Martin Luther King Dr From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	3	2	5	3	0	0	3	0	1	0	1	0	0	0	0	9
04:15 PM	0	2	0	2	0	2	0	2	0	0	0	0	0	0	0	0	4
04:30 PM	0	2	0	2	0	1	0	1	0	0	0	0	0	0	0	0	3
04:45 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
Total	0	7	2	9	3	5	0	8	0	1	0	1	0	1	0	1	19
05:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	1	0	1	0	1	0	1	0	0	0	0	0	1	0	1	3
05:30 PM	0	1	0	1	0	2	1	3	0	0	0	0	0	0	0	0	4
05:45 PM	0	1	0	1	0	1	0	1	0	0	0	0	0	1	0	1	3
Total	0	4	0	4	0	4	1	5	0	0	0	0	0	2	0	2	11
Grand Total	0	11	2	13	3	9	1	13	0	1	0	1	0	3	0	3	30
Apprch %	0	84.6	15.4		23.1	69.2	7.7		0	100	0		0	100	0		
Total %	0	36.7	6.7	43.3	10	30	3.3	43.3	0	3.3	0	3.3	0	10	0	10	

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103rd St and Martin Luther King Dr
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 6/7/2012

Groups Printed- Peds & Bikes

	Martin Luther King Dr Crossing North Leg			103rd St Crossing East Leg			Martin Luther King Dr Crossing South Leg			103rd St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	4	4	0	4	4	5	42	47	0	7	7	62
04:15 PM	0	5	5	0	9	9	0	24	24	0	10	10	48
04:30 PM	0	5	5	0	1	1	2	12	14	2	12	14	34
04:45 PM	1	10	11	0	2	2	0	22	22	0	7	7	42
Total	1	24	25	0	16	16	7	100	107	2	36	38	186
05:00 PM	0	2	2	0	5	5	0	23	23	0	13	13	43
05:15 PM	0	10	10	0	3	3	0	22	22	1	14	15	50
05:30 PM	1	1	2	0	0	0	1	20	21	1	6	7	30
05:45 PM	1	8	9	0	0	0	2	30	32	0	3	3	44
Total	2	21	23	0	8	8	3	95	98	2	36	38	167
Grand Total	3	45	48	0	24	24	10	195	205	4	72	76	353
Apprch %	6.2	93.8		0	100		4.9	95.1		5.3	94.7		
Total %	0.8	12.7	13.6	0	6.8	6.8	2.8	55.2	58.1	1.1	20.4	21.5	

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103rd St and State St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012
Page No : 1

Groups Printed- PC - SU - MU

	State St From North				103rd St From East				State St From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	3	13	3	19	2	38	2	42	10	64	4	78	5	50	21	76	215
07:15 AM	1	7	9	17	7	51	1	59	4	66	8	78	7	53	8	68	222
07:30 AM	2	16	8	26	11	55	4	70	12	73	19	104	6	85	14	105	305
07:45 AM	2	24	7	33	10	69	3	82	8	93	9	110	5	101	32	138	363
Total	8	60	27	95	30	213	10	253	34	296	40	370	23	289	75	387	1105
08:00 AM	4	30	10	44	7	65	2	74	8	63	10	81	7	80	15	102	301
08:15 AM	1	22	13	36	6	55	6	67	10	69	13	92	7	98	11	116	311
08:30 AM	3	24	7	34	3	75	4	82	13	56	10	79	9	93	16	118	313
08:45 AM	1	32	10	43	3	54	4	61	7	67	16	90	7	90	15	112	306
Total	9	108	40	157	19	249	16	284	38	255	49	342	30	361	57	448	1231
Grand Total	17	168	67	252	49	462	26	537	72	551	89	712	53	650	132	835	2336
Apprch %	6.7	66.7	26.6		9.1	86	4.8		10.1	77.4	12.5		6.3	77.8	15.8		
Total %	0.7	7.2	2.9	10.8	2.1	19.8	1.1	23	3.1	23.6	3.8	30.5	2.3	27.8	5.7	35.7	
PC	15	157	63	235	46	425	24	495	68	536	87	691	51	612	124	787	2208
% PC	88.2	93.5	94	93.3	93.9	92	92.3	92.2	94.4	97.3	97.8	97.1	96.2	94.2	93.9	94.3	94.5
SU	2	10	4	16	3	35	2	40	4	14	2	20	2	36	7	45	121
% SU	11.8	6	6	6.3	6.1	7.6	7.7	7.4	5.6	2.5	2.2	2.8	3.8	5.5	5.3	5.4	5.2
MU	0	1	0	1	0	2	0	2	0	1	0	1	0	2	1	3	7
% MU	0	0.6	0	0.4	0	0.4	0	0.4	0	0.2	0	0.1	0	0.3	0.8	0.4	0.3

	State St From North				103rd St From East				State St From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	2	24	7	33	**10**	69	3	**82**	8	**93**	9	**110**	5	**101**	**32**	**138**	**363**
08:00 AM	**4**	**30**	10	**44**	7	65	2	74	8	63	10	81	7	80	15	102	301
08:15 AM	1	22	**13**	36	6	55	**6**	67	10	69	**13**	92	7	98	11	116	311
08:30 AM	3	24	7	34	3	**75**	4	82	**13**	56	10	79	**9**	93	16	118	313
Total Volume	10	100	37	147	26	264	15	305	39	281	42	362	28	372	74	474	1288
% App. Total	6.8	68	25.2		8.5	86.6	4.9		10.8	77.6	11.6		5.9	78.5	15.6		
PHF	.625	.833	.712	.835	.650	.880	.625	.930	.750	.755	.808	.823	.778	.921	.578	.859	.887

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103rd St and State St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012
Page No : 2

Groups Printed- SU

	State St From North				103rd St From East				State St From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	1	1	2	1	3	0	4	1	2	0	3	0	5	1	6	15
07:15 AM	0	1	0	1	0	5	0	5	0	3	0	3	0	2	0	2	11
07:30 AM	0	0	0	0	0	5	1	6	1	2	0	3	0	4	1	5	14
07:45 AM	1	1	0	2	0	4	1	5	1	0	2	3	0	9	3	12	22
Total	1	3	1	5	1	17	2	20	3	7	2	12	0	20	5	25	62
08:00 AM	1	3	1	5	1	4	0	5	0	3	0	3	0	4	1	5	18
08:15 AM	0	3	1	4	0	4	0	4	1	1	0	2	0	4	0	4	14
08:30 AM	0	0	0	0	1	9	0	10	0	1	0	1	1	4	1	6	17
08:45 AM	0	1	1	2	0	1	0	1	0	2	0	2	1	4	0	5	10
Total	1	7	3	11	2	18	0	20	1	7	0	8	2	16	2	20	59
Grand Total	2	10	4	16	3	35	2	40	4	14	2	20	2	36	7	45	121
Apprch %	12.5	62.5	25		7.5	87.5	5		20	70	10		4.4	80	15.6		
Total %	1.7	8.3	3.3	13.2	2.5	28.9	1.7	33.1	3.3	11.6	1.7	16.5	1.7	29.8	5.8	37.2	

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103rd St and State St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012
Page No : 3

Groups Printed- MU

	State St From North				103rd St From East				State St From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	2	1	3	4
08:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:15 AM	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	2	0	2	0	0	0	0	0	0	0	0	3
Grand Total	0	1	0	1	0	2	0	2	0	1	0	1	0	2	1	3	7
Apprch %	0	100	0		0	100	0		0	100	0		0	66.7	33.3		
Total %	0	14.3	0	14.3	0	28.6	0	28.6	0	14.3	0	14.3	0	28.6	14.3	42.9	

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103rd St and State St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 6/5/2012

Groups Printed- Peds & Bikes

	State St Crossing North Leg			103rd St Crossing East Leg			State St Crossing South Leg			103rd St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	1	4	5	0	0	0	0	2	2	0	1	1	8
07:15 AM	0	3	3	0	0	0	0	3	3	0	0	0	6
07:30 AM	0	2	2	0	0	0	0	0	0	0	1	1	3
07:45 AM	0	7	7	0	4	4	0	8	8	0	0	0	19
Total	1	16	17	0	4	4	0	13	13	0	2	2	36
08:00 AM	0	5	5	0	1	1	0	0	0	0	0	0	6
08:15 AM	0	2	2	0	0	0	0	1	1	0	0	0	3
08:30 AM	1	3	4	0	0	0	0	2	2	0	10	10	16
08:45 AM	0	3	3	0	0	0	0	0	0	0	12	12	15
Total	1	13	14	0	1	1	0	3	3	0	22	22	40
Grand Total	2	29	31	0	5	5	0	16	16	0	24	24	76
Apprch %	6.5	93.5		0	100		0	100		0	100		
Total %	2.6	38.2	40.8	0	6.6	6.6	0	21.1	21.1	0	31.6	31.6	

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103rd St and State St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012
Page No : 5

Groups Printed- PC - SU - MU

	State St From North				103rd St From East				State St From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	8	49	32	89	11	83	9	103	11	25	13	49	5	96	12	113	354
04:15 PM	6	47	22	75	15	122	9	146	17	47	11	75	16	118	11	145	441
04:30 PM	6	34	19	59	12	109	6	127	21	40	13	74	21	101	8	130	390
04:45 PM	4	24	11	39	17	119	5	141	20	41	15	76	11	98	11	120	376
Total	24	154	84	262	55	433	29	517	69	153	52	274	53	413	42	508	1561
05:00 PM	5	31	22	58	15	143	14	172	17	34	11	62	7	103	15	125	417
05:15 PM	9	50	20	79	14	119	12	145	18	46	8	72	5	84	14	103	399
05:30 PM	9	33	26	68	6	104	8	118	13	50	10	73	4	146	14	164	423
05:45 PM	2	48	27	77	12	87	5	104	7	35	15	57	13	93	12	118	356
Total	25	162	95	282	47	453	39	539	55	165	44	264	29	426	55	510	1595
Grand Total	49	316	179	544	102	886	68	1056	124	318	96	538	82	839	97	1018	3156
Apprch %	9	58.1	32.9		9.7	83.9	6.4		23	59.1	17.8		8.1	82.4	9.5		
Total %	1.6	10	5.7	17.2	3.2	28.1	2.2	33.5	3.9	10.1	3	17	2.6	26.6	3.1	32.3	
PC	47	313	175	535	101	870	68	1039	122	314	96	532	80	821	95	996	3102
% PC	95.9	99.1	97.8	98.3	99	98.2	100	98.4	98.4	98.7	100	98.9	97.6	97.9	97.9	97.8	98.3
SU	2	3	4	9	1	15	0	16	2	4	0	6	2	18	2	22	53
% SU	4.1	0.9	2.2	1.7	1	1.7	0	1.5	1.6	1.3	0	1.1	2.4	2.1	2.1	2.2	1.7
MU	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
% MU	0	0	0	0	0	0.1	0	0.1	0	0	0	0	0	0	0	0	0

	State St From North				103rd St From East				State St From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	**6**	**47**	**22**	**75**	15	122	9	146	17	**47**	11	75	16	**118**	11	**145**	**441**
04:30 PM	6	34	19	59	12	109	6	127	**21**	40	13	74	**21**	101	8	130	390
04:45 PM	4	24	11	39	**17**	119	5	141	20	41	**15**	**76**	11	98	11	120	376
05:00 PM	5	31	22	58	15	**143**	**14**	**172**	17	34	11	62	7	103	**15**	125	417
Total Volume	21	136	74	231	59	493	34	586	75	162	50	287	55	420	45	520	1624
% App. Total	9.1	58.9	32		10.1	84.1	5.8		26.1	56.4	17.4		10.6	80.8	8.7		
PHF	.875	.723	.841	.770	.868	.862	.607	.852	.893	.862	.833	.944	.655	.890	.750	.897	.921

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103rd St and State St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012
Page No : 6

Groups Printed- SU

	State St From North				103rd St From East				State St From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	2	0	1	3	1	3	0	4	1	1	0	2	0	2	0	2	11
04:15 PM	0	1	1	2	0	1	0	1	0	1	0	1	0	2	1	3	7
04:30 PM	0	1	0	1	0	2	0	2	0	1	0	1	1	2	0	3	7
04:45 PM	0	1	1	2	0	3	0	3	0	0	0	0	0	1	0	1	6
Total	2	3	3	8	1	9	0	10	1	3	0	4	1	7	1	9	31
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	3
05:15 PM	0	0	0	0	0	2	0	2	0	1	0	1	1	3	0	4	7
05:30 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	1	0	1	4
05:45 PM	0	0	1	1	0	1	0	1	1	0	0	1	0	4	1	5	8
Total	0	0	1	1	0	6	0	6	1	1	0	2	1	11	1	13	22
Grand Total	2	3	4	9	1	15	0	16	2	4	0	6	2	18	2	22	53
Apprch %	22.2	33.3	44.4		6.2	93.8	0		33.3	66.7	0		9.1	81.8	9.1		
Total %	3.8	5.7	7.5	17	1.9	28.3	0	30.2	3.8	7.5	0	11.3	3.8	34	3.8	41.5	

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103rd St and State St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012
Page No : 7

Groups Printed- MU

	State St From North				103rd St From East				State St From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Grand Total	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Apprch %	0	0	0		0	100	0		0	0	0		0	0	0		
Total %	0	0	0	0	0	100	0	100	0	0	0	0	0	0	0	0	

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103rd St and State St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 6/5/2012

Groups Printed- Peds & Bikes

	State St Crossing North Leg			103rd St Crossing East Leg			State St Crossing South Leg			103rd St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	9	9	0	0	0	0	5	5	0	7	7	21
04:15 PM	0	16	16	0	4	4	0	0	0	0	4	4	24
04:30 PM	0	14	14	0	4	4	0	1	1	0	3	3	22
04:45 PM	0	14	14	1	4	5	0	0	0	0	0	0	19
Total	0	53	53	1	12	13	0	6	6	0	14	14	86
05:00 PM	0	14	14	0	8	8	0	0	0	0	4	4	26
05:15 PM	0	14	14	0	0	0	0	1	1	0	2	2	17
05:30 PM	0	18	18	0	2	2	0	0	0	0	3	3	23
05:45 PM	0	5	5	0	3	3	0	2	2	0	4	4	14
Total	0	51	51	0	13	13	0	3	3	0	13	13	80
Grand Total	0	104	104	1	25	26	0	9	9	0	27	27	166
Apprch %	0	100		3.8	96.2		0	100		0	100		
Total %	0	62.7	62.7	0.6	15.1	15.7	0	5.4	5.4	0	16.3	16.3	

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103rd St and Wentworth Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM No Peds
Site Code : 00000000
Start Date : 5/2/2012
Page No : 1

Groups Printed- PC - SU - MU

	Wentworth Ave From North				103rd St From East				Wentworth Ave From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	5	26	6	37	4	59	6	69	14	24	5	43	5	47	1	53	202
07:15 AM	3	33	7	43	4	75	6	85	15	27	8	50	8	54	5	67	245
07:30 AM	6	44	7	57	7	58	6	71	16	37	13	66	15	85	3	103	297
07:45 AM	6	49	13	68	10	94	8	112	18	39	10	67	12	102	4	118	365
Total	20	152	33	205	25	286	26	337	63	127	36	226	40	288	13	341	1109
08:00 AM	2	48	14	64	9	93	5	107	29	32	9	70	14	106	7	127	368
08:15 AM	12	51	15	78	7	93	8	108	16	25	9	50	9	90	4	103	339
08:30 AM	8	43	7	58	10	78	7	95	36	28	8	72	11	106	3	120	345
08:45 AM	5	40	15	60	9	88	2	99	17	34	10	61	10	79	3	92	312
Total	27	182	51	260	35	352	22	409	98	119	36	253	44	381	17	442	1364
Grand Total	47	334	84	465	60	638	48	746	161	246	72	479	84	669	30	783	2473
Apprch %	10.1	71.8	18.1		8	85.5	6.4		33.6	51.4	15		10.7	85.4	3.8		
Total %	1.9	13.5	3.4	18.8	2.4	25.8	1.9	30.2	6.5	9.9	2.9	19.4	3.4	27.1	1.2	31.7	
PC	44	315	78	437	57	609	42	708	160	237	71	468	73	630	29	732	2345
% PC	93.6	94.3	92.9	94	95	95.5	87.5	94.9	99.4	96.3	98.6	97.7	86.9	94.2	96.7	93.5	94.8
SU	3	19	6	28	3	27	6	36	1	8	1	10	11	33	0	44	118
% SU	6.4	5.7	7.1	6	5	4.2	12.5	4.8	0.6	3.3	1.4	2.1	13.1	4.9	0	5.6	4.8
MU	0	0	0	0	0	2	0	2	0	1	0	1	0	6	1	7	10
% MU	0	0	0	0	0	0.3	0	0.3	0	0.4	0	0.2	0	0.9	3.3	0.9	0.4

	Wentworth Ave From North				103rd St From East				Wentworth Ave From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	6	49	13	68	**10**	**94**	**8**	**112**	18	**39**	**10**	67	12	102	4	118	365
08:00 AM	2	48	14	64	9	93	5	107	29	32	9	70	**14**	**106**	**7**	**127**	**368**
08:15 AM	**12**	**51**	**15**	**78**	7	93	8	108	16	25	9	50	9	90	4	103	339
08:30 AM	8	43	7	58	10	78	7	95	**36**	28	8	**72**	11	106	3	120	345
Total Volume	28	191	49	268	36	358	28	422	99	124	36	259	46	404	18	468	1417
% App. Total	10.4	71.3	18.3		8.5	84.8	6.6		38.2	47.9	13.9		9.8	86.3	3.8		
PHF	.583	.936	.817	.859	.900	.952	.875	.942	.688	.795	.900	.899	.821	.953	.643	.921	.963

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103rd St and Wentworth Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM No Peds
Site Code : 00000000
Start Date : 5/2/2012

Groups Printed- SU

	Wentworth Ave From North				103rd St From East				Wentworth Ave From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	1	0	0	1	0	5	1	6	0	1	0	1	1	0	0	1	9
07:15 AM	0	1	0	1	0	2	0	2	0	1	0	1	1	1	0	2	6
07:30 AM	1	3	1	5	0	4	1	5	1	0	0	1	1	6	0	7	18
07:45 AM	0	2	1	3	1	2	3	6	0	0	0	0	2	7	0	9	18
Total	2	6	2	10	1	13	5	19	1	2	0	3	5	14	0	19	51
08:00 AM	0	7	0	7	2	4	0	6	0	2	0	2	3	4	0	7	22
08:15 AM	1	1	3	5	0	5	1	6	0	1	1	2	1	2	0	3	16
08:30 AM	0	3	1	4	0	3	0	3	0	3	0	3	0	8	0	8	18
08:45 AM	0	2	0	2	0	2	0	2	0	0	0	0	2	5	0	7	11
Total	1	13	4	18	2	14	1	17	0	6	1	7	6	19	0	25	67
Grand Total	3	19	6	28	3	27	6	36	1	8	1	10	11	33	0	44	118
Apprch %	10.7	67.9	21.4		8.3	75	16.7		10	80	10		25	75	0		
Total %	2.5	16.1	5.1	23.7	2.5	22.9	5.1	30.5	0.8	6.8	0.8	8.5	9.3	28	0	37.3	

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103rd St and Wentworth Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM No Peds
Site Code : 00000000
Start Date : 5/2/2012

Groups Printed- MU

	Wentworth Ave From North				103rd St From East				Wentworth Ave From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
07:15 AM	0	0	0	0	0	1	0	1	0	1	0	1	0	1	1	2	4
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	1	0	1	0	2	1	3	5
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	4	0	4	5
Grand Total	0	0	0	0	0	2	0	2	0	1	0	1	0	6	1	7	10
Apprch %	0	0	0		0	100	0		0	100	0		0	85.7	14.3		
Total %	0	0	0	0	0	20	0	20	0	10	0	10	0	60	10	70	

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103rd St and Wentworth Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM PEDS
Site Code : 00000000
Start Date : 5/2/2012
Page No : 4

Groups Printed- Peds & Bikes

	Wentworth Ave Crossing North Leg			103rd St Crossing East Leg			Wentworth Ave Crossing South Leg			103rd St Crossing West Leg			
Start Time	Left	Peds	App. Total	Left	Peds	App. Total	Left	Peds	App. Total	Left	Peds	App. Total	Int. Total
07:00 AM	0	8	8	0	4	4	0	3	3	0	5	5	20
07:15 AM	0	4	4	0	1	1	0	5	5	1	12	13	23
07:30 AM	2	6	8	0	2	2	0	5	5	0	8	8	23
07:45 AM	2	5	7	0	1	1	0	3	3	0	25	25	36
Total	4	23	27	0	8	8	0	16	16	1	50	51	102
08:00 AM	0	17	17	0	1	1	0	4	4	0	20	20	42
08:15 AM	0	5	5	0	1	1	0	3	3	0	15	15	24
08:30 AM	0	3	3	0	1	1	0	4	4	0	10	10	18
08:45 AM	0	10	10	0	5	5	0	3	3	0	3	3	21
Total	0	35	35	0	8	8	0	14	14	0	48	48	105
Grand Total	4	58	62	0	16	16	0	30	30	1	98	99	207
Apprch %	6.5	93.5		0	100		0	100		1	99		
Total %	1.9	28	30	0	7.7	7.7	0	14.5	14.5	0.5	47.3	47.8	

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103rd St and Wentworth Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM No Peds
Site Code : 00000000
Start Date : 5/2/2012

Groups Printed- PC - SU - MU

	Wentworth Ave From North				103rd St From East				Wentworth Ave From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	13	37	12	62	8	95	9	112	16	24	12	52	17	79	2	98	324
04:15 PM	13	51	13	77	8	106	13	127	27	22	7	56	9	116	6	131	391
04:30 PM	5	61	9	75	8	93	10	111	16	19	12	47	12	85	6	103	336
04:45 PM	4	68	12	84	8	99	13	120	16	26	14	56	15	92	7	114	374
Total	35	217	46	298	32	393	45	470	75	91	45	211	53	372	21	446	1425
05:00 PM	13	60	10	83	9	117	21	147	18	17	8	43	13	101	6	120	393
05:15 PM	10	54	12	76	5	129	13	147	19	18	11	48	19	101	8	128	399
05:30 PM	11	55	13	79	12	96	12	120	17	26	5	48	20	91	2	113	360
05:45 PM	11	56	16	83	6	99	20	125	18	15	13	46	12	89	3	104	358
Total	45	225	51	321	32	441	66	539	72	76	37	185	64	382	19	465	1510
Grand Total	80	442	97	619	64	834	111	1009	147	167	82	396	117	754	40	911	2935
Apprch %	12.9	71.4	15.7		6.3	82.7	11		37.1	42.2	20.7		12.8	82.8	4.4		
Total %	2.7	15.1	3.3	21.1	2.2	28.4	3.8	34.4	5	5.7	2.8	13.5	4	25.7	1.4	31	
PC	78	437	96	611	64	813	110	987	145	165	82	392	114	733	39	886	2876
% PC	97.5	98.9	99	98.7	100	97.5	99.1	97.8	98.6	98.8	100	99	97.4	97.2	97.5	97.3	98
SU	2	4	1	7	0	21	1	22	2	2	0	4	3	20	1	24	57
% SU	2.5	0.9	1	1.1	0	2.5	0.9	2.2	1.4	1.2	0	1	2.6	2.7	2.5	2.6	1.9
MU	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2
% MU	0	0.2	0	0.2	0	0	0	0	0	0	0	0	0	0.1	0	0.1	0.1

	Wentworth Ave From North				103rd St From East				Wentworth Ave From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	6	49	13	68	**10**	**94**	**8**	**112**	18	**39**	**10**	67	12	102	4	118	365
08:00 AM	2	48	14	64	9	93	5	107	29	32	9	70	**14**	**106**	**7**	**127**	**368**
08:15 AM	**12**	**51**	**15**	**78**	7	93	8	108	16	25	9	50	9	90	4	103	339
08:30 AM	8	43	7	58	10	78	7	95	**36**	28	8	**72**	11	106	3	120	345
Total Volume	28	191	49	268	36	358	28	422	99	124	36	259	46	404	18	468	1417
% App. Total	10.4	71.3	18.3		8.5	84.8	6.6		38.2	47.9	13.9		9.8	86.3	3.8		
PHF	.583	.936	.817	.859	.900	.952	.875	.942	.688	.795	.900	.899	.821	.953	.643	.921	.963

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103rd St and Wentworth Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM No Peds
Site Code : 00000000
Start Date : 5/2/2012

Groups Printed- SU

	Wentworth Ave From North				103rd St From East				Wentworth Ave From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	2	1	1	4	0	4	0	4	0	1	0	1	1	3	0	4	13
04:15 PM	0	0	0	0	0	5	0	5	0	0	0	0	0	3	0	3	8
04:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	1	1	3
04:45 PM	0	0	0	0	0	4	1	5	1	0	0	1	0	3	0	3	9
Total	2	1	1	4	0	15	1	16	1	1	0	2	1	9	1	11	33
05:00 PM	0	0	0	0	0	2	0	2	1	0	0	1	1	1	0	2	5
05:15 PM	0	2	0	2	0	1	0	1	0	1	0	1	0	2	0	2	6
05:30 PM	0	1	0	1	0	1	0	1	0	0	0	0	1	6	0	7	9
05:45 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	4
Total	0	3	0	3	0	6	0	6	1	1	0	2	2	11	0	13	24
Grand Total	2	4	1	7	0	21	1	22	2	2	0	4	3	20	1	24	57
Apprch %	28.6	57.1	14.3		0	95.5	4.5		50	50	0		12.5	83.3	4.2		
Total %	3.5	7	1.8	12.3	0	36.8	1.8	38.6	3.5	3.5	0	7	5.3	35.1	1.8	42.1	

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103rd St and Wentworth Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM No Peds
Site Code : 00000000
Start Date : 5/2/2012

Groups Printed- MU

	Wentworth Ave From North				103rd St From East				Wentworth Ave From South				103rd St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Grand Total	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2
Apprch %	0	100	0		0	0	0		0	0	0		0	100	0		
Total %	0	50	0	50	0	0	0	0	0	0	0	0	0	50	0	50	

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Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM PEDS
Site Code : 00000000
Start Date : 5/2/2012
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Groups Printed- Peds & Bikes

	Wentworth Ave Crossing North Leg			103rd St Crossing East Leg			Wentworth Ave Crossing South Leg			103rd St Crossing West Leg			
Start Time	Left	Peds	App. Total	Left	Peds	App. Total	Left	Peds	App. Total	Left	Peds	App. Total	Int. Total
04:00 PM	0	9	9	0	3	3	0	17	17	2	10	12	41
04:15 PM	0	3	3	0	0	0	0	4	4	1	17	18	25
04:30 PM	0	4	4	0	1	1	0	6	6	0	9	9	20
04:45 PM	0	16	16	0	0	0	0	22	22	1	35	36	74
Total	0	32	32	0	4	4	0	49	49	4	71	75	160
05:00 PM	0	4	4	0	8	8	0	1	1	2	18	20	33
05:15 PM	0	6	6	0	6	6	2	9	11	1	7	8	31
05:30 PM	0	6	6	0	10	10	0	4	4	0	6	6	26
05:45 PM	1	9	10	0	6	6	0	5	5	0	5	5	26
Total	1	25	26	0	30	30	2	19	21	3	36	39	116
Grand Total	1	57	58	0	34	34	2	68	70	7	107	114	276
Apprch %	1.7	98.3		0	100		2.9	97.1		6.1	93.9		
Total %	0.4	20.7	21	0	12.3	12.3	0.7	24.6	25.4	2.5	38.8	41.3	

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107th St and Cottage Grove Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/9/2012
Page No : 1

Groups Printed- PC - SU - MU

	Cottage Grove Ave From North				107th St From East				Cottage Grove Ave From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	5	28	2	35	3	1	0	4	0	43	3	46	3	0	17	20	105
07:15 AM	9	26	2	37	3	3	1	7	0	67	5	72	7	0	24	31	147
07:30 AM	12	37	0	49	1	1	0	2	1	71	7	79	11	2	17	30	160
07:45 AM	10	45	0	55	4	2	0	6	2	113	4	119	15	1	26	42	222
Total	36	136	4	176	11	7	1	19	3	294	19	316	36	3	84	123	634
08:00 AM	8	40	1	49	2	0	0	2	1	99	5	105	6	1	29	36	192
08:15 AM	9	33	1	43	1	0	1	2	1	96	14	111	8	3	22	33	189
08:30 AM	20	44	2	66	0	0	1	1	2	101	10	113	3	4	15	22	202
08:45 AM	18	72	1	91	2	4	0	6	3	101	16	120	9	2	33	44	261
Total	55	189	5	249	5	4	2	11	7	397	45	449	26	10	99	135	844
Grand Total	91	325	9	425	16	11	3	30	10	691	64	765	62	13	183	258	1478
Apprch %	21.4	76.5	2.1		53.3	36.7	10		1.3	90.3	8.4		24	5	70.9		
Total %	6.2	22	0.6	28.8	1.1	0.7	0.2	2	0.7	46.8	4.3	51.8	4.2	0.9	12.4	17.5	
PC	80	305	8	393	15	8	3	26	9	659	61	729	60	11	175	246	1394
% PC	87.9	93.8	88.9	92.5	93.8	72.7	100	86.7	90	95.4	95.3	95.3	96.8	84.6	95.6	95.3	94.3
SU	11	20	0	31	1	2	0	3	0	27	2	29	2	2	8	12	75
% SU	12.1	6.2	0	7.3	6.2	18.2	0	10	0	3.9	3.1	3.8	3.2	15.4	4.4	4.7	5.1
MU	0	0	1	1	0	1	0	1	1	5	1	7	0	0	0	0	9
% MU	0	0	11.1	0.2	0	9.1	0	3.3	10	0.7	1.6	0.9	0	0	0	0	0.6

	Cottage Grove Ave From North				107th St From East				Cottage Grove Ave From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	8	40	1	49	**2**	0	0	2	1	99	5	105	6	1	29	36	192
08:15 AM	9	33	1	43	1	0	**1**	2	1	96	14	111	8	3	22	33	189
08:30 AM	**20**	44	**2**	66	0	0	1	1	2	**101**	10	113	3	**4**	15	22	202
08:45 AM	18	**72**	1	**91**	2	**4**	0	**6**	**3**	101	**16**	**120**	**9**	2	**33**	**44**	**261**
Total Volume	55	189	5	249	5	4	2	11	7	397	45	449	26	10	99	135	844
% App. Total	22.1	75.9	2		45.5	36.4	18.2		1.6	88.4	10		19.3	7.4	73.3		
PHF	.688	.656	.625	.684	.625	.250	.500	.458	.583	.983	.703	.935	.722	.625	.750	.767	.808

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107th St and Cottage Grove Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/9/2012
Page No : 2

Groups Printed- SU

	Cottage Grove Ave From North				107th St From East				Cottage Grove Ave From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	1	2	0	3	0	0	0	0	0	2	0	2	0	0	1	1	6
07:15 AM	2	1	0	3	0	1	0	1	0	3	0	3	0	0	2	2	9
07:30 AM	0	2	0	2	0	0	0	0	0	2	0	2	1	0	0	1	5
07:45 AM	0	4	0	4	1	1	0	2	0	3	1	4	1	0	1	2	12
Total	3	9	0	12	1	2	0	3	0	10	1	11	2	0	4	6	32
08:00 AM	1	2	0	3	0	0	0	0	0	1	0	1	0	0	1	1	5
08:15 AM	1	3	0	4	0	0	0	0	0	5	0	5	0	1	3	4	13
08:30 AM	3	4	0	7	0	0	0	0	0	3	1	4	0	1	0	1	12
08:45 AM	3	2	0	5	0	0	0	0	0	8	0	8	0	0	0	0	13
Total	8	11	0	19	0	0	0	0	0	17	1	18	0	2	4	6	43
Grand Total	11	20	0	31	1	2	0	3	0	27	2	29	2	2	8	12	75
Apprch %	35.5	64.5	0		33.3	66.7	0		0	93.1	6.9		16.7	16.7	66.7		
Total %	14.7	26.7	0	41.3	1.3	2.7	0	4	0	36	2.7	38.7	2.7	2.7	10.7	16	

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Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/9/2012
Page No : 3

Groups Printed- MU

	Cottage Grove Ave From North				107th St From East				Cottage Grove Ave From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	1	1	0	0	0	0	0	1	0	1	0	0	0	0	2
07:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
Total	0	0	1	1	0	1	0	1	0	3	0	3	0	0	0	0	5
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	2
Total	0	0	0	0	0	0	0	0	1	2	1	4	0	0	0	0	4
Grand Total	0	0	1	1	0	1	0	1	1	5	1	7	0	0	0	0	9
Apprch %	0	0	100		0	100	0		14.3	71.4	14.3		0	0	0		
Total %	0	0	11.1	11.1	0	11.1	0	11.1	11.1	55.6	11.1	77.8	0	0	0	0	

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Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/9/2012
Page No : 4

Groups Printed- Peds & Bikes

	Cottage Grove Ave Crossing North Leg			107th St Crossing East Leg			Cottage Grove Ave Crossing South Leg			107th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	3	3	0	1	1	0	2	2	0	0	0	6
07:15 AM	0	1	1	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	2	2	0	0	0	0	0	0	0	0	0	2
07:45 AM	0	1	1	0	2	2	0	0	0	0	0	0	3
Total	0	7	7	0	3	3	0	2	2	0	0	0	12
08:00 AM	0	2	2	0	0	0	0	0	0	0	0	0	2
08:15 AM	0	4	4	0	4	4	0	0	0	0	1	1	9
08:30 AM	0	5	5	0	1	1	0	0	0	0	0	0	6
08:45 AM	0	8	8	0	0	0	0	1	1	0	1	1	10
Total	0	19	19	0	5	5	0	1	1	0	2	2	27
Grand Total	0	26	26	0	8	8	0	3	3	0	2	2	39
Apprch %	0	100		0	100		0	100		0	100		
Total %	0	66.7	66.7	0	20.5	20.5	0	7.7	7.7	0	5.1	5.1	

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Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/9/2012
Page No : 5

Groups Printed- PC - SU - MU

	Cottage Grove Ave From North				107th St From East				Cottage Grove Ave From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	12	91	4	107	5	2	0	7	1	48	20	69	16	0	9	25	208
04:15 PM	11	80	1	92	2	5	0	7	3	47	22	72	19	3	15	37	208
04:30 PM	12	78	2	92	1	1	1	3	2	39	7	48	16	3	16	35	178
04:45 PM	9	106	3	118	8	0	1	9	2	52	12	66	9	2	12	23	216
Total	44	355	10	409	16	8	2	26	8	186	61	255	60	8	52	120	810
05:00 PM	14	105	0	119	3	0	1	4	2	53	8	63	25	2	12	39	225
05:15 PM	21	107	1	129	0	2	1	3	0	48	15	63	11	3	6	20	215
05:30 PM	11	72	0	83	2	2	0	4	1	36	12	49	12	5	9	26	162
05:45 PM	13	75	2	90	2	0	0	2	1	44	10	55	26	0	15	41	188
Total	59	359	3	421	7	4	2	13	4	181	45	230	74	10	42	126	790
Grand Total	103	714	13	830	23	12	4	39	12	367	106	485	134	18	94	246	1600
Apprch %	12.4	86	1.6		59	30.8	10.3		2.5	75.7	21.9		54.5	7.3	38.2		
Total %	6.4	44.6	0.8	51.9	1.4	0.8	0.2	2.4	0.8	22.9	6.6	30.3	8.4	1.1	5.9	15.4	
PC	103	696	12	811	20	11	4	35	12	354	105	471	132	16	94	242	1559
% PC	100	97.5	92.3	97.7	87	91.7	100	89.7	100	96.5	99.1	97.1	98.5	88.9	100	98.4	97.4
SU	0	18	1	19	3	1	0	4	0	12	1	13	2	2	0	4	40
% SU	0	2.5	7.7	2.3	13	8.3	0	10.3	0	3.3	0.9	2.7	1.5	11.1	0	1.6	2.5
MU	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
% MU	0	0	0	0	0	0	0	0	0	0.3	0	0.2	0	0	0	0	0.1

	Cottage Grove Ave From North				107th St From East				Cottage Grove Ave From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	8	40	1	49	**2**	0	0	2	1	99	5	105	6	1	29	36	192
08:15 AM	9	33	1	43	1	0	**1**	2	1	96	14	111	8	3	22	33	189
08:30 AM	**20**	44	**2**	66	0	0	1	1	2	**101**	10	113	3	**4**	15	22	202
08:45 AM	18	**72**	1	**91**	2	**4**	0	**6**	**3**	101	**16**	**120**	**9**	2	**33**	**44**	**261**
Total Volume	55	189	5	249	5	4	2	11	7	397	45	449	26	10	99	135	844
% App. Total	22.1	75.9	2		45.5	36.4	18.2		1.6	88.4	10		19.3	7.4	73.3		
PHF	.688	.656	.625	.684	.625	.250	.500	.458	.583	.983	.703	.935	.722	.625	.750	.767	.808

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Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/9/2012
Page No : 6

Groups Printed- SU

	Cottage Grove Ave From North				107th St From East				Cottage Grove Ave From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	3	1	4	0	0	0	0	0	1	1	2	0	0	0	0	6
04:15 PM	0	2	0	2	0	1	0	1	0	4	0	4	0	0	0	0	7
04:30 PM	0	4	0	4	0	0	0	0	0	0	0	0	1	2	0	3	7
04:45 PM	0	1	0	1	3	0	0	3	0	3	0	3	0	0	0	0	7
Total	0	10	1	11	3	1	0	4	0	8	1	9	1	2	0	3	27
05:00 PM	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
05:15 PM	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0	4
05:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	1	2
05:45 PM	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0	4
Total	0	8	0	8	0	0	0	0	0	4	0	4	1	0	0	1	13
Grand Total	0	18	1	19	3	1	0	4	0	12	1	13	2	2	0	4	40
Apprch %	0	94.7	5.3		75	25	0		0	92.3	7.7		50	50	0		
Total %	0	45	2.5	47.5	7.5	2.5	0	10	0	30	2.5	32.5	5	5	0	10	

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107th St and Cottage Grove Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/9/2012
Page No : 7

Groups Printed- MU

	Cottage Grove Ave From North				107th St From East				Cottage Grove Ave From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Apprch %	0	0	0		0	0	0		0	100	0		0	0	0		
Total %	0	0	0	0	0	0	0	0	0	100	0	100	0	0	0	0	

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107th St and Cottage Grove Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/9/2012

Groups Printed- Peds & Bikes

	Cottage Grove Ave Crossing North Leg			107th St Crossing East Leg			Cottage Grove Ave Crossing South Leg			107th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	2	2	0	0	0	0	1	1	0	1	1	4
04:15 PM	0	1	1	0	0	0	0	0	0	0	0	0	1
04:30 PM	0	5	5	0	2	2	0	2	2	0	0	0	9
04:45 PM	0	0	0	0	0	0	0	2	2	0	0	0	2
Total	0	8	8	0	2	2	0	5	5	0	1	1	16
05:00 PM	0	3	3	0	0	0	0	1	1	0	2	2	6
05:15 PM	0	2	2	0	0	0	0	1	1	0	0	0	3
05:30 PM	0	0	0	0	0	0	0	1	1	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	2	2	0	1	1	3
Total	0	5	5	0	0	0	0	5	5	0	3	3	13
Grand Total	0	13	13	0	2	2	0	10	10	0	4	4	29
Apprch %	0	100		0	100		0	100		0	100		
Total %	0	44.8	44.8	0	6.9	6.9	0	34.5	34.5	0	13.8	13.8	

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107th St and Halsted St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/3/2012
Page No : 1

Groups Printed- PC - SU - MU

	Halsted St From North				107th St From East				Halsted St From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	5	77	11	93	7	23	18	48	13	256	16	285	10	20	22	52	478
07:15 AM	7	79	7	93	20	35	8	63	12	352	23	387	12	25	25	62	605
07:30 AM	9	99	16	124	16	63	13	92	14	403	23	440	16	55	31	102	758
07:45 AM	5	134	10	149	20	42	17	79	17	456	26	499	17	70	31	118	845
Total	26	389	44	459	63	163	56	282	56	1467	88	1611	55	170	109	334	2686
08:00 AM	9	123	22	154	17	45	14	76	14	366	37	417	22	47	30	99	746
08:15 AM	16	120	19	155	13	40	19	72	26	366	20	412	12	42	19	73	712
08:30 AM	19	119	18	156	15	29	10	54	21	335	23	379	14	39	23	76	665
08:45 AM	14	119	26	159	7	49	15	71	17	259	29	305	11	42	22	75	610
Total	58	481	85	624	52	163	58	273	78	1326	109	1513	59	170	94	323	2733
Grand Total	84	870	129	1083	115	326	114	555	134	2793	197	3124	114	340	203	657	5419
Apprch %	7.8	80.3	11.9		20.7	58.7	20.5		4.3	89.4	6.3		17.4	51.8	30.9		
Total %	1.6	16.1	2.4	20	2.1	6	2.1	10.2	2.5	51.5	3.6	57.6	2.1	6.3	3.7	12.1	
PC	77	803	121	1001	114	321	109	544	127	2678	193	2998	108	330	198	636	5179
% PC	91.7	92.3	93.8	92.4	99.1	98.5	95.6	98	94.8	95.9	98	96	94.7	97.1	97.5	96.8	95.6
SU	7	65	8	80	1	5	4	10	7	100	4	111	6	10	5	21	222
% SU	8.3	7.5	6.2	7.4	0.9	1.5	3.5	1.8	5.2	3.6	2	3.6	5.3	2.9	2.5	3.2	4.1
MU	0	2	0	2	0	0	1	1	0	15	0	15	0	0	0	0	18
% MU	0	0.2	0	0.2	0	0	0.9	0.2	0	0.5	0	0.5	0	0	0	0	0.3

	Halsted St From North				107th St From East				Halsted St From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	9	99	16	124	16	**63**	13	**92**	14	403	23	440	16	55	**31**	102	758
07:45 AM	5	**134**	10	149	**20**	42	17	79	17	**456**	26	**499**	17	**70**	31	**118**	**845**
08:00 AM	9	123	**22**	154	17	45	14	76	14	366	**37**	417	**22**	47	30	99	746
08:15 AM	**16**	120	19	**155**	13	40	**19**	72	**26**	366	20	412	12	42	19	73	712
Total Volume	39	476	67	582	66	190	63	319	71	1591	106	1768	67	214	111	392	3061
% App. Total	6.7	81.8	11.5		20.7	59.6	19.7		4	90	6		17.1	54.6	28.3		
PHF	.609	.888	.761	.939	.825	.754	.829	.867	.683	.872	.716	.886	.761	.764	.895	.831	.906

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107th St and Halsted St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/3/2012

Groups Printed- SU

	Halsted St From North				107th St From East				Halsted St From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	1	9	3	13	0	0	2	2	2	14	0	16	1	3	1	5	36
07:15 AM	2	11	1	14	0	0	0	0	0	16	1	17	1	0	1	2	33
07:30 AM	1	10	0	11	0	0	0	0	0	10	1	11	1	1	1	3	25
07:45 AM	0	8	0	8	1	1	0	2	1	12	0	13	2	3	2	7	30
Total	4	38	4	46	1	1	2	4	3	52	2	57	5	7	5	17	124
08:00 AM	0	7	2	9	0	1	0	1	0	15	1	16	0	0	0	0	26
08:15 AM	0	6	2	8	0	0	1	1	2	11	1	14	0	2	0	2	25
08:30 AM	1	7	0	8	0	1	0	1	1	12	0	13	0	1	0	1	23
08:45 AM	2	7	0	9	0	2	1	3	1	10	0	11	1	0	0	1	24
Total	3	27	4	34	0	4	2	6	4	48	2	54	1	3	0	4	98
Grand Total	7	65	8	80	1	5	4	10	7	100	4	111	6	10	5	21	222
Apprch %	8.8	81.2	10		10	50	40		6.3	90.1	3.6		28.6	47.6	23.8		
Total %	3.2	29.3	3.6	36	0.5	2.3	1.8	4.5	3.2	45	1.8	50	2.7	4.5	2.3	9.5	

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Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/3/2012
Page No : 3

Groups Printed- MU

	Halsted St From North				107th St From East				Halsted St From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
07:15 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
07:30 AM	0	0	0	0	0	0	1	1	0	3	0	3	0	0	0	0	4
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	1	1	0	7	0	7	0	0	0	0	9
08:00 AM	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	4
08:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
08:45 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
Total	0	1	0	1	0	0	0	0	0	8	0	8	0	0	0	0	9
Grand Total	0	2	0	2	0	0	1	1	0	15	0	15	0	0	0	0	18
Apprch %	0	100	0		0	0	100		0	100	0		0	0	0		
Total %	0	11.1	0	11.1	0	0	5.6	5.6	0	83.3	0	83.3	0	0	0	0	

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Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM PEDS
Site Code : 00000000
Start Date : 5/3/2012
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Groups Printed- Peds & Bikes

	Halsted St Crossing North Leg			107th St Crossing East Leg			Halsted St Crossing South Leg			107th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	0	0	1	2	3	0	0	0	0	0	0	3
07:15 AM	0	2	2	1	10	11	2	3	5	0	4	4	22
07:30 AM	0	3	3	0	1	1	0	3	3	0	1	1	8
07:45 AM	0	0	0	1	5	6	0	2	2	0	2	2	10
Total	0	5	5	3	18	21	2	8	10	0	7	7	43
08:00 AM	0	0	0	0	4	4	0	0	0	0	3	3	7
08:15 AM	0	1	1	0	6	6	0	4	4	0	0	0	11
08:30 AM	0	1	1	0	1	1	0	1	1	0	6	6	9
08:45 AM	0	5	5	0	3	3	0	3	3	0	2	2	13
Total	0	7	7	0	14	14	0	8	8	0	11	11	40
Grand Total	0	12	12	3	32	35	2	16	18	0	18	18	83
Apprch %	0	100		8.6	91.4		11.1	88.9		0	100		
Total %	0	14.5	14.5	3.6	38.6	42.2	2.4	19.3	21.7	0	21.7	21.7	

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Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/3/2012
Page No : 5

Groups Printed- PC - SU - MU

	Halsted St From North				107th St From East				Halsted St From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	31	201	27	259	14	38	18	70	15	192	21	228	21	35	18	74	631
04:15 PM	32	187	33	252	11	37	25	73	15	162	27	204	21	38	20	79	608
04:30 PM	22	194	24	240	14	34	33	81	19	170	22	211	16	47	20	83	615
04:45 PM	28	217	22	267	13	38	18	69	15	201	17	233	20	34	20	74	643
Total	113	799	106	1018	52	147	94	293	64	725	87	876	78	154	78	310	2497
05:00 PM	23	167	30	220	14	45	22	81	21	181	32	234	18	49	25	92	627
05:15 PM	20	223	20	263	7	41	22	70	16	213	30	259	20	41	19	80	672
05:30 PM	20	217	36	273	16	36	22	74	22	189	30	241	36	36	32	104	692
05:45 PM	27	179	32	238	17	38	27	82	18	186	22	226	20	50	25	95	641
Total	90	786	118	994	54	160	93	307	77	769	114	960	94	176	101	371	2632
Grand Total	203	1585	224	2012	106	307	187	600	141	1494	201	1836	172	330	179	681	5129
Apprch %	10.1	78.8	11.1		17.7	51.2	31.2		7.7	81.4	10.9		25.3	48.5	26.3		
Total %	4	30.9	4.4	39.2	2.1	6	3.6	11.7	2.7	29.1	3.9	35.8	3.4	6.4	3.5	13.3	
PC	198	1527	223	1948	105	305	185	595	141	1433	197	1771	169	325	175	669	4983
% PC	97.5	96.3	99.6	96.8	99.1	99.3	98.9	99.2	100	95.9	98	96.5	98.3	98.5	97.8	98.2	97.2
SU	4	56	1	61	1	2	2	5	0	59	4	63	3	5	3	11	140
% SU	2	3.5	0.4	3	0.9	0.7	1.1	0.8	0	3.9	2	3.4	1.7	1.5	1.7	1.6	2.7
MU	1	2	0	3	0	0	0	0	0	2	0	2	0	0	1	1	6
% MU	0.5	0.1	0	0.1	0	0	0	0	0	0.1	0	0.1	0	0	0.6	0.1	0.1

	Halsted St From North				107th St From East				Halsted St From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	9	99	16	124	16	**63**	13	**92**	14	403	23	440	16	55	**31**	102	758
07:45 AM	5	**134**	10	149	**20**	42	17	79	17	**456**	26	**499**	17	**70**	31	**118**	**845**
08:00 AM	9	123	**22**	154	17	45	14	76	14	366	**37**	417	**22**	47	30	99	746
08:15 AM	**16**	120	19	**155**	13	40	**19**	72	**26**	366	20	412	12	42	19	73	712
Total Volume	39	476	67	582	66	190	63	319	71	1591	106	1768	67	214	111	392	3061
% App. Total	6.7	81.8	11.5		20.7	59.6	19.7		4	90	6		17.1	54.6	28.3		
PHF	.609	.888	.761	.939	.825	.754	.829	.867	.683	.872	.716	.886	.761	.764	.895	.831	.906

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4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/3/2012
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Groups Printed- SU

	Halsted St From North				107th St From East				Halsted St From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	1	10	0	11	0	0	0	0	0	8	1	9	1	0	1	2	22
04:15 PM	2	8	0	10	0	0	0	0	0	12	0	12	0	1	0	1	23
04:30 PM	0	5	0	5	0	0	0	0	0	4	0	4	0	3	0	3	12
04:45 PM	1	10	0	11	0	0	0	0	0	6	0	6	1	0	1	2	19
Total	4	33	0	37	0	0	0	0	0	30	1	31	2	4	2	8	76
05:00 PM	0	5	0	5	0	0	2	2	0	8	0	8	1	0	0	1	16
05:15 PM	0	7	0	7	0	0	0	0	0	9	0	9	0	1	1	2	18
05:30 PM	0	5	1	6	1	2	0	3	0	8	2	10	0	0	0	0	19
05:45 PM	0	6	0	6	0	0	0	0	0	4	1	5	0	0	0	0	11
Total	0	23	1	24	1	2	2	5	0	29	3	32	1	1	1	3	64
Grand Total	4	56	1	61	1	2	2	5	0	59	4	63	3	5	3	11	140
Apprch %	6.6	91.8	1.6		20	40	40		0	93.7	6.3		27.3	45.5	27.3		
Total %	2.9	40	0.7	43.6	0.7	1.4	1.4	3.6	0	42.1	2.9	45	2.1	3.6	2.1	7.9	

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Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
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Groups Printed- MU

	Halsted St From North				107th St From East				Halsted St From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	1	1	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	1	0	1	0	0	0	0	0	1	0	1	0	0	1	1	3
Grand Total	1	2	0	3	0	0	0	0	0	2	0	2	0	0	1	1	6
Apprch %	33.3	66.7	0		0	0	0		0	100	0		0	0	100		
Total %	16.7	33.3	0	50	0	0	0	0	0	33.3	0	33.3	0	0	16.7	16.7	

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107th St and Halsted St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM PEDS
Site Code : 00000000
Start Date : 5/3/2012
Page No : 8

Groups Printed- Peds & Bikes

	Halsted St Crossing North Leg			107th St Crossing East Leg			Halsted St Crossing South Leg			107th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	3	3	1	2	3	0	3	3	1	4	5	14
04:15 PM	1	1	2	3	2	5	0	1	1	0	2	2	10
04:30 PM	0	3	3	0	2	2	0	10	10	0	4	4	19
04:45 PM	0	4	4	0	2	2	1	2	3	0	1	1	10
Total	1	11	12	4	8	12	1	16	17	1	11	12	53
05:00 PM	0	1	1	1	2	3	0	1	1	1	5	6	11
05:15 PM	2	2	4	0	1	1	0	1	1	1	2	3	9
05:30 PM	0	0	0	0	3	3	0	6	6	0	4	4	13
05:45 PM	0	7	7	0	1	1	0	5	5	0	7	7	20
Total	2	10	12	1	7	8	0	13	13	2	18	20	53
Grand Total	3	21	24	5	15	20	1	29	30	3	29	32	106
Apprch %	12.5	87.5		25	75		3.3	96.7		9.4	90.6		
Total %	2.8	19.8	22.6	4.7	14.2	18.9	0.9	27.4	28.3	2.8	27.4	30.2	

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107th St and Martin Luther King Dr
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/6/2012
Page No : 1

Groups Printed- PC - SU - MU

	Martin Luther King Dr From North				107th St From East				Martin Luther King Dr From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	3	20	2	25	4	20	2	26	3	44	4	51	4	14	4	22	124
07:15 AM	8	23	4	35	5	18	0	23	2	65	6	73	2	19	5	26	157
07:30 AM	11	40	3	54	7	20	0	27	1	78	8	87	16	25	18	59	227
07:45 AM	4	40	1	45	6	13	0	19	3	72	4	79	14	31	14	59	202
Total	26	123	10	159	22	71	2	95	9	259	22	290	36	89	41	166	710
08:00 AM	4	27	1	32	7	14	1	22	4	61	4	69	6	20	19	45	168
08:15 AM	4	35	0	39	6	18	1	25	1	51	3	55	4	23	19	46	165
08:30 AM	2	30	6	38	8	29	6	43	5	87	10	102	9	31	10	50	233
08:45 AM	5	37	2	44	5	31	3	39	9	51	4	64	9	58	8	75	222
Total	15	129	9	153	26	92	11	129	19	250	21	290	28	132	56	216	788
Grand Total	41	252	19	312	48	163	13	224	28	509	43	580	64	221	97	382	1498
Apprch %	13.1	80.8	6.1		21.4	72.8	5.8		4.8	87.8	7.4		16.8	57.9	25.4		
Total %	2.7	16.8	1.3	20.8	3.2	10.9	0.9	15	1.9	34	2.9	38.7	4.3	14.8	6.5	25.5	
PC	41	240	19	300	44	155	12	211	26	494	41	561	62	215	95	372	1444
% PC	100	95.2	100	96.2	91.7	95.1	92.3	94.2	92.9	97.1	95.3	96.7	96.9	97.3	97.9	97.4	96.4
SU	0	12	0	12	4	8	1	13	2	15	2	19	0	6	2	8	52
% SU	0	4.8	0	3.8	8.3	4.9	7.7	5.8	7.1	2.9	4.7	3.3	0	2.7	2.1	2.1	3.5
MU	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
% MU	0	0	0	0	0	0	0	0	0	0	0	0	3.1	0	0	0.5	0.1

	Martin Luther King Dr From North				107th St From East				Martin Luther King Dr From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	4	27	1	32	7	14	1	22	4	61	4	69	6	20	**19**	45	168
08:15 AM	4	35	0	39	6	18	1	25	1	51	3	55	4	23	19	46	165
08:30 AM	2	30	**6**	38	**8**	29	**6**	**43**	5	**87**	**10**	**102**	**9**	31	10	50	**233**
08:45 AM	**5**	**37**	2	**44**	5	**31**	3	39	**9**	51	4	64	9	**58**	8	**75**	222
Total Volume	15	129	9	153	26	92	11	129	19	250	21	290	28	132	56	216	788
% App. Total	9.8	84.3	5.9		20.2	71.3	8.5		6.6	86.2	7.2		13	61.1	25.9		
PHF	.750	.872	.375	.869	.813	.742	.458	.750	.528	.718	.525	.711	.778	.569	.737	.720	.845

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107th St and Martin Luther King Dr
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/6/2012

Groups Printed- SU

	Martin Luther King Dr From North				107th St From East				Martin Luther King Dr From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	1	1	0	2	1	2	0	3	0	1	0	1	6
07:15 AM	0	1	0	1	0	1	0	1	0	2	0	2	0	0	0	0	4
07:30 AM	0	1	0	1	0	1	0	1	0	5	0	5	0	1	1	2	9
07:45 AM	0	3	0	3	0	1	0	1	0	0	0	0	0	0	0	0	4
Total	0	5	0	5	1	4	0	5	1	9	0	10	0	2	1	3	23
08:00 AM	0	1	0	1	0	0	0	0	0	3	0	3	0	1	1	2	6
08:15 AM	0	1	0	1	0	2	0	2	0	0	0	0	0	1	0	1	4
08:30 AM	0	2	0	2	2	1	1	4	1	3	2	6	0	1	0	1	13
08:45 AM	0	3	0	3	1	1	0	2	0	0	0	0	0	1	0	1	6
Total	0	7	0	7	3	4	1	8	1	6	2	9	0	4	1	5	29
Grand Total	0	12	0	12	4	8	1	13	2	15	2	19	0	6	2	8	52
Apprch %	0	100	0		30.8	61.5	7.7		10.5	78.9	10.5		0	75	25		
Total %	0	23.1	0	23.1	7.7	15.4	1.9	25	3.8	28.8	3.8	36.5	0	11.5	3.8	15.4	

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107th St and Martin Luther King Dr
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/6/2012

Groups Printed- MU

	Martin Luther King Dr From North				107th St From East				Martin Luther King Dr From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
Apprch %	0	0	0		0	0	0		0	0	0		100	0	0		
Total %	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	100	

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107th St and Martin Luther King Dr
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 6/6/2012

Groups Printed- Peds & Bikes

	Martin Luther King Dr Crossing North Leg			107th St Crossing East Leg			Martin Luther King Dr Crossing South Leg			107th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	1	1	0	0	0	0	2	2	0	0	0	3
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	2	2	0	1	1	0	0	0	3
07:45 AM	0	0	0	0	2	2	0	2	2	0	1	1	5
Total	0	1	1	0	4	4	0	5	5	0	1	1	11
08:00 AM	0	0	0	0	1	1	0	5	5	0	0	0	6
08:15 AM	0	0	0	0	3	3	0	0	0	0	0	0	3
08:30 AM	0	1	1	0	1	1	0	0	0	0	0	0	2
08:45 AM	0	18	18	0	2	2	0	8	8	0	0	0	28
Total	0	19	19	0	7	7	0	13	13	0	0	0	39
Grand Total	0	20	20	0	11	11	0	18	18	0	1	1	50
Apprch %	0	100		0	100		0	100		0	100		
Total %	0	40	40	0	22	22	0	36	36	0	2	2	

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107th St and Martin Luther King Dr
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/6/2012
Page No : 5

Groups Printed- PC - SU - MU

	Martin Luther King Dr From North				107th St From East				Martin Luther King Dr From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	10	73	1	84	5	22	4	31	2	27	0	29	2	30	9	41	185
04:15 PM	8	85	3	96	7	20	3	30	4	42	1	47	9	20	11	40	213
04:30 PM	18	83	7	108	5	14	2	21	5	47	5	57	5	19	12	36	222
04:45 PM	15	73	8	96	9	19	2	30	5	45	8	58	3	27	10	40	224
Total	51	314	19	384	26	75	11	112	16	161	14	191	19	96	42	157	844
05:00 PM	19	69	11	99	4	27	5	36	2	64	5	71	11	25	8	44	250
05:15 PM	14	129	6	149	7	32	3	42	2	44	8	54	6	37	8	51	296
05:30 PM	13	82	4	99	7	39	2	48	4	57	8	69	7	30	15	52	268
05:45 PM	9	67	7	83	2	26	6	34	2	47	7	56	2	19	16	37	210
Total	55	347	28	430	20	124	16	160	10	212	28	250	26	111	47	184	1024
Grand Total	106	661	47	814	46	199	27	272	26	373	42	441	45	207	89	341	1868
Apprch %	13	81.2	5.8		16.9	73.2	9.9		5.9	84.6	9.5		13.2	60.7	26.1		
Total %	5.7	35.4	2.5	43.6	2.5	10.7	1.4	14.6	1.4	20	2.2	23.6	2.4	11.1	4.8	18.3	
PC	106	650	47	803	45	196	27	268	26	363	42	431	45	207	87	339	1841
% PC	100	98.3	100	98.6	97.8	98.5	100	98.5	100	97.3	100	97.7	100	100	97.8	99.4	98.6
SU	0	10	0	10	1	3	0	4	0	9	0	9	0	0	1	1	24
% SU	0	1.5	0	1.2	2.2	1.5	0	1.5	0	2.4	0	2	0	0	1.1	0.3	1.3
MU	0	1	0	1	0	0	0	0	0	1	0	1	0	0	1	1	3
% MU	0	0.2	0	0.1	0	0	0	0	0	0.3	0	0.2	0	0	1.1	0.3	0.2

	Martin Luther King Dr From North				107th St From East				Martin Luther King Dr From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	15	73	8	96	**9**	19	2	30	**5**	45	**8**	58	3	27	10	40	224
05:00 PM	**19**	69	**11**	99	4	27	**5**	36	2	**64**	5	**71**	**11**	25	8	44	250
05:15 PM	14	**129**	6	**149**	7	32	3	42	2	44	8	54	6	**37**	8	51	**296**
05:30 PM	13	82	4	99	7	**39**	2	**48**	4	57	8	69	7	30	**15**	**52**	268
Total Volume	61	353	29	443	27	117	12	156	13	210	29	252	27	119	41	187	1038
% App. Total	13.8	79.7	6.5		17.3	75	7.7		5.2	83.3	11.5		14.4	63.6	21.9		
PHF	.803	.684	.659	.743	.750	.750	.600	.813	.650	.820	.906	.887	.614	.804	.683	.899	.877

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107th St and Martin Luther King Dr
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/6/2012
Page No : 6

Groups Printed- SU

	Martin Luther King Dr From North				107th St From East				Martin Luther King Dr From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	3	0	3	0	1	0	1	0	1	0	1	0	0	1	1	6
04:15 PM	0	1	0	1	1	1	0	2	0	1	0	1	0	0	0	0	4
04:30 PM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
04:45 PM	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
Total	0	7	0	7	1	2	0	3	0	5	0	5	0	0	1	1	16
05:00 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
05:15 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
05:30 PM	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
05:45 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
Total	0	3	0	3	0	1	0	1	0	4	0	4	0	0	0	0	8
Grand Total	0	10	0	10	1	3	0	4	0	9	0	9	0	0	1	1	24
Apprch %	0	100	0		25	75	0		0	100	0		0	0	100		
Total %	0	41.7	0	41.7	4.2	12.5	0	16.7	0	37.5	0	37.5	0	0	4.2	4.2	

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107th St and Martin Luther King Dr
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/6/2012
Page No : 7

Groups Printed- MU

	Martin Luther King Dr From North				107th St From East				Martin Luther King Dr From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	2
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	2
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Grand Total	0	1	0	1	0	0	0	0	0	1	0	1	0	0	1	1	3
Apprch %	0	100	0		0	0	0		0	100	0		0	0	100		
Total %	0	33.3	0	33.3	0	0	0	0	0	33.3	0	33.3	0	0	33.3	33.3	

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107th St and Martin Luther King Dr
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 6/6/2012
Page No : 8

Groups Printed- Peds & Bikes

	Martin Luther King Dr Crossing North Leg			107th St Crossing East Leg			Martin Luther King Dr Crossing South Leg			107th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	1	1	0	0	0	0	0	0	0	1	1	2
04:15 PM	0	1	1	0	0	0	0	2	2	0	2	2	5
04:30 PM	0	0	0	0	4	4	0	0	0	0	1	1	5
04:45 PM	0	1	1	0	0	0	0	1	1	0	0	0	2
Total	0	3	3	0	4	4	0	3	3	0	4	4	14
05:00 PM	0	1	1	0	1	1	0	1	1	0	1	1	4
05:15 PM	0	0	0	0	2	2	0	3	3	0	0	0	5
05:30 PM	0	0	0	0	1	1	0	5	5	0	0	0	6
05:45 PM	0	0	0	0	1	1	0	1	1	0	1	1	3
Total	0	1	1	0	5	5	0	10	10	0	2	2	18
Grand Total	0	4	4	0	9	9	0	13	13	0	6	6	32
Apprch %	0	100		0	100		0	100		0	100		
Total %	0	12.5	12.5	0	28.1	28.1	0	40.6	40.6	0	18.8	18.8	

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107th St and Michigan Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/9/2012
Page No : 1

Groups Printed- PC - SU - MU

	Michigan Ave From North				107th St From East				Michigan Ave From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	1	24	0	25	10	19	3	32	2	87	6	95	5	16	7	28	180
07:15 AM	6	31	0	37	5	31	6	42	2	91	10	103	4	31	18	53	235
07:30 AM	3	30	5	38	4	29	1	34	4	88	5	97	6	36	12	54	223
07:45 AM	3	57	0	60	14	28	5	47	7	108	7	122	10	45	17	72	301
Total	13	142	5	160	33	107	15	155	15	374	28	417	25	128	54	207	939
08:00 AM	4	43	3	50	6	27	4	37	5	114	8	127	6	52	10	68	282
08:15 AM	5	33	3	41	5	38	6	49	8	104	7	119	9	45	7	61	270
08:30 AM	6	27	2	35	6	32	3	41	3	79	5	87	7	38	12	57	220
08:45 AM	4	25	2	31	11	32	8	51	11	91	8	110	11	58	15	84	276
Total	19	128	10	157	28	129	21	178	27	388	28	443	33	193	44	270	1048
Grand Total	32	270	15	317	61	236	36	333	42	762	56	860	58	321	98	477	1987
Apprch %	10.1	85.2	4.7		18.3	70.9	10.8		4.9	88.6	6.5		12.2	67.3	20.5		
Total %	1.6	13.6	0.8	16	3.1	11.9	1.8	16.8	2.1	38.3	2.8	43.3	2.9	16.2	4.9	24	
PC	32	239	15	286	61	226	35	322	41	703	53	797	55	310	91	456	1861
% PC	100	88.5	100	90.2	100	95.8	97.2	96.7	97.6	92.3	94.6	92.7	94.8	96.6	92.9	95.6	93.7
SU	0	27	0	27	0	10	1	11	1	50	3	54	3	11	6	20	112
% SU	0	10	0	8.5	0	4.2	2.8	3.3	2.4	6.6	5.4	6.3	5.2	3.4	6.1	4.2	5.6
MU	0	4	0	4	0	0	0	0	0	9	0	9	0	0	1	1	14
% MU	0	1.5	0	1.3	0	0	0	0	0	1.2	0	1	0	0	1	0.2	0.7

	Michigan Ave From North				107th St From East				Michigan Ave From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	3	30	**5**	38	4	29	1	34	4	88	5	97	6	36	12	54	223
07:45 AM	3	**57**	0	**60**	**14**	28	5	47	7	108	7	122	**10**	45	**17**	**72**	**301**
08:00 AM	4	43	3	50	6	27	4	37	5	**114**	**8**	**127**	6	**52**	10	68	282
08:15 AM	**5**	33	3	41	5	**38**	**6**	**49**	**8**	104	7	119	9	45	7	61	270
Total Volume	15	163	11	189	29	122	16	167	24	414	27	465	31	178	46	255	1076
% App. Total	7.9	86.2	5.8		17.4	73.1	9.6		5.2	89	5.8		12.2	69.8	18		
PHF	.750	.715	.550	.788	.518	.803	.667	.852	.750	.908	.844	.915	.775	.856	.676	.885	.894

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107th St and Michigan Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/9/2012
Page No : 2

Groups Printed- SU

	Michigan Ave From North				107th St From East				Michigan Ave From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	4	0	4	0	1	0	1	0	8	1	9	0	2	1	3	17
07:15 AM	0	1	0	1	0	1	1	2	0	6	1	7	0	1	1	2	12
07:30 AM	0	3	0	3	0	2	0	2	1	5	0	6	1	1	1	3	14
07:45 AM	0	6	0	6	0	0	0	0	0	9	0	9	0	3	0	3	18
Total	0	14	0	14	0	4	1	5	1	28	2	31	1	7	3	11	61
08:00 AM	0	6	0	6	0	2	0	2	0	4	0	4	0	1	0	1	13
08:15 AM	0	3	0	3	0	1	0	1	0	10	0	10	2	2	0	4	18
08:30 AM	0	1	0	1	0	2	0	2	0	5	0	5	0	1	2	3	11
08:45 AM	0	3	0	3	0	1	0	1	0	3	1	4	0	0	1	1	9
Total	0	13	0	13	0	6	0	6	0	22	1	23	2	4	3	9	51
Grand Total	0	27	0	27	0	10	1	11	1	50	3	54	3	11	6	20	112
Apprch %	0	100	0		0	90.9	9.1		1.9	92.6	5.6		15	55	30		
Total %	0	24.1	0	24.1	0	8.9	0.9	9.8	0.9	44.6	2.7	48.2	2.7	9.8	5.4	17.9	

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Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/9/2012
Page No : 3

Groups Printed- MU

	Michigan Ave From North				107th St From East				Michigan Ave From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1	2
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
Total	0	4	0	4	0	0	0	0	0	2	0	2	0	0	1	1	7
08:00 AM	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	3
08:15 AM	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	4
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	7	0	7	0	0	0	0	7
Grand Total	0	4	0	4	0	0	0	0	0	9	0	9	0	0	1	1	14
Apprch %	0	100	0		0	0	0		0	100	0		0	0	100		
Total %	0	28.6	0	28.6	0	0	0	0	0	64.3	0	64.3	0	0	7.1	7.1	

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107th St and Michigan Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/9/2012

Groups Printed- Peds & Bikes

	Michigan Ave Crossing North Leg			107th St Crossing East Leg			Michigan Ave Crossing South Leg			107th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	3	3	0	1	1	0	11	11	0	7	7	22
07:15 AM	0	3	3	0	2	2	0	9	9	0	1	1	15
07:30 AM	0	2	2	1	1	2	0	9	9	0	5	5	18
07:45 AM	0	3	3	1	2	3	0	3	3	0	3	3	12
Total	0	11	11	2	6	8	0	32	32	0	16	16	67
08:00 AM	0	0	0	0	2	2	0	8	8	0	6	6	16
08:15 AM	0	5	5	0	5	5	0	9	9	0	3	3	22
08:30 AM	0	16	16	0	6	6	0	0	0	0	12	12	34
08:45 AM	0	4	4	0	3	3	0	3	3	0	3	3	13
Total	0	25	25	0	16	16	0	20	20	0	24	24	85
Grand Total	0	36	36	2	22	24	0	52	52	0	40	40	152
Apprch %	0	100		8.3	91.7		0	100		0	100		
Total %	0	23.7	23.7	1.3	14.5	15.8	0	34.2	34.2	0	26.3	26.3	

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107th St and Michigan Ave
Chicago, IL
4:00PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/9/2012
Page No : 5

Groups Printed- PC - SU - MU

	Michigan Ave From North				107th St From East				Michigan Ave From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	10	66	4	80	5	39	4	48	3	72	3	78	17	45	19	81	287
04:15 PM	11	60	8	79	10	26	9	45	6	64	8	78	11	41	13	65	267
04:30 PM	3	76	3	82	5	37	4	46	8	66	14	88	13	51	15	79	295
04:45 PM	6	74	4	84	8	21	5	34	12	67	12	91	11	43	13	67	276
Total	30	276	19	325	28	123	22	173	29	269	37	335	52	180	60	292	1125
05:00 PM	9	73	9	91	13	29	8	50	4	65	8	77	14	33	14	61	279
05:15 PM	8	87	6	101	6	35	5	46	2	61	6	69	10	29	14	53	269
05:30 PM	10	77	8	95	4	39	5	48	3	57	4	64	7	39	15	61	268
05:45 PM	6	79	7	92	7	29	3	39	7	55	5	67	7	52	18	77	275
Total	33	316	30	379	30	132	21	183	16	238	23	277	38	153	61	252	1091
Grand Total	63	592	49	704	58	255	43	356	45	507	60	612	90	333	121	544	2216
Apprch %	8.9	84.1	7		16.3	71.6	12.1		7.4	82.8	9.8		16.5	61.2	22.2		
Total %	2.8	26.7	2.2	31.8	2.6	11.5	1.9	16.1	2	22.9	2.7	27.6	4.1	15	5.5	24.5	
PC	63	565	49	677	56	252	43	351	44	480	58	582	90	331	119	540	2150
% PC	100	95.4	100	96.2	96.6	98.8	100	98.6	97.8	94.7	96.7	95.1	100	99.4	98.3	99.3	97
SU	0	27	0	27	2	3	0	5	1	27	2	30	0	2	2	4	66
% SU	0	4.6	0	3.8	3.4	1.2	0	1.4	2.2	5.3	3.3	4.9	0	0.6	1.7	0.7	3
MU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% MU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Michigan Ave From North				107th St From East				Michigan Ave From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	3	30	**5**	38	4	29	1	34	4	88	5	97	6	36	12	54	223
07:45 AM	3	**57**	0	**60**	**14**	28	5	47	7	108	7	122	**10**	45	**17**	**72**	**301**
08:00 AM	4	43	3	50	6	27	4	37	5	**114**	**8**	**127**	6	**52**	10	68	282
08:15 AM	**5**	33	3	41	5	**38**	**6**	**49**	**8**	104	7	119	9	45	7	61	270
Total Volume	15	163	11	189	29	122	16	167	24	414	27	465	31	178	46	255	1076
% App. Total	7.9	86.2	5.8		17.4	73.1	9.6		5.2	89	5.8		12.2	69.8	18		
PHF	.750	.715	.550	.788	.518	.803	.667	.852	.750	.908	.844	.915	.775	.856	.676	.885	.894

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107th St and Michigan Ave
Chicago, IL
4:00PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/9/2012
Page No : 6

Groups Printed- SU

	Michigan Ave From North				107th St From East				Michigan Ave From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	6	0	6	0	2	0	2	0	3	0	3	0	0	1	1	12
04:15 PM	0	2	0	2	1	0	0	1	0	4	0	4	0	0	0	0	7
04:30 PM	0	2	0	2	0	0	0	0	0	6	0	6	0	1	0	1	9
04:45 PM	0	5	0	5	0	0	0	0	1	2	1	4	0	0	0	0	9
Total	0	15	0	15	1	2	0	3	1	15	1	17	0	1	1	2	37
05:00 PM	0	3	0	3	0	0	0	0	0	1	1	2	0	0	0	0	5
05:15 PM	0	1	0	1	1	1	0	2	0	5	0	5	0	0	1	1	9
05:30 PM	0	4	0	4	0	0	0	0	0	3	0	3	0	1	0	1	8
05:45 PM	0	4	0	4	0	0	0	0	0	3	0	3	0	0	0	0	7
Total	0	12	0	12	1	1	0	2	0	12	1	13	0	1	1	2	29
Grand Total	0	27	0	27	2	3	0	5	1	27	2	30	0	2	2	4	66
Apprch %	0	100	0		40	60	0		3.3	90	6.7		0	50	50		
Total %	0	40.9	0	40.9	3	4.5	0	7.6	1.5	40.9	3	45.5	0	3	3	6.1	

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107th St and Michigan Ave
Chicago, IL
4:00PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/9/2012
Page No : 7

Groups Printed- MU

	Michigan Ave From North				107th St From East				Michigan Ave From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

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107th St and Michigan Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/9/2012

Groups Printed- Peds & Bikes

	Michigan Ave Crossing North Leg			107th St Crossing East Leg			Michigan Ave Crossing South Leg			107th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	9	9	0	2	2	0	7	7	0	7	7	25
04:15 PM	0	8	8	1	5	6	0	4	4	0	10	10	28
04:30 PM	0	0	0	0	7	7	0	5	5	0	10	10	22
04:45 PM	0	1	1	1	2	3	0	6	6	0	4	4	14
Total	0	18	18	2	16	18	0	22	22	0	31	31	89
05:00 PM	0	5	5	0	2	2	0	5	5	0	4	4	16
05:15 PM	0	1	1	0	2	2	0	1	1	0	3	3	7
05:30 PM	0	3	3	0	2	2	0	8	8	0	15	15	28
05:45 PM	0	2	2	0	1	1	0	3	3	0	4	4	10
Total	0	11	11	0	7	7	0	17	17	0	26	26	61
Grand Total	0	29	29	2	23	25	0	39	39	0	57	57	150
Apprch %	0	100		8	92		0	100		0	100		
Total %	0	19.3	19.3	1.3	15.3	16.7	0	26	26	0	38	38	

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107th St and State St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/12/2012
Page No : 1

Groups Printed- PC - SU - MU

	State St From North				107th St From East				State St From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	2	9	0	11	1	19	2	22	4	68	7	79	3	25	7	35	147
07:15 AM	2	15	6	23	3	34	3	40	9	60	5	74	3	26	8	37	174
07:30 AM	5	18	1	24	3	39	2	44	4	63	7	74	3	44	6	53	195
07:45 AM	3	25	1	29	7	41	2	50	5	73	4	82	8	57	4	69	230
Total	12	67	8	87	14	133	9	156	22	264	23	309	17	152	25	194	746
08:00 AM	6	16	5	27	3	37	0	40	6	66	13	85	9	36	5	50	202
08:15 AM	3	27	8	38	3	45	5	53	11	94	9	114	5	44	9	58	263
08:30 AM	4	23	2	29	3	60	5	68	6	72	8	86	7	30	11	48	231
08:45 AM	7	31	4	42	5	56	6	67	3	69	10	82	6	56	15	77	268
Total	20	97	19	136	14	198	16	228	26	301	40	367	27	166	40	233	964
Grand Total	32	164	27	223	28	331	25	384	48	565	63	676	44	318	65	427	1710
Apprch %	14.3	73.5	12.1		7.3	86.2	6.5		7.1	83.6	9.3		10.3	74.5	15.2		
Total %	1.9	9.6	1.6	13	1.6	19.4	1.5	22.5	2.8	33	3.7	39.5	2.6	18.6	3.8	25	
PC	31	150	25	206	26	324	23	373	47	550	60	657	43	304	63	410	1646
% PC	96.9	91.5	92.6	92.4	92.9	97.9	92	97.1	97.9	97.3	95.2	97.2	97.7	95.6	96.9	96	96.3
SU	1	13	2	16	2	7	2	11	1	12	3	16	1	14	2	17	60
% SU	3.1	7.9	7.4	7.2	7.1	2.1	8	2.9	2.1	2.1	4.8	2.4	2.3	4.4	3.1	4	3.5
MU	0	1	0	1	0	0	0	0	0	3	0	3	0	0	0	0	4
% MU	0	0.6	0	0.4	0	0	0	0	0	0.5	0	0.4	0	0	0	0	0.2

	State St From North				107th St From East				State St From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	6	16	5	27	3	37	0	40	6	66	**13**	85	**9**	36	5	50	202
08:15 AM	3	27	**8**	38	3	45	5	53	**11**	**94**	9	**114**	5	44	9	58	263
08:30 AM	4	23	2	29	3	**60**	5	**68**	6	72	8	86	7	30	11	48	231
08:45 AM	**7**	**31**	4	**42**	**5**	56	**6**	67	3	69	10	82	6	**56**	**15**	**77**	**268**
Total Volume	20	97	19	136	14	198	16	228	26	301	40	367	27	166	40	233	964
% App. Total	14.7	71.3	14		6.1	86.8	7		7.1	82	10.9		11.6	71.2	17.2		
PHF	.714	.782	.594	.810	.700	.825	.667	.838	.591	.801	.769	.805	.750	.741	.667	.756	.899

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107th St and State St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/12/2012

Groups Printed- SU

	State St From North				107th St From East				State St From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	1	0	1	0	0	0	0	0	4	0	4	0	2	1	3	8
07:15 AM	0	0	0	0	0	0	0	0	1	2	0	3	0	2	0	2	5
07:30 AM	0	0	1	1	0	1	1	2	0	1	0	1	0	3	0	3	7
07:45 AM	0	4	0	4	0	1	1	2	0	1	0	1	0	1	0	1	8
Total	0	5	1	6	0	2	2	4	1	8	0	9	0	8	1	9	28
08:00 AM	0	0	0	0	1	2	0	3	0	1	1	2	0	2	0	2	7
08:15 AM	1	3	0	4	0	0	0	0	0	0	0	0	0	1	1	2	6
08:30 AM	0	1	1	2	0	2	0	2	0	1	1	2	0	0	0	0	6
08:45 AM	0	4	0	4	1	1	0	2	0	2	1	3	1	3	0	4	13
Total	1	8	1	10	2	5	0	7	0	4	3	7	1	6	1	8	32
Grand Total	1	13	2	16	2	7	2	11	1	12	3	16	1	14	2	17	60
Apprch %	6.2	81.2	12.5		18.2	63.6	18.2		6.2	75	18.8		5.9	82.4	11.8		
Total %	1.7	21.7	3.3	26.7	3.3	11.7	3.3	18.3	1.7	20	5	26.7	1.7	23.3	3.3	28.3	

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Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/12/2012
Page No : 3

Groups Printed- MU

	State St From North				107th St From East				State St From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	1	0	1	0	0	0	0	0	3	0	3	0	0	0	0	4
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	1	0	1	0	0	0	0	0	3	0	3	0	0	0	0	4
Apprch %	0	100	0		0	0	0		0	100	0		0	0	0		
Total %	0	25	0	25	0	0	0	0	0	75	0	75	0	0	0	0	

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107th St and State St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 6/12/2012

Groups Printed- Peds & Bikes

	State St Crossing North Leg			107th St Crossing East Leg			State St Crossing South Leg			107th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	0	0	2	0	2	7	1	8	6	0	6	16
07:15 AM	6	5	11	3	2	5	5	8	13	8	2	10	39
07:30 AM	0	2	2	1	0	1	7	2	9	6	4	10	22
07:45 AM	1	9	10	1	0	1	4	3	7	4	5	9	27
Total	7	16	23	7	2	9	23	14	37	24	11	35	104
08:00 AM	5	12	17	0	0	0	12	0	12	5	3	8	37
08:15 AM	8	12	20	5	0	5	9	1	10	8	6	14	49
08:30 AM	1	4	5	5	0	5	7	1	8	11	0	11	29
08:45 AM	4	1	5	6	0	6	9	5	14	15	3	18	43
Total	18	29	47	16	0	16	37	7	44	39	12	51	158
Grand Total	25	45	70	23	2	25	60	21	81	63	23	86	262
Apprch %	35.7	64.3		92	8		74.1	25.9		73.3	26.7		
Total %	9.5	17.2	26.7	8.8	0.8	9.5	22.9	8	30.9	24	8.8	32.8	

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Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/12/2012
Page No : 5

Groups Printed- PC - SU - MU

	State St From North				107th St From East				State St From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	5	49	5	59	8	39	6	53	11	49	9	69	7	33	7	47	228
04:15 PM	5	50	7	62	4	46	7	57	9	42	12	63	8	44	8	60	242
04:30 PM	5	50	8	63	7	35	4	46	17	55	9	81	11	48	4	63	253
04:45 PM	6	36	6	48	6	52	12	70	9	43	13	65	9	47	6	62	245
Total	21	185	26	232	25	172	29	226	46	189	43	278	35	172	25	232	968
05:00 PM	7	41	8	56	4	37	10	51	6	49	11	66	10	43	0	53	226
05:15 PM	5	47	11	63	6	49	2	57	8	42	8	58	6	39	8	53	231
05:30 PM	12	41	8	61	3	45	5	53	8	39	10	57	11	57	7	75	246
05:45 PM	9	51	6	66	5	48	8	61	9	65	9	83	7	40	8	55	265
Total	33	180	33	246	18	179	25	222	31	195	38	264	34	179	23	236	968
Grand Total	54	365	59	478	43	351	54	448	77	384	81	542	69	351	48	468	1936
Apprch %	11.3	76.4	12.3		9.6	78.3	12.1		14.2	70.8	14.9		14.7	75	10.3		
Total %	2.8	18.9	3	24.7	2.2	18.1	2.8	23.1	4	19.8	4.2	28	3.6	18.1	2.5	24.2	
PC	52	357	56	465	43	349	54	446	77	383	79	539	69	347	47	463	1913
% PC	96.3	97.8	94.9	97.3	100	99.4	100	99.6	100	99.7	97.5	99.4	100	98.9	97.9	98.9	98.8
SU	2	8	3	13	0	1	0	1	0	1	2	3	0	4	1	5	22
% SU	3.7	2.2	5.1	2.7	0	0.3	0	0.2	0	0.3	2.5	0.6	0	1.1	2.1	1.1	1.1
MU	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
% MU	0	0	0	0	0	0.3	0	0.2	0	0	0	0	0	0	0	0	0.1

	State St From North				107th St From East				State St From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	5	49	5	59	**8**	39	6	53	11	49	9	69	7	33	7	47	228
04:15 PM	5	**50**	7	62	4	46	7	57	9	42	12	63	8	44	**8**	60	242
04:30 PM	5	50	**8**	**63**	7	35	4	46	**17**	**55**	9	**81**	**11**	**48**	4	**63**	**253**
04:45 PM	**6**	36	6	48	6	**52**	**12**	**70**	9	43	**13**	65	9	47	6	62	245
Total Volume	21	185	26	232	25	172	29	226	46	189	43	278	35	172	25	232	968
% App. Total	9.1	79.7	11.2		11.1	76.1	12.8		16.5	68	15.5		15.1	74.1	10.8		
PHF	.875	.925	.813	.921	.781	.827	.604	.807	.676	.859	.827	.858	.795	.896	.781	.921	.957

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107th St and State St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/12/2012
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Groups Printed- SU

	State St From North				107th St From East				State St From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	1	1	1	3	0	0	0	0	0	0	0	0	0	0	0	0	3
04:15 PM	1	2	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
04:30 PM	0	2	0	2	0	1	0	1	0	0	0	0	0	0	0	0	3
04:45 PM	0	1	1	2	0	0	0	0	0	1	0	1	0	2	0	2	5
Total	2	6	2	10	0	1	0	1	0	1	0	1	0	2	0	2	14
05:00 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	1	0	1	3
05:15 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	2
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	2	1	3	0	0	0	0	0	0	2	2	0	2	1	3	8
Grand Total	2	8	3	13	0	1	0	1	0	1	2	3	0	4	1	5	22
Apprch %	15.4	61.5	23.1		0	100	0		0	33.3	66.7		0	80	20		
Total %	9.1	36.4	13.6	59.1	0	4.5	0	4.5	0	4.5	9.1	13.6	0	18.2	4.5	22.7	

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Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/12/2012
Page No : 7

Groups Printed- MU

	State St From North				107th St From East				State St From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Apprch %	0	0	0		0	100	0		0	0	0		0	0	0		
Total %	0	0	0	0	0	100	0	100	0	0	0	0	0	0	0	0	

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Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 6/12/2012

Groups Printed- Peds & Bikes

	State St Crossing North Leg			107th St Crossing East Leg			State St Crossing South Leg			107th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	4	4	8	6	0	6	9	10	19	7	1	8	41
04:15 PM	7	5	12	7	0	7	12	0	12	8	1	9	40
04:30 PM	8	10	18	4	0	4	9	3	12	4	0	4	38
04:45 PM	5	4	9	12	0	12	13	0	13	6	3	9	43
Total	24	23	47	29	0	29	43	13	56	25	5	30	162
05:00 PM	8	5	13	10	0	10	11	4	15	0	0	0	38
05:15 PM	10	5	15	2	0	2	8	4	12	7	2	9	38
05:30 PM	8	4	12	5	0	5	8	4	12	7	0	7	36
05:45 PM	6	6	12	8	0	8	9	5	14	8	0	8	42
Total	32	20	52	25	0	25	36	17	53	22	2	24	154
Grand Total	56	43	99	54	0	54	79	30	109	47	7	54	316
Apprch %	56.6	43.4		100	0		72.5	27.5		87	13		
Total %	17.7	13.6	31.3	17.1	0	17.1	25	9.5	34.5	14.9	2.2	17.1	

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107th St and Wentworth Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/7/2012
Page No : 1

Groups Printed- PC - SU - MU

	Wentworth Ave From North				107th St From East				Wentworth Ave From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	5	24	2	31	3	28	1	32	5	20	7	32	2	41	6	49	144
07:15 AM	3	21	3	27	0	34	2	36	3	32	3	38	1	33	9	43	144
07:30 AM	4	19	5	28	4	39	3	46	6	42	2	50	0	66	6	72	196
07:45 AM	5	37	7	49	1	40	2	43	6	43	3	52	2	49	8	59	203
Total	17	101	17	135	8	141	8	157	20	137	15	172	5	189	29	223	687
08:00 AM	3	40	7	50	3	36	5	44	5	35	7	47	7	46	9	62	203
08:15 AM	7	34	9	50	1	34	5	40	7	26	4	37	6	51	3	60	187
08:30 AM	10	28	3	41	1	35	3	39	7	31	2	40	4	40	11	55	175
08:45 AM	5	37	6	48	3	33	5	41	8	38	7	53	6	50	6	62	204
Total	25	139	25	189	8	138	18	164	27	130	20	177	23	187	29	239	769
Grand Total	42	240	42	324	16	279	26	321	47	267	35	349	28	376	58	462	1456
Apprch %	13	74.1	13		5	86.9	8.1		13.5	76.5	10		6.1	81.4	12.6		
Total %	2.9	16.5	2.9	22.3	1.1	19.2	1.8	22	3.2	18.3	2.4	24	1.9	25.8	4	31.7	
PC	40	231	42	313	16	275	22	313	42	251	32	325	27	367	54	448	1399
% PC	95.2	96.2	100	96.6	100	98.6	84.6	97.5	89.4	94	91.4	93.1	96.4	97.6	93.1	97	96.1
SU	2	8	0	10	0	3	4	7	5	15	3	23	1	9	4	14	54
% SU	4.8	3.3	0	3.1	0	1.1	15.4	2.2	10.6	5.6	8.6	6.6	3.6	2.4	6.9	3	3.7
MU	0	1	0	1	0	1	0	1	0	1	0	1	0	0	0	0	3
% MU	0	0.4	0	0.3	0	0.4	0	0.3	0	0.4	0	0.3	0	0	0	0	0.2

	Wentworth Ave From North				107th St From East				Wentworth Ave From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	4	19	5	28	**4**	39	3	**46**	6	42	2	50	0	**66**	6	**72**	196
07:45 AM	5	37	7	49	1	**40**	2	43	6	**43**	3	**52**	2	49	8	59	**203**
08:00 AM	3	**40**	7	**50**	3	36	**5**	44	5	35	**7**	47	**7**	46	**9**	62	203
08:15 AM	**7**	34	**9**	50	1	34	5	40	**7**	26	4	37	6	51	3	60	187
Total Volume	19	130	28	177	9	149	15	173	24	146	16	186	15	212	26	253	789
% App. Total	10.7	73.4	15.8		5.2	86.1	8.7		12.9	78.5	8.6		5.9	83.8	10.3		
PHF	.679	.813	.778	.885	.563	.931	.750	.940	.857	.849	.571	.894	.536	.803	.722	.878	.972

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107th St and Wentworth Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/7/2012
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Groups Printed- SU

	Wentworth Ave From North				107th St From East				Wentworth Ave From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	1	1	0	2	0	0	0	0	1	2	0	3	1	2	2	5	10
07:15 AM	0	1	0	1	0	1	0	1	2	4	0	6	0	1	0	1	9
07:30 AM	0	0	0	0	0	1	1	2	0	1	0	1	0	1	1	2	5
07:45 AM	0	1	0	1	0	0	0	0	1	3	1	5	0	1	0	1	7
Total	1	3	0	4	0	2	1	3	4	10	1	15	1	5	3	9	31
08:00 AM	0	2	0	2	0	1	0	1	0	1	0	1	0	1	0	1	5
08:15 AM	1	0	0	1	0	0	2	2	1	0	1	2	0	1	0	1	6
08:30 AM	0	1	0	1	0	0	1	1	0	3	1	4	0	1	1	2	8
08:45 AM	0	2	0	2	0	0	0	0	0	1	0	1	0	1	0	1	4
Total	1	5	0	6	0	1	3	4	1	5	2	8	0	4	1	5	23
Grand Total	2	8	0	10	0	3	4	7	5	15	3	23	1	9	4	14	54
Apprch %	20	80	0		0	42.9	57.1		21.7	65.2	13		7.1	64.3	28.6		
Total %	3.7	14.8	0	18.5	0	5.6	7.4	13	9.3	27.8	5.6	42.6	1.9	16.7	7.4	25.9	

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107th St and Wentworth Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/7/2012
Page No : 3

Groups Printed- MU

	Wentworth Ave From North				107th St From East				Wentworth Ave From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Grand Total	0	1	0	1	0	1	0	1	0	1	0	1	0	0	0	0	3
Apprch %	0	100	0		0	100	0		0	100	0		0	0	0		
Total %	0	33.3	0	33.3	0	33.3	0	33.3	0	33.3	0	33.3	0	0	0	0	

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Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 6/7/2012
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Groups Printed- Peds & Bikes

	Wentworth Ave Crossing North Leg			107th St Crossing East Leg			Wentworth Ave Crossing South Leg			107th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	1	1	0	2	2	0	1	1	0	2	2	6
07:15 AM	0	0	0	0	2	2	0	1	1	0	1	1	4
07:30 AM	0	2	2	0	7	7	2	1	3	0	0	0	12
07:45 AM	0	1	1	0	1	1	0	2	2	0	0	0	4
Total	0	4	4	0	12	12	2	5	7	0	3	3	26
08:00 AM	0	2	2	0	3	3	0	1	1	0	1	1	7
08:15 AM	0	0	0	0	23	23	1	7	8	0	6	6	37
08:30 AM	0	1	1	0	7	7	1	8	9	0	4	4	21
08:45 AM	0	2	2	0	7	7	0	4	4	0	1	1	14
Total	0	5	5	0	40	40	2	20	22	0	12	12	79
Grand Total	0	9	9	0	52	52	4	25	29	0	15	15	105
Apprch %	0	100		0	100		13.8	86.2		0	100		
Total %	0	8.6	8.6	0	49.5	49.5	3.8	23.8	27.6	0	14.3	14.3	

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Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/7/2012
Page No : 5

Groups Printed- PC - SU - MU

	Wentworth Ave From North				107th St From East				Wentworth Ave From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	6	59	5	70	1	37	4	42	9	35	6	50	8	50	5	63	225
04:15 PM	11	51	6	68	4	45	4	53	9	23	3	35	6	52	9	67	223
04:30 PM	11	49	8	68	5	25	6	36	7	16	6	29	4	39	4	47	180
04:45 PM	5	51	0	56	5	43	6	54	2	30	5	37	5	47	11	63	210
Total	33	210	19	262	15	150	20	185	27	104	20	151	23	188	29	240	838
05:00 PM	19	59	7	85	6	36	3	45	8	28	4	40	5	47	8	60	230
05:15 PM	8	67	9	84	4	44	3	51	7	32	3	42	15	49	5	69	246
05:30 PM	11	60	9	80	4	43	7	54	11	28	6	45	8	41	5	54	233
05:45 PM	9	53	10	72	6	50	7	63	5	27	5	37	5	36	3	44	216
Total	47	239	35	321	20	173	20	213	31	115	18	164	33	173	21	227	925
Grand Total	80	449	54	583	35	323	40	398	58	219	38	315	56	361	50	467	1763
Apprch %	13.7	77	9.3		8.8	81.2	10.1		18.4	69.5	12.1		12	77.3	10.7		
Total %	4.5	25.5	3.1	33.1	2	18.3	2.3	22.6	3.3	12.4	2.2	17.9	3.2	20.5	2.8	26.5	
PC	80	444	54	578	35	321	39	395	58	214	35	307	53	360	50	463	1743
% PC	100	98.9	100	99.1	100	99.4	97.5	99.2	100	97.7	92.1	97.5	94.6	99.7	100	99.1	98.9
SU	0	5	0	5	0	2	1	3	0	5	3	8	3	1	0	4	20
% SU	0	1.1	0	0.9	0	0.6	2.5	0.8	0	2.3	7.9	2.5	5.4	0.3	0	0.9	1.1
MU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% MU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Wentworth Ave From North				107th St From East				Wentworth Ave From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**19**	59	7	**85**	**6**	36	3	45	8	28	4	40	5	47	**8**	60	230
05:15 PM	8	**67**	9	84	4	44	3	51	7	**32**	3	42	**15**	**49**	5	**69**	**246**
05:30 PM	11	60	9	80	4	43	**7**	54	**11**	28	**6**	**45**	8	41	5	54	233
05:45 PM	9	53	**10**	72	6	**50**	7	**63**	5	27	5	37	5	36	3	44	216
Total Volume	47	239	35	321	20	173	20	213	31	115	18	164	33	173	21	227	925
% App. Total	14.6	74.5	10.9		9.4	81.2	9.4		18.9	70.1	11		14.5	76.2	9.3		
PHF	.618	.892	.875	.944	.833	.865	.714	.845	.705	.898	.750	.911	.550	.883	.656	.822	.940

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107th St and Wentworth Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/7/2012
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Groups Printed- SU

	Wentworth Ave From North				107th St From East				Wentworth Ave From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	1	2
04:15 PM	0	1	0	1	0	1	0	1	0	1	1	2	1	0	0	1	5
04:30 PM	0	2	0	2	0	0	0	0	0	1	2	3	1	0	0	1	6
04:45 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
Total	0	5	0	5	0	1	0	1	0	3	3	6	3	0	0	3	15
05:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0	1	2
Total	0	0	0	0	0	1	1	2	0	2	0	2	0	1	0	1	5
Grand Total	0	5	0	5	0	2	1	3	0	5	3	8	3	1	0	4	20
Apprch %	0	100	0		0	66.7	33.3		0	62.5	37.5		75	25	0		
Total %	0	25	0	25	0	10	5	15	0	25	15	40	15	5	0	20	

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Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/7/2012
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Groups Printed- MU

	Wentworth Ave From North				107th St From East				Wentworth Ave From South				107th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

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107th St and Wentworth Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 6/7/2012

Groups Printed- Peds & Bikes

	Wentworth Ave Crossing North Leg			107th St Crossing East Leg			Wentworth Ave Crossing South Leg			107th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	1	1	0	8	8	0	7	7	16
04:15 PM	0	9	9	1	14	15	2	12	14	0	9	9	47
04:30 PM	0	8	8	0	18	18	0	5	5	0	0	0	31
04:45 PM	0	3	3	2	3	5	0	14	14	0	9	9	31
Total	0	20	20	3	36	39	2	39	41	0	25	25	125
05:00 PM	0	10	10	0	8	8	1	13	14	0	5	5	37
05:15 PM	0	5	5	0	0	0	1	6	7	1	3	4	16
05:30 PM	0	2	2	4	8	12	1	9	10	0	3	3	27
05:45 PM	0	1	1	0	3	3	3	6	9	0	5	5	18
Total	0	18	18	4	19	23	6	34	40	1	16	17	98
Grand Total	0	38	38	7	55	62	8	73	81	1	41	42	223
Apprch %	0	100		11.3	88.7		9.9	90.1		2.4	97.6		
Total %	0	17	17	3.1	24.7	27.8	3.6	32.7	36.3	0.4	18.4	18.8	

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111th St and Halsted Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/8/2012
Page No : 1

Groups Printed- PC - SU - MU

	Halsted Ave From North				111th St From East				Halsted Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	11	61	14	86	23	24	5	52	8	198	6	212	6	27	24	57	407
07:15 AM	3	88	10	101	10	28	8	46	5	224	7	236	14	32	29	75	458
07:30 AM	8	108	19	135	19	29	10	58	17	271	7	295	6	47	45	98	586
07:45 AM	15	113	18	146	25	33	14	72	10	253	13	276	14	45	35	94	588
Total	37	370	61	468	77	114	37	228	40	946	33	1019	40	151	133	324	2039
08:00 AM	5	146	25	176	24	44	12	80	18	202	9	229	20	45	21	86	571
08:15 AM	14	109	26	149	20	36	9	65	5	195	6	206	14	65	25	104	524
08:30 AM	9	91	22	122	13	24	14	51	9	164	12	185	16	34	15	65	423
08:45 AM	5	113	31	149	18	39	11	68	14	159	17	190	18	51	16	85	492
Total	33	459	104	596	75	143	46	264	46	720	44	810	68	195	77	340	2010
Grand Total	70	829	165	1064	152	257	83	492	86	1666	77	1829	108	346	210	664	4049
Apprch %	6.6	77.9	15.5		30.9	52.2	16.9		4.7	91.1	4.2		16.3	52.1	31.6		
Total %	1.7	20.5	4.1	26.3	3.8	6.3	2	12.2	2.1	41.1	1.9	45.2	2.7	8.5	5.2	16.4	
PC	65	764	156	985	147	236	77	460	85	1598	74	1757	104	325	194	623	3825
% PC	92.9	92.2	94.5	92.6	96.7	91.8	92.8	93.5	98.8	95.9	96.1	96.1	96.3	93.9	92.4	93.8	94.5
SU	5	63	9	77	5	21	6	32	1	64	3	68	4	20	15	39	216
% SU	7.1	7.6	5.5	7.2	3.3	8.2	7.2	6.5	1.2	3.8	3.9	3.7	3.7	5.8	7.1	5.9	5.3
MU	0	2	0	2	0	0	0	0	0	4	0	4	0	1	1	2	8
% MU	0	0.2	0	0.2	0	0	0	0	0	0.2	0	0.2	0	0.3	0.5	0.3	0.2

	Halsted Ave From North				111th St From East				Halsted Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	8	108	19	135	19	29	10	58	17	**271**	7	**295**	6	47	**45**	98	586
07:45 AM	**15**	113	18	146	**25**	33	**14**	72	10	253	**13**	276	14	45	35	94	**588**
08:00 AM	5	**146**	25	**176**	24	**44**	12	**80**	**18**	202	9	229	**20**	45	21	86	571
08:15 AM	14	109	**26**	149	20	36	9	65	5	195	6	206	14	**65**	25	**104**	524
Total Volume	42	476	88	606	88	142	45	275	50	921	35	1006	54	202	126	382	2269
% App. Total	6.9	78.5	14.5		32	51.6	16.4		5	91.6	3.5		14.1	52.9	33		
PHF	.700	.815	.846	.861	.880	.807	.804	.859	.694	.850	.673	.853	.675	.777	.700	.918	.965

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Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/8/2012
Page No : 2

Groups Printed- SU

	Halsted Ave From North				111th St From East				Halsted Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	1	6	2	9	1	3	0	4	0	7	0	7	1	1	3	5	25
07:15 AM	1	5	0	6	0	2	0	2	0	11	0	11	1	1	1	3	22
07:30 AM	1	8	1	10	2	3	0	5	0	8	0	8	0	3	3	6	29
07:45 AM	1	10	0	11	1	2	1	4	0	10	2	12	0	5	6	11	38
Total	4	29	3	36	4	10	1	15	0	36	2	38	2	10	13	25	114
08:00 AM	0	10	1	11	0	1	3	4	0	10	0	10	0	2	1	3	28
08:15 AM	0	11	1	12	1	4	0	5	0	4	0	4	2	3	1	6	27
08:30 AM	1	8	0	9	0	2	2	4	1	9	0	10	0	0	0	0	23
08:45 AM	0	5	4	9	0	4	0	4	0	5	1	6	0	5	0	5	24
Total	1	34	6	41	1	11	5	17	1	28	1	30	2	10	2	14	102
Grand Total	5	63	9	77	5	21	6	32	1	64	3	68	4	20	15	39	216
Apprch %	6.5	81.8	11.7		15.6	65.6	18.8		1.5	94.1	4.4		10.3	51.3	38.5		
Total %	2.3	29.2	4.2	35.6	2.3	9.7	2.8	14.8	0.5	29.6	1.4	31.5	1.9	9.3	6.9	18.1	

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7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/8/2012
Page No : 3

Groups Printed- MU

	Halsted Ave From North				111th St From East				Halsted Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
07:30 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2
Total	0	1	0	1	0	0	0	0	0	3	0	3	0	1	1	2	6
08:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
Grand Total	0	2	0	2	0	0	0	0	0	4	0	4	0	1	1	2	8
Apprch %	0	100	0		0	0	0		0	100	0		0	50	50		
Total %	0	25	0	25	0	0	0	0	0	50	0	50	0	12.5	12.5	25	

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111th St and Halsted Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/8/2012

Groups Printed- Peds & Bikes

	Halsted Ave Crossing North Leg			111th St Crossing East Leg			Halsted Ave Crossing South Leg			111th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	12	12	0	8	8	1	8	9	1	5	6	35
07:15 AM	0	16	16	0	4	4	0	18	18	0	11	11	49
07:30 AM	1	9	10	0	2	2	0	7	7	0	12	12	31
07:45 AM	1	19	20	0	2	2	0	9	9	0	8	8	39
Total	2	56	58	0	16	16	1	42	43	1	36	37	154
08:00 AM	0	16	16	0	4	4	0	2	2	0	2	2	24
08:15 AM	0	5	5	0	0	0	0	2	2	0	4	4	11
08:30 AM	0	20	20	1	8	9	0	7	7	1	4	5	41
08:45 AM	2	9	11	0	2	2	0	3	3	1	7	8	24
Total	2	50	52	1	14	15	0	14	14	2	17	19	100
Grand Total	4	106	110	1	30	31	1	56	57	3	53	56	254
Apprch %	3.6	96.4		3.2	96.8		1.8	98.2		5.4	94.6		
Total %	1.6	41.7	43.3	0.4	11.8	12.2	0.4	22	22.4	1.2	20.9	22	

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111th St and Halsted Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/8/2012
Page No : 5

Groups Printed- PC - SU - MU

	Halsted Ave From North				111th St From East				Halsted Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	21	225	29	275	14	49	18	81	13	139	13	165	34	57	11	102	623
04:15 PM	13	174	25	212	26	50	24	100	15	125	17	157	19	37	17	73	542
04:30 PM	13	207	28	248	21	47	27	95	12	137	21	170	31	47	23	101	614
04:45 PM	10	194	32	236	25	49	24	98	19	137	12	168	22	34	29	85	587
Total	57	800	114	971	86	195	93	374	59	538	63	660	106	175	80	361	2366
05:00 PM	18	217	19	254	17	55	23	95	14	147	14	175	24	52	22	98	622
05:15 PM	20	217	23	260	23	50	28	101	12	129	12	153	33	54	18	105	619
05:30 PM	9	181	25	215	22	53	13	88	23	134	18	175	23	47	20	90	568
05:45 PM	15	227	29	271	29	40	26	95	10	128	21	159	20	52	16	88	613
Total	62	842	96	1000	91	198	90	379	59	538	65	662	100	205	76	381	2422
Grand Total	119	1642	210	1971	177	393	183	753	118	1076	128	1322	206	380	156	742	4788
Apprch %	6	83.3	10.7		23.5	52.2	24.3		8.9	81.4	9.7		27.8	51.2	21		
Total %	2.5	34.3	4.4	41.2	3.7	8.2	3.8	15.7	2.5	22.5	2.7	27.6	4.3	7.9	3.3	15.5	
PC	116	1587	208	1911	173	377	180	730	117	1029	125	1271	203	361	155	719	4631
% PC	97.5	96.7	99	97	97.7	95.9	98.4	96.9	99.2	95.6	97.7	96.1	98.5	95	99.4	96.9	96.7
SU	3	52	2	57	4	14	2	20	0	42	2	44	3	19	0	22	143
% SU	2.5	3.2	1	2.9	2.3	3.6	1.1	2.7	0	3.9	1.6	3.3	1.5	5	0	3	3
MU	0	3	0	3	0	2	1	3	1	5	1	7	0	0	1	1	14
% MU	0	0.2	0	0.2	0	0.5	0.5	0.4	0.8	0.5	0.8	0.5	0	0	0.6	0.1	0.3

	Halsted Ave From North				111th St From East				Halsted Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	8	108	19	135	19	29	10	58	17	**271**	7	**295**	6	47	**45**	98	586
07:45 AM	**15**	113	18	146	**25**	33	**14**	72	10	253	**13**	276	14	45	35	94	**588**
08:00 AM	5	**146**	25	**176**	24	**44**	12	**80**	**18**	202	9	229	**20**	45	21	86	571
08:15 AM	14	109	**26**	149	20	36	9	65	5	195	6	206	14	**65**	25	**104**	524
Total Volume	42	476	88	606	88	142	45	275	50	921	35	1006	54	202	126	382	2269
% App. Total	6.9	78.5	14.5		32	51.6	16.4		5	91.6	3.5		14.1	52.9	33		
PHF	.700	.815	.846	.861	.880	.807	.804	.859	.694	.850	.673	.853	.675	.777	.700	.918	.965

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Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/8/2012
Page No : 6

Groups Printed- SU

	Halsted Ave From North				111th St From East				Halsted Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	1	10	0	11	0	2	1	3	0	5	0	5	1	4	0	5	24
04:15 PM	0	5	0	5	0	5	1	6	0	6	1	7	0	2	0	2	20
04:30 PM	0	10	0	10	0	1	0	1	0	5	0	5	1	3	0	4	20
04:45 PM	1	6	0	7	1	1	0	2	0	6	0	6	1	1	0	2	17
Total	2	31	0	33	1	9	2	12	0	22	1	23	3	10	0	13	81
05:00 PM	0	7	0	7	0	1	0	1	0	5	0	5	0	3	0	3	16
05:15 PM	1	6	0	7	0	1	0	1	0	6	0	6	0	3	0	3	17
05:30 PM	0	3	2	5	0	1	0	1	0	1	1	2	0	0	0	0	8
05:45 PM	0	5	0	5	3	2	0	5	0	8	0	8	0	3	0	3	21
Total	1	21	2	24	3	5	0	8	0	20	1	21	0	9	0	9	62
Grand Total	3	52	2	57	4	14	2	20	0	42	2	44	3	19	0	22	143
Apprch %	5.3	91.2	3.5		20	70	10		0	95.5	4.5		13.6	86.4	0		
Total %	2.1	36.4	1.4	39.9	2.8	9.8	1.4	14	0	29.4	1.4	30.8	2.1	13.3	0	15.4	

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4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/8/2012
Page No : 7

Groups Printed- MU

	Halsted Ave From North				111th St From East				Halsted Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	3
04:15 PM	0	1	0	1	0	0	0	0	0	1	1	2	0	0	0	0	3
04:30 PM	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	2	0	1	0	1	0	4	1	5	0	0	0	0	8
05:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:15 PM	0	0	0	0	0	1	1	2	0	0	0	0	0	0	1	1	3
05:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
Total	0	1	0	1	0	1	1	2	1	1	0	2	0	0	1	1	6
Grand Total	0	3	0	3	0	2	1	3	1	5	1	7	0	0	1	1	14
Apprch %	0	100	0		0	66.7	33.3		14.3	71.4	14.3		0	0	100		
Total %	0	21.4	0	21.4	0	14.3	7.1	21.4	7.1	35.7	7.1	50	0	0	7.1	7.1	

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Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/8/2012

Groups Printed- Peds & Bikes

	Halsted Ave Crossing North Leg			111th St Crossing East Leg			Halsted Ave Crossing South Leg			111th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	18	18	0	6	6	0	9	9	0	13	13	46
04:15 PM	0	5	5	0	8	8	1	11	12	1	6	7	32
04:30 PM	0	20	20	0	3	3	2	19	21	2	9	11	55
04:45 PM	3	17	20	0	1	1	0	4	4	0	4	4	29
Total	3	60	63	0	18	18	3	43	46	3	32	35	162
05:00 PM	0	5	5	0	2	2	0	7	7	0	7	7	21
05:15 PM	0	10	10	0	4	4	0	12	12	1	10	11	37
05:30 PM	1	7	8	0	0	0	0	4	4	0	8	8	20
05:45 PM	0	13	13	0	2	2	0	7	7	0	9	9	31
Total	1	35	36	0	8	8	0	30	30	1	34	35	109
Grand Total	4	95	99	0	26	26	3	73	76	4	66	70	271
Apprch %	4	96		0	100		3.9	96.1		5.7	94.3		
Total %	1.5	35.1	36.5	0	9.6	9.6	1.1	26.9	28	1.5	24.4	25.8	

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111th St and Hamlet Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012
Page No : 1

Groups Printed- PC - SU - MU

	Hamlet Ave From North				111th St From East				Hamlet Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	16	27	0	43	37	139	36	212	0	27	48	75	330
07:15 AM	0	0	0	0	18	62	0	80	36	131	45	212	0	24	40	64	356
07:30 AM	0	0	0	0	21	60	0	81	59	123	37	219	0	42	46	88	388
07:45 AM	0	0	0	0	12	51	0	63	71	143	58	272	0	46	43	89	424
Total	0	0	0	0	67	200	0	267	203	536	176	915	0	139	177	316	1498
08:00 AM	0	0	0	0	14	94	0	108	88	122	43	253	0	43	26	69	430
08:15 AM	0	0	0	0	7	65	0	72	71	121	34	226	0	54	23	77	375
08:30 AM	0	0	0	0	10	56	0	66	61	123	24	208	0	66	27	93	367
08:45 AM	0	0	0	0	23	71	0	94	55	123	14	192	0	61	21	82	368
Total	0	0	0	0	54	286	0	340	275	489	115	879	0	224	97	321	1540
Grand Total	0	0	0	0	121	486	0	607	478	1025	291	1794	0	363	274	637	3038
Apprch %	0	0	0		19.9	80.1	0		26.6	57.1	16.2		0	57	43		
Total %	0	0	0	0	4	16	0	20	15.7	33.7	9.6	59.1	0	11.9	9	21	
PC	0	0	0	0	110	457	0	567	465	1013	286	1764	0	320	266	586	2917
% PC	0	0	0	0	90.9	94	0	93.4	97.3	98.8	98.3	98.3	0	88.2	97.1	92	96
SU	0	0	0	0	11	28	0	39	11	9	4	24	0	42	8	50	113
% SU	0	0	0	0	9.1	5.8	0	6.4	2.3	0.9	1.4	1.3	0	11.6	2.9	7.8	3.7
MU	0	0	0	0	0	1	0	1	2	3	1	6	0	1	0	1	8
% MU	0	0	0	0	0	0.2	0	0.2	0.4	0.3	0.3	0.3	0	0.3	0	0.2	0.3

	Hamlet Ave From North				111th St From East				Hamlet Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	**21**	60	0	81	59	123	37	219	0	42	**46**	88	388
07:45 AM	0	0	0	0	12	51	0	63	71	**143**	**58**	**272**	0	46	43	**89**	424
08:00 AM	0	0	0	0	14	**94**	0	**108**	**88**	122	43	253	0	43	26	69	**430**
08:15 AM	0	0	0	0	7	65	0	72	71	121	34	226	0	**54**	23	77	375
Total Volume	0	0	0	0	54	270	0	324	289	509	172	970	0	185	138	323	1617
% App. Total	0	0	0		16.7	83.3	0		29.8	52.5	17.7		0	57.3	42.7		
PHF	.000	.000	.000	.000	.643	.718	.000	.750	.821	.890	.741	.892	.000	.856	.750	.907	.940

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111th St and Hamlet Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012
Page No : 2

Groups Printed- SU

	Hamlet Ave From North				111th St From East				Hamlet Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	4	2	0	6	0	0	0	0	0	0	1	1	7
07:15 AM	0	0	0	0	3	7	0	10	1	1	2	4	0	4	2	6	20
07:30 AM	0	0	0	0	0	3	0	3	3	2	0	5	0	6	1	7	15
07:45 AM	0	0	0	0	0	1	0	1	1	1	1	3	0	5	0	5	9
Total	0	0	0	0	7	13	0	20	5	4	3	12	0	15	4	19	51
08:00 AM	0	0	0	0	2	5	0	7	3	0	0	3	0	4	1	5	15
08:15 AM	0	0	0	0	0	4	0	4	1	0	0	1	0	6	1	7	12
08:30 AM	0	0	0	0	1	4	0	5	1	3	0	4	0	10	2	12	21
08:45 AM	0	0	0	0	1	2	0	3	1	2	1	4	0	7	0	7	14
Total	0	0	0	0	4	15	0	19	6	5	1	12	0	27	4	31	62
Grand Total	0	0	0	0	11	28	0	39	11	9	4	24	0	42	8	50	113
Apprch %	0	0	0		28.2	71.8	0		45.8	37.5	16.7		0	84	16		
Total %	0	0	0	0	9.7	24.8	0	34.5	9.7	8	3.5	21.2	0	37.2	7.1	44.2	

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Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012
Page No : 3

Groups Printed- MU

	Hamlet Ave From North				111th St From East				Hamlet Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2
08:00 AM	0	0	0	0	0	1	0	1	1	0	1	2	0	0	0	0	3
08:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	2
Total	0	0	0	0	0	1	0	1	2	2	1	5	0	0	0	0	6
Grand Total	0	0	0	0	0	1	0	1	2	3	1	6	0	1	0	1	8
Apprch %	0	0	0		0	100	0		33.3	50	16.7		0	100	0		
Total %	0	0	0	0	0	12.5	0	12.5	25	37.5	12.5	75	0	12.5	0	12.5	

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File Name : AM + PM Peds
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Start Date : 6/5/2012
Page No : 4

Groups Printed- Peds & Bikes

	Hamlet Ave Crossing North Leg			111th St Crossing East Leg			Hamlet Ave Crossing South Leg			111th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	1	1	0	0	0	0	1	1	0	0	0	2
07:15 AM	0	7	7	0	0	0	0	2	2	0	0	0	9
07:30 AM	1	4	5	1	0	1	0	4	4	0	0	0	10
07:45 AM	0	5	5	0	0	0	0	0	0	0	0	0	5
Total	1	17	18	1	0	1	0	7	7	0	0	0	26
08:00 AM	0	1	1	0	1	1	0	4	4	0	0	0	6
08:15 AM	0	4	4	0	0	0	0	8	8	0	0	0	12
08:30 AM	0	3	3	0	0	0	0	11	11	0	0	0	14
08:45 AM	0	3	3	0	3	3	0	3	3	0	0	0	9
Total	0	11	11	0	4	4	0	26	26	0	0	0	41
Grand Total	1	28	29	1	4	5	0	33	33	0	0	0	67
Apprch %	3.4	96.6		20	80		0	100		0	0		
Total %	1.5	41.8	43.3	1.5	6	7.5	0	49.3	49.3	0	0	0	

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111th St and Hamlet Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012
Page No : 5

Groups Printed- PC - SU - MU

	Hamlet Ave From North				111th St From East				Hamlet Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	18	74	0	92	47	95	20	162	0	54	25	79	333
04:15 PM	0	0	0	0	31	86	0	117	41	105	16	162	0	76	46	122	401
04:30 PM	0	0	0	0	23	73	0	96	45	113	21	179	0	54	31	85	360
04:45 PM	0	0	0	0	19	52	0	71	44	88	16	148	0	46	29	75	294
Total	0	0	0	0	91	285	0	376	177	401	73	651	0	230	131	361	1388
05:00 PM	0	0	0	0	31	62	0	93	41	90	8	139	0	52	45	97	329
05:15 PM	0	0	0	0	33	75	0	108	36	108	20	164	0	68	33	101	373
05:30 PM	0	0	0	0	20	70	0	90	50	89	10	149	0	56	27	83	322
05:45 PM	0	0	0	0	25	70	0	95	48	128	22	198	0	56	44	100	393
Total	0	0	0	0	109	277	0	386	175	415	60	650	0	232	149	381	1417
Grand Total	0	0	0	0	200	562	0	762	352	816	133	1301	0	462	280	742	2805
Apprch %	0	0	0		26.2	73.8	0		27.1	62.7	10.2		0	62.3	37.7		
Total %	0	0	0	0	7.1	20	0	27.2	12.5	29.1	4.7	46.4	0	16.5	10	26.5	
PC	0	0	0	0	197	550	0	747	351	807	133	1291	0	408	274	682	2720
% PC	0	0	0	0	98.5	97.9	0	98	99.7	98.9	100	99.2	0	88.3	97.9	91.9	97
SU	0	0	0	0	3	12	0	15	1	8	0	9	0	54	6	60	84
% SU	0	0	0	0	1.5	2.1	0	2	0.3	1	0	0.7	0	11.7	2.1	8.1	3
MU	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
% MU	0	0	0	0	0	0	0	0	0	0.1	0	0.1	0	0	0	0	0

	Hamlet Ave From North				111th St From East				Hamlet Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	31	62	0	93	41	90	8	139	0	52	**45**	97	329
05:15 PM	0	0	0	0	**33**	**75**	0	**108**	36	108	20	164	0	**68**	33	**101**	373
05:30 PM	0	0	0	0	20	70	0	90	**50**	89	10	149	0	56	27	83	322
05:45 PM	0	0	0	0	25	70	0	95	48	**128**	**22**	**198**	0	56	44	100	**393**
Total Volume	0	0	0	0	109	277	0	386	175	415	60	650	0	232	149	381	1417
% App. Total	0	0	0		28.2	71.8	0		26.9	63.8	9.2		0	60.9	39.1		
PHF	.000	.000	.000	.000	.826	.923	.000	.894	.875	.811	.682	.821	.000	.853	.828	.943	.901

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111th St and Hamlet Ave
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File Name : AM + PM
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Groups Printed- SU

	Hamlet Ave From North				111th St From East				Hamlet Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	1	2	0	3	0	7	1	8	11
04:15 PM	0	0	0	0	2	2	0	4	0	1	0	1	0	11	0	11	16
04:30 PM	0	0	0	0	0	2	0	2	0	1	0	1	0	13	2	15	18
04:45 PM	0	0	0	0	0	1	0	1	0	1	0	1	0	6	0	6	8
Total	0	0	0	0	2	5	0	7	1	5	0	6	0	37	3	40	53
05:00 PM	0	0	0	0	1	3	0	4	0	0	0	0	0	5	1	6	10
05:15 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	5	0	5	8
05:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	4	0	4	5
05:45 PM	0	0	0	0	0	0	0	0	0	3	0	3	0	3	2	5	8
Total	0	0	0	0	1	7	0	8	0	3	0	3	0	17	3	20	31
Grand Total	0	0	0	0	3	12	0	15	1	8	0	9	0	54	6	60	84
Apprch %	0	0	0		20	80	0		11.1	88.9	0		0	90	10		
Total %	0	0	0	0	3.6	14.3	0	17.9	1.2	9.5	0	10.7	0	64.3	7.1	71.4	

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Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012
Page No : 7

Groups Printed- MU

	Hamlet Ave From North				111th St From East				Hamlet Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Grand Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Apprch %	0	0	0		0	0	0		0	100	0		0	0	0		
Total %	0	0	0	0	0	0	0	0	0	100	0	100	0	0	0	0	

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4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
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Groups Printed- Peds & Bikes

	Hamlet Ave Crossing North Leg			111th St Crossing East Leg			Hamlet Ave Crossing South Leg			111th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	1	6	7	0	0	0	7
04:15 PM	0	3	3	0	0	0	0	0	0	0	0	0	3
04:30 PM	1	1	2	0	0	0	0	0	0	0	0	0	2
04:45 PM	1	1	2	1	0	1	0	2	2	0	0	0	5
Total	2	5	7	1	0	1	1	8	9	0	0	0	17
05:00 PM	1	0	1	0	0	0	0	6	6	0	0	0	7
05:15 PM	0	0	0	0	0	0	0	1	1	0	0	0	1
05:30 PM	2	4	6	0	1	1	0	6	6	0	0	0	13
05:45 PM	0	5	5	0	0	0	0	0	0	0	0	0	5
Total	3	9	12	0	1	1	0	13	13	0	0	0	26
Grand Total	5	14	19	1	1	2	1	21	22	0	0	0	43
Apprch %	26.3	73.7		50	50		4.5	95.5		0	0		
Total %	11.6	32.6	44.2	2.3	2.3	4.7	2.3	48.8	51.2	0	0	0	

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111th St and Marshfield Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/30/2012
Page No : 1

Groups Printed- PC - SU - MU

	Marshfield Ave From North				111th St From East				Marshfield Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	60	58	7	125	0	38	10	48	0	0	0	0	11	75	0	86	259
07:15 AM	92	76	11	179	0	73	20	93	0	0	0	0	15	63	0	78	350
07:30 AM	117	82	13	212	0	61	21	82	0	0	0	0	15	60	0	75	369
07:45 AM	108	80	18	206	0	86	21	107	0	0	0	0	16	60	0	76	389
Total	377	296	49	722	0	258	72	330	0	0	0	0	57	258	0	315	1367
08:00 AM	64	61	18	143	0	78	20	98	0	0	0	0	25	43	0	68	309
08:15 AM	72	82	17	171	0	67	32	99	0	0	0	0	20	53	0	73	343
08:30 AM	47	62	23	132	0	76	30	106	0	0	0	0	17	44	0	61	299
08:45 AM	67	68	32	167	0	64	28	92	0	0	0	0	10	51	0	61	320
Total	250	273	90	613	0	285	110	395	0	0	0	0	72	191	0	263	1271
Grand Total	627	569	139	1335	0	543	182	725	0	0	0	0	129	449	0	578	2638
Apprch %	47	42.6	10.4		0	74.9	25.1		0	0	0		22.3	77.7	0		
Total %	23.8	21.6	5.3	50.6	0	20.6	6.9	27.5	0	0	0	0	4.9	17	0	21.9	
PC	604	555	125	1284	0	512	174	686	0	0	0	0	125	418	0	543	2513
% PC	96.3	97.5	89.9	96.2	0	94.3	95.6	94.6	0	0	0	0	96.9	93.1	0	93.9	95.3
SU	19	12	14	45	0	29	8	37	0	0	0	0	4	30	0	34	116
% SU	3	2.1	10.1	3.4	0	5.3	4.4	5.1	0	0	0	0	3.1	6.7	0	5.9	4.4
MU	4	2	0	6	0	2	0	2	0	0	0	0	0	1	0	1	9
% MU	0.6	0.4	0	0.4	0	0.4	0	0.3	0	0	0	0	0	0.2	0	0.2	0.3

	Marshfield Ave From North				111th St From East				Marshfield Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	92	76	11	179	0	73	20	93	0	0	0	0	15	**63**	0	**78**	350
07:30 AM	**117**	**82**	13	**212**	0	61	**21**	82	0	0	0	0	15	60	0	75	369
07:45 AM	108	80	**18**	206	0	**86**	21	**107**	0	0	0	0	16	60	0	76	**389**
08:00 AM	64	61	18	143	0	78	20	98	0	0	0	0	**25**	43	0	68	309
Total Volume	381	299	60	740	0	298	82	380	0	0	0	0	71	226	0	297	1417
% App. Total	51.5	40.4	8.1		0	78.4	21.6		0	0	0		23.9	76.1	0		
PHF	.814	.912	.833	.873	.000	.866	.976	.888	.000	.000	.000	.000	.710	.897	.000	.952	.911

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Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
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Groups Printed- SU

	Marshfield Ave From North				111th St From East				Marshfield Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	1	1	0	2	0	4	0	4	0	0	0	0	0	1	0	1	7
07:15 AM	2	0	1	3	0	3	0	3	0	0	0	0	0	5	0	5	11
07:30 AM	2	2	1	5	0	3	2	5	0	0	0	0	0	7	0	7	17
07:45 AM	5	2	0	7	0	5	1	6	0	0	0	0	1	4	0	5	18
Total	10	5	2	17	0	15	3	18	0	0	0	0	1	17	0	18	53
08:00 AM	1	2	1	4	0	3	0	3	0	0	0	0	2	2	0	4	11
08:15 AM	4	0	1	5	0	2	2	4	0	0	0	0	0	5	0	5	14
08:30 AM	2	1	4	7	0	5	1	6	0	0	0	0	0	3	0	3	16
08:45 AM	2	4	6	12	0	4	2	6	0	0	0	0	1	3	0	4	22
Total	9	7	12	28	0	14	5	19	0	0	0	0	3	13	0	16	63
Grand Total	19	12	14	45	0	29	8	37	0	0	0	0	4	30	0	34	116
Apprch %	42.2	26.7	31.1		0	78.4	21.6		0	0	0		11.8	88.2	0		
Total %	16.4	10.3	12.1	38.8	0	25	6.9	31.9	0	0	0	0	3.4	25.9	0	29.3	

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Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/30/2012
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Groups Printed- MU

	Marshfield Ave From North				111th St From East				Marshfield Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:30 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	3	0	0	3	0	1	0	1	0	0	0	0	0	0	0	0	4
08:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
08:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:45 AM	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	1	2	0	3	0	1	0	1	0	0	0	0	0	1	0	1	5
Grand Total	4	2	0	6	0	2	0	2	0	0	0	0	0	1	0	1	9
Apprch %	66.7	33.3	0		0	100	0		0	0	0		0	100	0		
Total %	44.4	22.2	0	66.7	0	22.2	0	22.2	0	0	0	0	0	11.1	0	11.1	

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File Name : AM + PM Peds
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Groups Printed- Peds & Bikes

	Marshfield Ave Crossing North Leg			111th St Crossing East Leg			Marshfield Ave Crossing South Leg			111th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	7	7	0	0	0	0	0	0	0	0	0	7
07:15 AM	0	12	12	0	0	0	0	2	2	0	0	0	14
07:30 AM	0	3	3	0	0	0	0	3	3	0	0	0	6
07:45 AM	0	4	4	0	0	0	1	3	4	0	0	0	8
Total	0	26	26	0	0	0	1	8	9	0	0	0	35
08:00 AM	0	3	3	0	0	0	0	13	13	0	8	8	24
08:15 AM	0	4	4	0	0	0	0	13	13	0	6	6	23
08:30 AM	0	11	11	0	0	0	2	3	5	0	2	2	18
08:45 AM	1	3	4	0	0	0	0	1	1	0	1	1	6
Total	1	21	22	0	0	0	2	30	32	0	17	17	71
Grand Total	1	47	48	0	0	0	3	38	41	0	17	17	106
Apprch %	2.1	97.9		0	0		7.3	92.7		0	100		
Total %	0.9	44.3	45.3	0	0	0	2.8	35.8	38.7	0	16	16	

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4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/30/2012
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Groups Printed- PC - SU - MU

	Marshfield Ave From North				111th St From East				Marshfield Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	135	135	41	311	0	44	28	72	0	0	0	0	32	52	0	84	467
04:15 PM	91	101	30	222	0	60	46	106	0	0	0	0	34	66	0	100	428
04:30 PM	102	107	34	243	0	66	44	110	0	0	0	0	37	54	0	91	444
04:45 PM	85	127	36	248	0	45	23	68	0	0	0	0	28	66	0	94	410
Total	413	470	141	1024	0	215	141	356	0	0	0	0	131	238	0	369	1749
05:00 PM	100	124	35	259	0	47	38	85	0	0	0	0	54	55	0	109	453
05:15 PM	93	137	25	255	0	50	34	84	0	0	0	0	36	69	0	105	444
05:30 PM	78	99	22	199	0	60	42	102	0	0	0	0	35	65	0	100	401
05:45 PM	106	110	21	237	0	38	44	82	0	0	0	0	38	46	0	84	403
Total	377	470	103	950	0	195	158	353	0	0	0	0	163	235	0	398	1701
Grand Total	790	940	244	1974	0	410	299	709	0	0	0	0	294	473	0	767	3450
Apprch %	40	47.6	12.4		0	57.8	42.2		0	0	0		38.3	61.7	0		
Total %	22.9	27.2	7.1	57.2	0	11.9	8.7	20.6	0	0	0	0	8.5	13.7	0	22.2	
PC	779	928	200	1907	0	395	292	687	0	0	0	0	292	451	0	743	3337
% PC	98.6	98.7	82	96.6	0	96.3	97.7	96.9	0	0	0	0	99.3	95.3	0	96.9	96.7
SU	10	12	44	66	0	14	7	21	0	0	0	0	2	22	0	24	111
% SU	1.3	1.3	18	3.3	0	3.4	2.3	3	0	0	0	0	0.7	4.7	0	3.1	3.2
MU	1	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
% MU	0.1	0	0	0.1	0	0.2	0	0.1	0	0	0	0	0	0	0	0	0.1

	Marshfield Ave From North				111th St From East				Marshfield Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	**102**	107	34	243	0	**66**	**44**	**110**	0	0	0	0	37	54	0	91	444
04:45 PM	85	127	**36**	248	0	45	23	68	0	0	0	0	28	66	0	94	410
05:00 PM	100	124	35	**259**	0	47	38	85	0	0	0	0	**54**	55	0	**109**	**453**
05:15 PM	93	**137**	25	255	0	50	34	84	0	0	0	0	36	**69**	0	105	444
Total Volume	380	495	130	1005	0	208	139	347	0	0	0	0	155	244	0	399	1751
% App. Total	37.8	49.3	12.9		0	59.9	40.1		0	0	0		38.8	61.2	0		
PHF	.931	.903	.903	.970	.000	.788	.790	.789	.000	.000	.000	.000	.718	.884	.000	.915	.966

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111th St and Marshfield Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/30/2012
Page No : 6

Groups Printed- SU

	Marshfield Ave From North				111th St From East				Marshfield Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	6	2	7	15	0	2	0	2	0	0	0	0	0	4	0	4	21
04:15 PM	2	0	10	12	0	3	2	5	0	0	0	0	0	4	0	4	21
04:30 PM	0	2	8	10	0	1	3	4	0	0	0	0	0	3	0	3	17
04:45 PM	0	0	9	9	0	2	0	2	0	0	0	0	0	2	0	2	13
Total	8	4	34	46	0	8	5	13	0	0	0	0	0	13	0	13	72
05:00 PM	0	0	4	4	0	2	1	3	0	0	0	0	2	4	0	6	13
05:15 PM	1	4	4	9	0	2	1	3	0	0	0	0	0	2	0	2	14
05:30 PM	0	2	0	2	0	1	0	1	0	0	0	0	0	2	0	2	5
05:45 PM	1	2	2	5	0	1	0	1	0	0	0	0	0	1	0	1	7
Total	2	8	10	20	0	6	2	8	0	0	0	0	2	9	0	11	39
Grand Total	10	12	44	66	0	14	7	21	0	0	0	0	2	22	0	24	111
Apprch %	15.2	18.2	66.7		0	66.7	33.3		0	0	0		8.3	91.7	0		
Total %	9	10.8	39.6	59.5	0	12.6	6.3	18.9	0	0	0	0	1.8	19.8	0	21.6	

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Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/30/2012
Page No : 7

Groups Printed- MU

	Marshfield Ave From North				111th St From East				Marshfield Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Grand Total	1	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
Apprch %	100	0	0		0	100	0		0	0	0		0	0	0		
Total %	50	0	0	50	0	50	0	50	0	0	0	0	0	0	0	0	

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111th St and Marshfield Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/30/2012

Groups Printed- Peds & Bikes

	Marshfield Ave Crossing North Leg			111th St Crossing East Leg			Marshfield Ave Crossing South Leg			111th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	2	2	0	0	0	1	0	1	0	0	0	3
04:15 PM	0	3	3	0	0	0	0	2	2	0	1	1	6
04:30 PM	0	2	2	0	0	0	0	5	5	0	0	0	7
04:45 PM	0	2	2	0	0	0	0	1	1	0	0	0	3
Total	0	9	9	0	0	0	1	8	9	0	1	1	19
05:00 PM	0	2	2	0	0	0	0	2	2	0	1	1	5
05:15 PM	0	15	15	0	0	0	0	0	0	0	0	0	15
05:30 PM	0	0	0	0	0	0	0	1	1	0	0	0	1
05:45 PM	0	1	1	0	0	0	0	0	0	0	0	0	1
Total	0	18	18	0	0	0	0	3	3	0	1	1	22
Grand Total	0	27	27	0	0	0	1	11	12	0	2	2	41
Apprch %	0	100		0	0		8.3	91.7		0	100		
Total %	0	65.9	65.9	0	0	0	2.4	26.8	29.3	0	4.9	4.9	

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111th St and Martin Luther King Dr
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/12/2012
Page No : 1

Groups Printed- PC - SU - MU

	Martin Luther King Dr From North				111th St From East				Martin Luther King Dr From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	6	11	7	24	9	36	0	45	5	24	2	31	3	24	8	35	135
07:15 AM	9	14	4	27	20	56	1	77	4	12	4	20	3	58	7	68	192
07:30 AM	18	19	9	46	15	73	2	90	14	28	4	46	1	61	14	76	258
07:45 AM	24	9	11	44	17	132	4	153	11	27	12	50	4	65	15	84	331
Total	57	53	31	141	61	297	7	365	34	91	22	147	11	208	44	263	916
08:00 AM	21	25	5	51	19	118	7	144	10	25	4	39	5	85	20	110	344
08:15 AM	9	20	10	39	12	94	2	108	6	22	8	36	5	80	7	92	275
08:30 AM	11	18	5	34	15	85	5	105	14	30	8	52	4	59	15	78	269
08:45 AM	6	20	13	39	12	87	3	102	11	32	4	47	7	54	19	80	268
Total	47	83	33	163	58	384	17	459	41	109	24	174	21	278	61	360	1156
Grand Total	104	136	64	304	119	681	24	824	75	200	46	321	32	486	105	623	2072
Apprch %	34.2	44.7	21.1		14.4	82.6	2.9		23.4	62.3	14.3		5.1	78	16.9		
Total %	5	6.6	3.1	14.7	5.7	32.9	1.2	39.8	3.6	9.7	2.2	15.5	1.5	23.5	5.1	30.1	
PC	92	133	63	288	117	652	24	793	62	194	46	302	32	458	95	585	1968
% PC	88.5	97.8	98.4	94.7	98.3	95.7	100	96.2	82.7	97	100	94.1	100	94.2	90.5	93.9	95
SU	12	3	1	16	2	29	0	31	13	6	0	19	0	25	10	35	101
% SU	11.5	2.2	1.6	5.3	1.7	4.3	0	3.8	17.3	3	0	5.9	0	5.1	9.5	5.6	4.9
MU	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	3
% MU	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	0	0.5	0.1

	Martin Luther King Dr From North				111th St From East				Martin Luther King Dr From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	**24**	9	**11**	44	17	**132**	4	**153**	11	27	**12**	50	4	65	15	84	331
08:00 AM	21	**25**	5	**51**	**19**	118	**7**	144	10	25	4	39	**5**	**85**	**20**	**110**	**344**
08:15 AM	9	20	10	39	12	94	2	108	6	22	8	36	5	80	7	92	275
08:30 AM	11	18	5	34	15	85	5	105	**14**	**30**	8	**52**	4	59	15	78	269
Total Volume	65	72	31	168	63	429	18	510	41	104	32	177	18	289	57	364	1219
% App. Total	38.7	42.9	18.5		12.4	84.1	3.5		23.2	58.8	18.1		4.9	79.4	15.7		
PHF	.677	.720	.705	.824	.829	.813	.643	.833	.732	.867	.667	.851	.900	.850	.713	.827	.886

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111th St and Martin Luther King Dr
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/12/2012
Page No : 2

Groups Printed- SU

	Martin Luther King Dr From North				111th St From East				Martin Luther King Dr From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	2	0	1	3	1	1	0	2	2	1	0	3	0	1	2	3	11
07:15 AM	2	1	0	3	0	4	0	4	0	1	0	1	0	6	1	7	15
07:30 AM	1	1	0	2	1	5	0	6	4	1	0	5	0	3	1	4	17
07:45 AM	1	1	0	2	0	3	0	3	2	0	0	2	0	3	1	4	11
Total	6	3	1	10	2	13	0	15	8	3	0	11	0	13	5	18	54
08:00 AM	3	0	0	3	0	5	0	5	1	0	0	1	0	3	1	4	13
08:15 AM	1	0	0	1	0	5	0	5	2	2	0	4	0	3	1	4	14
08:30 AM	1	0	0	1	0	3	0	3	1	1	0	2	0	3	2	5	11
08:45 AM	1	0	0	1	0	3	0	3	1	0	0	1	0	3	1	4	9
Total	6	0	0	6	0	16	0	16	5	3	0	8	0	12	5	17	47
Grand Total	12	3	1	16	2	29	0	31	13	6	0	19	0	25	10	35	101
Apprch %	75	18.8	6.2		6.5	93.5	0		68.4	31.6	0		0	71.4	28.6		
Total %	11.9	3	1	15.8	2	28.7	0	30.7	12.9	5.9	0	18.8	0	24.8	9.9	34.7	

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Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/12/2012
Page No : 3

Groups Printed- MU

	Martin Luther King Dr From North				111th St From East				Martin Luther King Dr From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	3
Apprch %	0	0	0		0	0	0		0	0	0		0	100	0		
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	100	

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Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
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Groups Printed- Peds & Bikes

	Martin Luther King Dr Crossing North Leg			111th St Crossing East Leg			Martin Luther King Dr Crossing South Leg			111th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	4	4	0	1	1	1	6	7	2	2	4	16
07:15 AM	0	4	4	0	2	2	0	5	5	0	1	1	12
07:30 AM	0	6	6	0	1	1	0	16	16	0	7	7	30
07:45 AM	0	6	6	0	0	0	0	7	7	0	8	8	21
Total	0	20	20	0	4	4	1	34	35	2	18	20	79
08:00 AM	0	6	6	0	1	1	0	9	9	0	0	0	16
08:15 AM	0	4	4	0	1	1	2	8	10	1	3	4	19
08:30 AM	0	5	5	0	2	2	0	6	6	0	0	0	13
08:45 AM	0	2	2	0	5	5	0	9	9	0	2	2	18
Total	0	17	17	0	9	9	2	32	34	1	5	6	66
Grand Total	0	37	37	0	13	13	3	66	69	3	23	26	145
Apprch %	0	100		0	100		4.3	95.7		11.5	88.5		
Total %	0	25.5	25.5	0	9	9	2.1	45.5	47.6	2.1	15.9	17.9	

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Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/12/2012
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Groups Printed- PC - SU - MU

	Martin Luther King Dr From North				111th St From East				Martin Luther King Dr From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	20	28	13	61	9	76	5	90	14	27	2	43	1	71	14	86	280
04:15 PM	21	34	12	67	6	70	3	79	11	21	4	36	1	73	14	88	270
04:30 PM	9	41	17	67	15	59	5	79	8	18	4	30	3	80	13	96	272
04:45 PM	14	34	19	67	10	67	6	83	15	27	6	48	3	76	14	93	291
Total	64	137	61	262	40	272	19	331	48	93	16	157	8	300	55	363	1113
05:00 PM	17	31	18	66	12	70	5	87	9	19	6	34	7	61	7	75	262
05:15 PM	17	28	12	57	12	73	4	89	9	44	7	60	4	63	17	84	290
05:30 PM	19	53	13	85	15	66	9	90	10	26	4	40	2	62	9	73	288
05:45 PM	7	30	18	55	11	53	4	68	14	30	5	49	5	67	12	84	256
Total	60	142	61	263	50	262	22	334	42	119	22	183	18	253	45	316	1096
Grand Total	124	279	122	525	90	534	41	665	90	212	38	340	26	553	100	679	2209
Apprch %	23.6	53.1	23.2		13.5	80.3	6.2		26.5	62.4	11.2		3.8	81.4	14.7		
Total %	5.6	12.6	5.5	23.8	4.1	24.2	1.9	30.1	4.1	9.6	1.7	15.4	1.2	25	4.5	30.7	
PC	113	279	122	514	89	517	41	647	82	211	38	331	26	533	92	651	2143
% PC	91.1	100	100	97.9	98.9	96.8	100	97.3	91.1	99.5	100	97.4	100	96.4	92	95.9	97
SU	11	0	0	11	1	17	0	18	8	1	0	9	0	20	8	28	66
% SU	8.9	0	0	2.1	1.1	3.2	0	2.7	8.9	0.5	0	2.6	0	3.6	8	4.1	3
MU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% MU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Martin Luther King Dr From North				111th St From East				Martin Luther King Dr From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	14	34	**19**	67	10	67	6	83	**15**	27	6	48	3	**76**	14	**93**	**291**
05:00 PM	17	31	18	66	12	70	5	87	9	19	6	34	**7**	61	7	75	262
05:15 PM	17	28	12	57	12	**73**	4	89	9	**44**	**7**	**60**	4	63	**17**	84	290
05:30 PM	**19**	**53**	13	**85**	**15**	66	**9**	**90**	10	26	4	40	2	62	9	73	288
Total Volume	67	146	62	275	49	276	24	349	43	116	23	182	16	262	47	325	1131
% App. Total	24.4	53.1	22.5		14	79.1	6.9		23.6	63.7	12.6		4.9	80.6	14.5		
PHF	.882	.689	.816	.809	.817	.945	.667	.969	.717	.659	.821	.758	.571	.862	.691	.874	.972

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111th St and Martin Luther King Dr
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/12/2012
Page No : 6

Groups Printed- SU

	Martin Luther King Dr From North				111th St From East				Martin Luther King Dr From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	2	0	0	2	0	2	0	2	0	0	0	0	0	2	1	3	7
04:15 PM	2	0	0	2	1	2	0	3	2	0	0	2	0	5	1	6	13
04:30 PM	1	0	0	1	0	1	0	1	1	0	0	1	0	1	1	2	5
04:45 PM	1	0	0	1	0	4	0	4	1	0	0	1	0	3	1	4	10
Total	6	0	0	6	1	9	0	10	4	0	0	4	0	11	4	15	35
05:00 PM	2	0	0	2	0	2	0	2	1	0	0	1	0	3	1	4	9
05:15 PM	1	0	0	1	0	2	0	2	1	1	0	2	0	0	2	2	7
05:30 PM	1	0	0	1	0	3	0	3	1	0	0	1	0	4	1	5	10
05:45 PM	1	0	0	1	0	1	0	1	1	0	0	1	0	2	0	2	5
Total	5	0	0	5	0	8	0	8	4	1	0	5	0	9	4	13	31
Grand Total	11	0	0	11	1	17	0	18	8	1	0	9	0	20	8	28	66
Apprch %	100	0	0		5.6	94.4	0		88.9	11.1	0		0	71.4	28.6		
Total %	16.7	0	0	16.7	1.5	25.8	0	27.3	12.1	1.5	0	13.6	0	30.3	12.1	42.4	

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111th St and Martin Luther King Dr
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/12/2012
Page No : 7

Groups Printed- MU

	Martin Luther King Dr From North				111th St From East				Martin Luther King Dr From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

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11th St and Martin Luther King Dr
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 6/12/2012

Groups Printed- Peds & Bikes

	Martin Luther King Dr Crossing North Leg			111th St Crossing East Leg			Martin Luther King Dr Crossing South Leg			111th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	6	6	0	2	2	0	16	16	0	5	5	29
04:15 PM	0	14	14	0	6	6	0	20	20	0	6	6	46
04:30 PM	0	3	3	0	3	3	0	15	15	0	0	0	21
04:45 PM	0	7	7	0	3	3	2	25	27	0	2	2	39
Total	0	30	30	0	14	14	2	76	78	0	13	13	135
05:00 PM	0	7	7	0	7	7	0	3	3	0	2	2	19
05:15 PM	0	6	6	0	25	25	0	15	15	0	1	1	47
05:30 PM	0	1	1	0	2	2	3	16	19	1	6	7	29
05:45 PM	0	10	10	0	2	2	1	13	14	0	0	0	26
Total	0	24	24	0	36	36	4	47	51	1	9	10	121
Grand Total	0	54	54	0	50	50	6	123	129	1	22	23	256
Apprch %	0	100		0	100		4.7	95.3		4.3	95.7		
Total %	0	21.1	21.1	0	19.5	19.5	2.3	48	50.4	0.4	8.6	9	

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111th St and Michigan Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/10/2012
Page No : 1

Groups Printed- PC - SU - MU

	Michigan Ave From North				111th St From East				Michigan Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	10	20	5	35	8	32	5	45	3	57	1	61	4	37	9	50	191
07:15 AM	7	23	5	35	22	46	8	76	7	65	2	74	5	56	11	72	257
07:30 AM	9	24	12	45	15	50	11	76	14	60	3	77	6	67	18	91	289
07:45 AM	10	29	10	49	30	85	8	123	11	81	2	94	3	78	17	98	364
Total	36	96	32	164	75	213	32	320	35	263	8	306	18	238	55	311	1101
08:00 AM	8	33	12	53	22	92	11	125	14	82	5	101	4	80	14	98	377
08:15 AM	11	32	7	50	15	86	7	108	5	79	1	85	7	68	15	90	333
08:30 AM	12	30	7	49	12	55	3	70	3	56	6	65	11	89	11	111	295
08:45 AM	8	41	13	62	20	81	12	113	8	49	6	63	12	58	14	84	322
Total	39	136	39	214	69	314	33	416	30	266	18	314	34	295	54	383	1327
Grand Total	75	232	71	378	144	527	65	736	65	529	26	620	52	533	109	694	2428
Apprch %	19.8	61.4	18.8		19.6	71.6	8.8		10.5	85.3	4.2		7.5	76.8	15.7		
Total %	3.1	9.6	2.9	15.6	5.9	21.7	2.7	30.3	2.7	21.8	1.1	25.5	2.1	22	4.5	28.6	
PC	71	202	68	341	141	497	55	693	49	481	25	555	51	503	104	658	2247
% PC	94.7	87.1	95.8	90.2	97.9	94.3	84.6	94.2	75.4	90.9	96.2	89.5	98.1	94.4	95.4	94.8	92.5
SU	4	30	3	37	3	29	10	42	16	47	1	64	1	30	3	34	177
% SU	5.3	12.9	4.2	9.8	2.1	5.5	15.4	5.7	24.6	8.9	3.8	10.3	1.9	5.6	2.8	4.9	7.3
MU	0	0	0	0	0	1	0	1	0	1	0	1	0	0	2	2	4
% MU	0	0	0	0	0	0.2	0	0.1	0	0.2	0	0.2	0	0	1.8	0.3	0.2

	Michigan Ave From North				111th St From East				Michigan Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	10	29	10	49	**30**	85	8	123	11	81	2	94	3	78	**17**	98	364
08:00 AM	8	**33**	**12**	**53**	22	**92**	**11**	**125**	**14**	**82**	5	**101**	4	80	14	98	**377**
08:15 AM	11	32	7	50	15	86	7	108	5	79	1	85	7	68	15	90	333
08:30 AM	**12**	30	7	49	12	55	3	70	3	56	**6**	65	**11**	**89**	11	**111**	295
Total Volume	41	124	36	201	79	318	29	426	33	298	14	345	25	315	57	397	1369
% App. Total	20.4	61.7	17.9		18.5	74.6	6.8		9.6	86.4	4.1		6.3	79.3	14.4		
PHF	.854	.939	.750	.948	.658	.864	.659	.852	.589	.909	.583	.854	.568	.885	.838	.894	.908

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Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/10/2012
Page No : 2

Groups Printed- SU

	Michigan Ave From North				111th St From East				Michigan Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	4	0	4	2	2	1	5	1	5	0	6	0	4	0	4	19
07:15 AM	0	2	1	3	0	2	1	3	1	8	0	9	0	4	0	4	19
07:30 AM	0	5	1	6	0	5	1	6	5	4	0	9	0	2	1	3	24
07:45 AM	0	5	0	5	0	7	1	8	1	9	0	10	0	2	0	2	25
Total	0	16	2	18	2	16	4	22	8	26	0	34	0	12	1	13	87
08:00 AM	2	4	0	6	0	4	2	6	2	7	0	9	0	8	0	8	29
08:15 AM	0	4	1	5	1	3	1	5	1	6	0	7	0	3	2	5	22
08:30 AM	2	3	0	5	0	5	1	6	2	5	1	8	1	5	0	6	25
08:45 AM	0	3	0	3	0	1	2	3	3	3	0	6	0	2	0	2	14
Total	4	14	1	19	1	13	6	20	8	21	1	30	1	18	2	21	90
Grand Total	4	30	3	37	3	29	10	42	16	47	1	64	1	30	3	34	177
Apprch %	10.8	81.1	8.1		7.1	69	23.8		25	73.4	1.6		2.9	88.2	8.8		
Total %	2.3	16.9	1.7	20.9	1.7	16.4	5.6	23.7	9	26.6	0.6	36.2	0.6	16.9	1.7	19.2	

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Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/10/2012
Page No : 3

Groups Printed- MU

	Michigan Ave From North				111th St From East				Michigan Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	1	0	1	0	1	0	1	0	0	0	0	2
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total	0	0	0	0	0	1	0	1	0	1	0	1	0	0	1	1	3
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Grand Total	0	0	0	0	0	1	0	1	0	1	0	1	0	0	2	2	4
Apprch %	0	0	0		0	100	0		0	100	0		0	0	100		
Total %	0	0	0	0	0	25	0	25	0	25	0	25	0	0	50	50	

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111th St and Michigan Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/10/2012

Groups Printed- Peds & Bikes

	Michigan Ave Crossing North Leg			111th St Crossing East Leg			Michigan Ave Crossing South Leg			111th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	18	18	0	9	9	2	1	3	0	7	7	37
07:15 AM	0	22	22	1	7	8	0	8	8	0	9	9	47
07:30 AM	0	5	5	0	7	7	0	12	12	0	21	21	45
07:45 AM	0	14	14	0	4	4	0	10	10	0	8	8	36
Total	0	59	59	1	27	28	2	31	33	0	45	45	165
08:00 AM	0	23	23	0	13	13	0	11	11	0	16	16	63
08:15 AM	0	11	11	0	4	4	0	1	1	0	22	22	38
08:30 AM	0	18	18	1	7	8	0	2	2	0	17	17	45
08:45 AM	0	9	9	0	3	3	0	0	0	0	21	21	33
Total	0	61	61	1	27	28	0	14	14	0	76	76	179
Grand Total	0	120	120	2	54	56	2	45	47	0	121	121	344
Apprch %	0	100		3.6	96.4		4.3	95.7		0	100		
Total %	0	34.9	34.9	0.6	15.7	16.3	0.6	13.1	13.7	0	35.2	35.2	

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Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/10/2012
Page No : 5

Groups Printed- PC - SU - MU

	Michigan Ave From North				111th St From East				Michigan Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	25	60	16	101	9	78	13	100	12	48	9	69	16	70	20	106	376
04:15 PM	20	63	18	101	9	66	8	83	9	74	5	88	25	75	19	119	391
04:30 PM	24	69	13	106	13	56	15	84	19	61	7	87	27	84	17	128	405
04:45 PM	21	59	9	89	6	79	20	105	8	54	7	69	13	66	15	94	357
Total	90	251	56	397	37	279	56	372	48	237	28	313	81	295	71	447	1529
05:00 PM	16	65	15	96	9	70	16	95	10	58	9	77	19	59	11	89	357
05:15 PM	12	85	10	107	9	83	18	110	20	48	10	78	20	74	6	100	395
05:30 PM	20	68	9	97	11	86	17	114	10	48	17	75	15	76	26	117	403
05:45 PM	16	61	12	89	11	77	18	106	12	53	4	69	14	78	12	104	368
Total	64	279	46	389	40	316	69	425	52	207	40	299	68	287	55	410	1523
Grand Total	154	530	102	786	77	595	125	797	100	444	68	612	149	582	126	857	3052
Apprch %	19.6	67.4	13		9.7	74.7	15.7		16.3	72.5	11.1		17.4	67.9	14.7		
Total %	5	17.4	3.3	25.8	2.5	19.5	4.1	26.1	3.3	14.5	2.2	20.1	4.9	19.1	4.1	28.1	
PC	150	503	101	754	77	575	114	766	90	421	67	578	148	561	124	833	2931
% PC	97.4	94.9	99	95.9	100	96.6	91.2	96.1	90	94.8	98.5	94.4	99.3	96.4	98.4	97.2	96
SU	4	27	1	32	0	20	11	31	9	23	1	33	1	21	2	24	120
% SU	2.6	5.1	1	4.1	0	3.4	8.8	3.9	9	5.2	1.5	5.4	0.7	3.6	1.6	2.8	3.9
MU	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
% MU	0	0	0	0	0	0	0	0	1	0	0	0.2	0	0	0	0	0

	Michigan Ave From North				111th St From East				Michigan Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	**25**	60	16	101	9	78	13	100	12	48	**9**	69	16	70	**20**	106	376
04:15 PM	20	63	**18**	101	9	66	8	83	9	**74**	5	**88**	25	75	19	119	391
04:30 PM	24	**69**	13	**106**	**13**	56	15	84	**19**	61	7	87	**27**	**84**	17	**128**	**405**
04:45 PM	21	59	9	89	6	**79**	**20**	**105**	8	54	7	69	13	66	15	94	357
Total Volume	90	251	56	397	37	279	56	372	48	237	28	313	81	295	71	447	1529
% App. Total	22.7	63.2	14.1		9.9	75	15.1		15.3	75.7	8.9		18.1	66	15.9		
PHF	.900	.909	.778	.936	.712	.883	.700	.886	.632	.801	.778	.889	.750	.878	.888	.873	.944

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File Name : AM + PM
Site Code : 00000000
Start Date : 5/10/2012
Page No : 6

Groups Printed- SU

	Michigan Ave From North				111th St From East				Michigan Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	4	0	4	0	4	2	6	1	1	0	2	0	2	1	3	15
04:15 PM	0	3	0	3	0	4	1	5	0	5	1	6	0	5	1	6	20
04:30 PM	0	1	0	1	0	2	1	3	2	2	0	4	1	3	0	4	12
04:45 PM	1	5	0	6	0	4	2	6	1	3	0	4	0	3	0	3	19
Total	1	13	0	14	0	14	6	20	4	11	1	16	1	13	2	16	66
05:00 PM	1	4	0	5	0	1	2	3	1	3	0	4	0	2	0	2	14
05:15 PM	2	3	1	6	0	1	1	2	1	5	0	6	0	1	0	1	15
05:30 PM	0	4	0	4	0	3	1	4	2	2	0	4	0	2	0	2	14
05:45 PM	0	3	0	3	0	1	1	2	1	2	0	3	0	3	0	3	11
Total	3	14	1	18	0	6	5	11	5	12	0	17	0	8	0	8	54
Grand Total	4	27	1	32	0	20	11	31	9	23	1	33	1	21	2	24	120
Apprch %	12.5	84.4	3.1		0	64.5	35.5		27.3	69.7	3		4.2	87.5	8.3		
Total %	3.3	22.5	0.8	26.7	0	16.7	9.2	25.8	7.5	19.2	0.8	27.5	0.8	17.5	1.7	20	

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Page No : 7

Groups Printed- MU

	Michigan Ave From North				111th St From East				Michigan Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
Apprch %	0	0	0		0	0	0		100	0	0		0	0	0		
Total %	0	0	0	0	0	0	0	0	100	0	0	100	0	0	0	0	

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111th St and Michigan Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/10/2012

Groups Printed- Peds & Bikes

	Michigan Ave Crossing North Leg			111th St Crossing East Leg			Michigan Ave Crossing South Leg			111th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	8	8	0	19	19	0	11	11	0	31	31	69
04:15 PM	0	15	15	0	7	7	0	5	5	0	40	40	67
04:30 PM	0	23	23	1	11	12	0	1	1	0	30	30	66
04:45 PM	0	7	7	0	5	5	0	0	0	0	37	37	49
Total	0	53	53	1	42	43	0	17	17	0	138	138	251
05:00 PM	0	14	14	0	12	12	0	0	0	0	32	32	58
05:15 PM	0	3	3	1	15	16	0	2	2	0	30	30	51
05:30 PM	0	13	13	0	13	13	0	5	5	0	25	25	56
05:45 PM	0	8	8	0	13	13	0	10	10	0	38	38	69
Total	0	38	38	1	53	54	0	17	17	0	125	125	234
Grand Total	0	91	91	2	95	97	0	34	34	0	263	263	485
Apprch %	0	100		2.1	97.9		0	100		0	100		
Total %	0	18.8	18.8	0.4	19.6	20	0	7	7	0	54.2	54.2	

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111th St and State St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/6/2012
Page No : 1

Groups Printed- PC - SU - MU

	State St From North				111th St From East				State St From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	3	11	7	21	3	62	2	67	14	49	4	67	5	31	7	43	198
07:15 AM	3	14	8	25	9	49	7	65	14	52	9	75	5	40	4	49	214
07:30 AM	3	11	6	20	18	59	5	82	24	55	4	83	6	49	15	70	255
07:45 AM	7	14	12	33	10	77	4	91	15	78	10	103	5	64	13	82	309
Total	16	50	33	99	40	247	18	305	67	234	27	328	21	184	39	244	976
08:00 AM	6	24	7	37	14	78	10	102	19	62	11	92	4	49	6	59	290
08:15 AM	0	25	12	37	19	66	9	94	11	51	11	73	1	42	5	48	252
08:30 AM	4	31	8	43	22	61	7	90	24	60	7	91	6	55	11	72	296
08:45 AM	2	29	8	39	9	67	5	81	20	59	12	91	6	70	8	84	295
Total	12	109	35	156	64	272	31	367	74	232	41	347	17	216	30	263	1133
Grand Total	28	159	68	255	104	519	49	672	141	466	68	675	38	400	69	507	2109
Apprch %	11	62.4	26.7		15.5	77.2	7.3		20.9	69	10.1		7.5	78.9	13.6		
Total %	1.3	7.5	3.2	12.1	4.9	24.6	2.3	31.9	6.7	22.1	3.2	32	1.8	19	3.3	24	
PC	25	153	67	245	101	489	47	637	135	454	65	654	34	369	63	466	2002
% PC	89.3	96.2	98.5	96.1	97.1	94.2	95.9	94.8	95.7	97.4	95.6	96.9	89.5	92.2	91.3	91.9	94.9
SU	3	6	1	10	3	26	2	31	6	12	3	21	4	29	5	38	100
% SU	10.7	3.8	1.5	3.9	2.9	5	4.1	4.6	4.3	2.6	4.4	3.1	10.5	7.2	7.2	7.5	4.7
MU	0	0	0	0	0	4	0	4	0	0	0	0	0	2	1	3	7
% MU	0	0	0	0	0	0.8	0	0.6	0	0	0	0	0	0.5	1.4	0.6	0.3

	State St From North				111th St From East				State St From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	**7**	14	**12**	33	10	77	4	91	15	**78**	10	**103**	5	**64**	**13**	**82**	**309**
08:00 AM	6	24	7	37	14	**78**	**10**	**102**	19	62	**11**	92	4	49	6	59	290
08:15 AM	0	25	12	37	19	66	9	94	11	51	11	73	1	42	5	48	252
08:30 AM	4	**31**	8	**43**	**22**	61	7	90	**24**	60	7	91	**6**	55	11	72	296
Total Volume	17	94	39	150	65	282	30	377	69	251	39	359	16	210	35	261	1147
% App. Total	11.3	62.7	26		17.2	74.8	8		19.2	69.9	10.9		6.1	80.5	13.4		
PHF	.607	.758	.813	.872	.739	.904	.750	.924	.719	.804	.886	.871	.667	.820	.673	.796	.928

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111th St and State St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/6/2012
Page No : 2

Groups Printed- SU

	State St From North				111th St From East				State St From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	4	0	4	1	3	0	4	1	4	2	7	15
07:15 AM	1	1	1	3	1	3	0	4	0	1	1	2	1	3	1	5	14
07:30 AM	0	0	0	0	1	6	0	7	1	1	0	2	1	3	1	5	14
07:45 AM	0	0	0	0	0	3	0	3	0	2	0	2	1	2	0	3	8
Total	1	1	1	3	2	16	0	18	2	7	1	10	4	12	4	20	51
08:00 AM	2	2	0	4	0	4	0	4	0	0	1	1	0	4	1	5	14
08:15 AM	0	1	0	1	0	4	0	4	1	0	1	2	0	4	0	4	11
08:30 AM	0	2	0	2	1	1	1	3	3	3	0	6	0	3	0	3	14
08:45 AM	0	0	0	0	0	1	1	2	0	2	0	2	0	6	0	6	10
Total	2	5	0	7	1	10	2	13	4	5	2	11	0	17	1	18	49
Grand Total	3	6	1	10	3	26	2	31	6	12	3	21	4	29	5	38	100
Apprch %	30	60	10		9.7	83.9	6.5		28.6	57.1	14.3		10.5	76.3	13.2		
Total %	3	6	1	10	3	26	2	31	6	12	3	21	4	29	5	38	

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111th St and State St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/6/2012
Page No : 3

Groups Printed- MU

	State St From North				111th St From East				State St From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
07:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	1	2
08:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	3	0	3	0	0	0	0	0	0	1	1	4
Grand Total	0	0	0	0	0	4	0	4	0	0	0	0	0	2	1	3	7
Apprch %	0	0	0		0	100	0		0	0	0		0	66.7	33.3		
Total %	0	0	0	0	0	57.1	0	57.1	0	0	0	0	0	28.6	14.3	42.9	

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111th St and State St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 6/6/2012

Groups Printed- Peds & Bikes

	State St Crossing North Leg			111th St Crossing East Leg			State St Crossing South Leg			111th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	4	4	0	3	3	1	1	2	0	2	2	11
07:15 AM	1	5	6	0	3	3	0	5	5	0	3	3	17
07:30 AM	0	9	9	0	2	2	0	4	4	0	2	2	17
07:45 AM	0	6	6	1	0	1	0	2	2	0	2	2	11
Total	1	24	25	1	8	9	1	12	13	0	9	9	56
08:00 AM	0	6	6	0	1	1	0	5	5	0	5	5	17
08:15 AM	1	4	5	0	1	1	0	3	3	0	3	3	12
08:30 AM	0	9	9	1	4	5	0	6	6	0	3	3	23
08:45 AM	0	9	9	0	4	4	0	8	8	0	4	4	25
Total	1	28	29	1	10	11	0	22	22	0	15	15	77
Grand Total	2	52	54	2	18	20	1	34	35	0	24	24	133
Apprch %	3.7	96.3		10	90		2.9	97.1		0	100		
Total %	1.5	39.1	40.6	1.5	13.5	15	0.8	25.6	26.3	0	18	18	

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111th St and State St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/6/2012
Page No : 5

Groups Printed- PC - SU - MU

	State St From North				111th St From East				State St From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	14	34	18	66	16	61	21	98	34	52	10	96	9	90	15	114	374
04:15 PM	8	42	23	73	15	65	18	98	20	56	13	89	7	77	14	98	358
04:30 PM	6	47	17	70	11	74	19	104	19	54	9	82	15	52	23	90	346
04:45 PM	12	47	19	78	15	75	21	111	25	34	11	70	7	60	13	80	339
Total	40	170	77	287	57	275	79	411	98	196	43	337	38	279	65	382	1417
05:00 PM	11	53	15	79	18	84	20	122	21	62	13	96	12	62	11	85	382
05:15 PM	11	44	11	66	14	75	17	106	25	54	10	89	7	61	11	79	340
05:30 PM	13	39	20	72	23	107	16	146	17	49	9	75	11	75	10	96	389
05:45 PM	13	39	18	70	15	96	13	124	32	46	10	88	9	57	9	75	357
Total	48	175	64	287	70	362	66	498	95	211	42	348	39	255	41	335	1468
Grand Total	88	345	141	574	127	637	145	909	193	407	85	685	77	534	106	717	2885
Apprch %	15.3	60.1	24.6		14	70.1	16		28.2	59.4	12.4		10.7	74.5	14.8		
Total %	3.1	12	4.9	19.9	4.4	22.1	5	31.5	6.7	14.1	2.9	23.7	2.7	18.5	3.7	24.9	
PC	87	344	141	572	127	622	145	894	188	403	85	676	76	519	102	697	2839
% PC	98.9	99.7	100	99.7	100	97.6	100	98.3	97.4	99	100	98.7	98.7	97.2	96.2	97.2	98.4
SU	1	1	0	2	0	15	0	15	5	4	0	9	1	15	3	19	45
% SU	1.1	0.3	0	0.3	0	2.4	0	1.7	2.6	1	0	1.3	1.3	2.8	2.8	2.6	1.6
MU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
% MU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.9	0.1	0

	State St From North				111th St From East				State St From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	11	**53**	15	**79**	18	84	**20**	122	21	**62**	**13**	**96**	**12**	62	**11**	85	382
05:15 PM	11	44	11	66	14	75	17	106	25	54	10	89	7	61	11	79	340
05:30 PM	**13**	39	**20**	72	**23**	**107**	16	**146**	17	49	9	75	11	**75**	10	**96**	**389**
05:45 PM	13	39	18	70	15	96	13	124	**32**	46	10	88	9	57	9	75	357
Total Volume	48	175	64	287	70	362	66	498	95	211	42	348	39	255	41	335	1468
% App. Total	16.7	61	22.3		14.1	72.7	13.3		27.3	60.6	12.1		11.6	76.1	12.2		
PHF	.923	.825	.800	.908	.761	.846	.825	.853	.742	.851	.808	.906	.813	.850	.932	.872	.943

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111th St and State St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/6/2012
Page No : 6

Groups Printed- SU

	State St From North				111th St From East				State St From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	1	0	1	0	3	0	3	1	0	0	1	1	2	0	3	8
04:15 PM	0	0	0	0	0	3	0	3	1	0	0	1	0	2	1	3	7
04:30 PM	1	0	0	1	0	3	0	3	1	0	0	1	0	2	1	3	8
04:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Total	1	1	0	2	0	10	0	10	3	0	0	3	1	7	2	10	25
05:00 PM	0	0	0	0	0	1	0	1	1	3	0	4	0	2	0	2	7
05:15 PM	0	0	0	0	0	2	0	2	1	0	0	1	0	4	0	4	7
05:30 PM	0	0	0	0	0	1	0	1	0	1	0	1	0	1	1	2	4
05:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Total	0	0	0	0	0	5	0	5	2	4	0	6	0	8	1	9	20
Grand Total	1	1	0	2	0	15	0	15	5	4	0	9	1	15	3	19	45
Apprch %	50	50	0		0	100	0		55.6	44.4	0		5.3	78.9	15.8		
Total %	2.2	2.2	0	4.4	0	33.3	0	33.3	11.1	8.9	0	20	2.2	33.3	6.7	42.2	

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111th St and State St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/6/2012
Page No : 7

Groups Printed- MU

	State St From North				111th St From East				State St From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Apprch %	0	0	0		0	0	0		0	0	0		0	0	100		
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	100	

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111th St and State St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 6/6/2012

Groups Printed- Peds & Bikes

	State St Crossing North Leg			111th St Crossing East Leg			State St Crossing South Leg			111th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	14	14	0	1	1	4	6	10	1	7	8	33
04:15 PM	0	16	16	0	4	4	1	12	13	0	4	4	37
04:30 PM	2	12	14	0	11	11	0	11	11	1	2	3	39
04:45 PM	0	6	6	0	2	2	0	13	13	3	6	9	30
Total	2	48	50	0	18	18	5	42	47	5	19	24	139
05:00 PM	0	8	8	1	5	6	0	6	6	1	5	6	26
05:15 PM	0	5	5	2	7	9	0	12	12	0	3	3	29
05:30 PM	0	3	3	0	5	5	0	6	6	0	6	6	20
05:45 PM	0	4	4	0	3	3	0	7	7	0	2	2	16
Total	0	20	20	3	20	23	0	31	31	1	16	17	91
Grand Total	2	68	70	3	38	41	5	73	78	6	35	41	230
Apprch %	2.9	97.1		7.3	92.7		6.4	93.6		14.6	85.4		
Total %	0.9	29.6	30.4	1.3	16.5	17.8	2.2	31.7	33.9	2.6	15.2	17.8	

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111th St and Wentworth Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/16/2012
Page No : 1

Groups Printed- PC - SU - MU

	Wentworth Ave From North				111th St From East				Wentworth Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	6	15	3	24	8	31	5	44	10	21	3	34	1	45	4	50	152
07:15 AM	4	16	8	28	2	48	5	55	3	29	6	38	1	55	6	62	183
07:30 AM	4	23	9	36	10	49	1	60	8	33	3	44	7	90	4	101	241
07:45 AM	6	19	11	36	10	68	5	83	10	33	4	47	6	56	12	74	240
Total	20	73	31	124	30	196	16	242	31	116	16	163	15	246	26	287	816
08:00 AM	3	29	11	43	10	68	2	80	4	29	3	36	6	81	5	92	251
08:15 AM	5	29	17	51	8	77	8	93	6	45	3	54	5	79	14	98	296
08:30 AM	12	23	16	51	7	59	2	68	5	25	7	37	10	86	6	102	258
08:45 AM	4	26	12	42	10	97	5	112	11	25	9	45	5	69	10	84	283
Total	24	107	56	187	35	301	17	353	26	124	22	172	26	315	35	376	1088
Grand Total	44	180	87	311	65	497	33	595	57	240	38	335	41	561	61	663	1904
Apprch %	14.1	57.9	28		10.9	83.5	5.5		17	71.6	11.3		6.2	84.6	9.2		
Total %	2.3	9.5	4.6	16.3	3.4	26.1	1.7	31.2	3	12.6	2	17.6	2.2	29.5	3.2	34.8	
PC	42	175	83	300	60	458	30	548	56	227	37	320	40	524	56	620	1788
% PC	95.5	97.2	95.4	96.5	92.3	92.2	90.9	92.1	98.2	94.6	97.4	95.5	97.6	93.4	91.8	93.5	93.9
SU	2	5	3	10	5	38	3	46	1	12	1	14	1	35	4	40	110
% SU	4.5	2.8	3.4	3.2	7.7	7.6	9.1	7.7	1.8	5	2.6	4.2	2.4	6.2	6.6	6	5.8
MU	0	0	1	1	0	1	0	1	0	1	0	1	0	2	1	3	6
% MU	0	0	1.1	0.3	0	0.2	0	0.2	0	0.4	0	0.3	0	0.4	1.6	0.5	0.3

	Wentworth Ave From North				111th St From East				Wentworth Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	3	**29**	11	43	**10**	68	2	80	4	29	3	36	6	81	5	92	251
08:15 AM	5	29	**17**	**51**	8	77	**8**	93	6	**45**	3	**54**	5	79	**14**	98	**296**
08:30 AM	**12**	23	16	51	7	59	2	68	5	25	7	37	**10**	**86**	6	**102**	258
08:45 AM	4	26	12	42	10	**97**	5	**112**	**11**	25	**9**	45	5	69	10	84	283
Total Volume	24	107	56	187	35	301	17	353	26	124	22	172	26	315	35	376	1088
% App. Total	12.8	57.2	29.9		9.9	85.3	4.8		15.1	72.1	12.8		6.9	83.8	9.3		
PHF	.500	.922	.824	.917	.875	.776	.531	.788	.591	.689	.611	.796	.650	.916	.625	.922	.919

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Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/16/2012
Page No : 2

Groups Printed- SU

	Wentworth Ave From North				111th St From East				Wentworth Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	3	1	4	0	1	0	1	0	3	1	4	9
07:15 AM	0	0	1	1	0	3	0	3	0	5	0	5	0	5	1	6	15
07:30 AM	0	1	0	1	0	4	0	4	1	0	0	1	0	5	0	5	11
07:45 AM	0	1	1	2	1	6	2	9	0	1	0	1	1	4	0	5	17
Total	0	2	2	4	1	16	3	20	1	7	0	8	1	17	2	20	52
08:00 AM	1	2	0	3	3	6	0	9	0	1	0	1	0	5	0	5	18
08:15 AM	0	0	0	0	1	4	0	5	0	2	0	2	0	4	0	4	11
08:30 AM	1	1	1	3	0	4	0	4	0	1	0	1	0	5	0	5	13
08:45 AM	0	0	0	0	0	8	0	8	0	1	1	2	0	4	2	6	16
Total	2	3	1	6	4	22	0	26	0	5	1	6	0	18	2	20	58
Grand Total	2	5	3	10	5	38	3	46	1	12	1	14	1	35	4	40	110
Apprch %	20	50	30		10.9	82.6	6.5		7.1	85.7	7.1		2.5	87.5	10		
Total %	1.8	4.5	2.7	9.1	4.5	34.5	2.7	41.8	0.9	10.9	0.9	12.7	0.9	31.8	3.6	36.4	

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Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/16/2012
Page No : 3

Groups Printed- MU

	Wentworth Ave From North				111th St From East				Wentworth Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2
07:45 AM	0	0	1	1	0	1	0	1	0	0	0	0	0	1	0	1	3
Total	0	0	1	1	0	1	0	1	0	1	0	1	0	2	0	2	5
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Grand Total	0	0	1	1	0	1	0	1	0	1	0	1	0	2	1	3	6
Apprch %	0	0	100		0	100	0		0	100	0		0	66.7	33.3		
Total %	0	0	16.7	16.7	0	16.7	0	16.7	0	16.7	0	16.7	0	33.3	16.7	50	

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Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/16/2012

Groups Printed- Peds & Bikes

	Wentworth Ave Crossing North Leg			111th St Crossing East Leg			Wentworth Ave Crossing South Leg			111th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	2	2	0	2	2	0	4	4	0	4	4	12
07:15 AM	0	3	3	0	2	2	0	3	3	0	5	5	13
07:30 AM	0	7	7	0	0	0	0	1	1	0	8	8	16
07:45 AM	0	6	6	0	3	3	0	6	6	0	1	1	16
Total	0	18	18	0	7	7	0	14	14	0	18	18	57
08:00 AM	1	11	12	0	4	4	0	2	2	0	14	14	32
08:15 AM	0	5	5	0	7	7	0	7	7	1	5	6	25
08:30 AM	0	5	5	0	2	2	0	7	7	0	1	1	15
08:45 AM	0	1	1	0	3	3	0	1	1	0	4	4	9
Total	1	22	23	0	16	16	0	17	17	1	24	25	81
Grand Total	1	40	41	0	23	23	0	31	31	1	42	43	138
Apprch %	2.4	97.6		0	100		0	100		2.3	97.7		
Total %	0.7	29	29.7	0	16.7	16.7	0	22.5	22.5	0.7	30.4	31.2	

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Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/16/2012
Page No : 5

Groups Printed- PC - SU - MU

	Wentworth Ave From North				111th St From East				Wentworth Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	11	42	9	62	14	70	12	96	8	27	4	39	3	78	11	92	289
04:15 PM	4	40	16	60	7	77	12	96	7	19	7	33	6	73	7	86	275
04:30 PM	6	36	10	52	3	63	10	76	7	26	9	42	10	69	8	87	257
04:45 PM	5	48	14	67	12	68	11	91	8	19	4	31	11	56	6	73	262
Total	26	166	49	241	36	278	45	359	30	91	24	145	30	276	32	338	1083
05:00 PM	12	31	12	55	13	80	14	107	7	20	3	30	6	55	1	62	254
05:15 PM	10	35	14	59	9	73	8	90	10	23	4	37	10	78	10	98	284
05:30 PM	10	34	17	61	13	65	5	83	2	26	7	35	4	77	7	88	267
05:45 PM	8	42	7	57	6	67	5	78	11	22	8	41	7	79	1	87	263
Total	40	142	50	232	41	285	32	358	30	91	22	143	27	289	19	335	1068
Grand Total	66	308	99	473	77	563	77	717	60	182	46	288	57	565	51	673	2151
Apprch %	14	65.1	20.9		10.7	78.5	10.7		20.8	63.2	16		8.5	84	7.6		
Total %	3.1	14.3	4.6	22	3.6	26.2	3.6	33.3	2.8	8.5	2.1	13.4	2.6	26.3	2.4	31.3	
PC	65	306	97	468	75	543	76	694	58	181	46	285	56	547	50	653	2100
% PC	98.5	99.4	98	98.9	97.4	96.4	98.7	96.8	96.7	99.5	100	99	98.2	96.8	98	97	97.6
SU	1	2	2	5	2	20	1	23	2	1	0	3	1	17	0	18	49
% SU	1.5	0.6	2	1.1	2.6	3.6	1.3	3.2	3.3	0.5	0	1	1.8	3	0	2.7	2.3
MU	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2
% MU	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	2	0.3	0.1

	Wentworth Ave From North				111th St From East				Wentworth Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	**11**	42	9	62	**14**	70	**12**	**96**	**8**	**27**	4	39	3	**78**	**11**	**92**	**289**
04:15 PM	4	40	**16**	60	7	**77**	12	96	7	19	7	33	6	73	7	86	275
04:30 PM	6	36	10	52	3	63	10	76	7	26	**9**	**42**	10	69	8	87	257
04:45 PM	5	**48**	14	**67**	12	68	11	91	8	19	4	31	**11**	56	6	73	262
Total Volume	26	166	49	241	36	278	45	359	30	91	24	145	30	276	32	338	1083
% App. Total	10.8	68.9	20.3		10	77.4	12.5		20.7	62.8	16.6		8.9	81.7	9.5		
PHF	.591	.865	.766	.899	.643	.903	.938	.935	.938	.843	.667	.863	.682	.885	.727	.918	.937

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111th St and Wentworth Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/16/2012
Page No : 6

Groups Printed- SU

	Wentworth Ave From North				111th St From East				Wentworth Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	1	0	0	1	1	3	0	4	0	0	0	0	0	4	0	4	9
04:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
04:30 PM	0	1	0	1	1	5	0	6	0	0	0	0	0	2	0	2	9
04:45 PM	0	1	0	1	0	3	0	3	0	1	0	1	1	2	0	3	8
Total	1	2	0	3	2	12	0	14	0	1	0	1	1	10	0	11	29
05:00 PM	0	0	1	1	0	4	1	5	0	0	0	0	0	3	0	3	9
05:15 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	4
05:30 PM	0	0	1	1	0	1	0	1	2	0	0	2	0	1	0	1	5
05:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Total	0	0	2	2	0	8	1	9	2	0	0	2	0	7	0	7	20
Grand Total	1	2	2	5	2	20	1	23	2	1	0	3	1	17	0	18	49
Apprch %	20	40	40		8.7	87	4.3		66.7	33.3	0		5.6	94.4	0		
Total %	2	4.1	4.1	10.2	4.1	40.8	2	46.9	4.1	2	0	6.1	2	34.7	0	36.7	

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Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/16/2012
Page No : 7

Groups Printed- MU

	Wentworth Ave From North				111th St From East				Wentworth Ave From South				111th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2
Apprch %	0	0	0		0	0	0		0	0	0		0	50	50		
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	50	50	100	

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Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/16/2012

Groups Printed- Peds & Bikes

	Wentworth Ave Crossing North Leg			111th St Crossing East Leg			Wentworth Ave Crossing South Leg			111th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	0	0	1	2	3	0	2	2	0	1	1	6
04:15 PM	0	2	2	0	4	4	0	5	5	0	21	21	32
04:30 PM	0	3	3	0	8	8	0	6	6	0	6	6	23
04:45 PM	0	14	14	0	3	3	0	7	7	2	5	7	31
Total	0	19	19	1	17	18	0	20	20	2	33	35	92
05:00 PM	2	10	12	2	8	10	1	6	7	1	18	19	48
05:15 PM	0	6	6	0	3	3	0	2	2	0	5	5	16
05:30 PM	0	8	8	0	10	10	0	8	8	0	13	13	39
05:45 PM	1	8	9	0	3	3	1	9	10	3	23	26	48
Total	3	32	35	2	24	26	2	25	27	4	59	63	151
Grand Total	3	51	54	3	41	44	2	45	47	6	92	98	243
Apprch %	5.6	94.4		6.8	93.2		4.3	95.7		6.1	93.9		
Total %	1.2	21	22.2	1.2	16.9	18.1	0.8	18.5	19.3	2.5	37.9	40.3	

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112th Pl and Hamlet St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/7/2012
Page No : 1

Groups Printed- PC - SU - MU

	Hamlet St From North				112th Pl From East				Hamlet St From South				112th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	2	12	0	14	4	94	81	179	0	10	102	112	305
07:15 AM	0	0	0	0	1	18	0	19	8	135	112	255	0	8	111	119	393
07:30 AM	0	0	0	0	1	15	0	16	13	128	148	289	0	8	91	99	404
07:45 AM	0	0	0	0	0	16	0	16	11	155	131	297	0	19	81	100	413
Total	0	0	0	0	4	61	0	65	36	512	472	1020	0	45	385	430	1515
08:00 AM	0	0	0	0	1	12	0	13	13	156	109	278	0	13	101	114	405
08:15 AM	0	0	0	0	1	13	0	14	21	158	143	322	0	13	75	88	424
08:30 AM	0	0	0	0	1	10	0	11	16	110	99	225	0	10	100	110	346
08:45 AM	0	0	0	0	0	26	0	26	12	95	115	222	0	11	92	103	351
Total	0	0	0	0	3	61	0	64	62	519	466	1047	0	47	368	415	1526
Grand Total	0	0	0	0	7	122	0	129	98	1031	938	2067	0	92	753	845	3041
Apprch %	0	0	0		5.4	94.6	0		4.7	49.9	45.4		0	10.9	89.1		
Total %	0	0	0	0	0.2	4	0	4.2	3.2	33.9	30.8	68	0	3	24.8	27.8	
PC	0	0	0	0	7	119	0	126	97	1010	921	2028	0	90	734	824	2978
% PC	0	0	0	0	100	97.5	0	97.7	99	98	98.2	98.1	0	97.8	97.5	97.5	97.9
SU	0	0	0	0	0	3	0	3	1	19	12	32	0	2	11	13	48
% SU	0	0	0	0	0	2.5	0	2.3	1	1.8	1.3	1.5	0	2.2	1.5	1.5	1.6
MU	0	0	0	0	0	0	0	0	0	2	5	7	0	0	8	8	15
% MU	0	0	0	0	0	0	0	0	0	0.2	0.5	0.3	0	0	1.1	0.9	0.5

	Hamlet St From North				112th Pl From East				Hamlet St From South				112th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	**1**	15	0	**16**	13	128	**148**	289	0	8	91	99	404
07:45 AM	0	0	0	0	0	**16**	0	16	11	155	131	297	0	**19**	81	100	413
08:00 AM	0	0	0	0	1	12	0	13	13	156	109	278	0	13	**101**	**114**	405
08:15 AM	0	0	0	0	1	13	0	14	**21**	**158**	143	**322**	0	13	75	88	**424**
Total Volume	0	0	0	0	3	56	0	59	58	597	531	1186	0	53	348	401	1646
% App. Total	0	0	0		5.1	94.9	0		4.9	50.3	44.8		0	13.2	86.8		
PHF	.000	.000	.000	.000	.750	.875	.000	.922	.690	.945	.897	.921	.000	.697	.861	.879	.971

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112th Pl and Hamlet St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/7/2012
Page No : 2

Groups Printed- SU

	Hamlet St From North				112th Pl From East				Hamlet St From South				112th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	1	0	1	0	2	2	4	0	1	1	2	7
07:15 AM	0	0	0	0	0	1	0	1	0	2	5	7	0	0	2	2	10
07:30 AM	0	0	0	0	0	1	0	1	0	3	0	3	0	1	0	1	5
07:45 AM	0	0	0	0	0	0	0	0	1	4	2	7	0	0	1	1	8
Total	0	0	0	0	0	3	0	3	1	11	9	21	0	2	4	6	30
08:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1	2
08:15 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	3	3	4
08:30 AM	0	0	0	0	0	0	0	0	0	4	2	6	0	0	2	2	8
08:45 AM	0	0	0	0	0	0	0	0	0	3	0	3	0	0	1	1	4
Total	0	0	0	0	0	0	0	0	0	8	3	11	0	0	7	7	18
Grand Total	0	0	0	0	0	3	0	3	1	19	12	32	0	2	11	13	48
Apprch %	0	0	0		0	100	0		3.1	59.4	37.5		0	15.4	84.6		
Total %	0	0	0	0	0	6.2	0	6.2	2.1	39.6	25	66.7	0	4.2	22.9	27.1	

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112th Pl and Hamlet St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/7/2012
Page No : 3

Groups Printed- MU

	Hamlet St From North				112th Pl From East				Hamlet St From South				112th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total	0	0	0	0	0	0	0	0	0	1	1	2	0	0	1	1	3
08:00 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	2	3
08:15 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	2	3
08:30 AM	0	0	0	0	0	0	0	0	0	1	2	3	0	0	3	3	6
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	4	5	0	0	7	7	12
Grand Total	0	0	0	0	0	0	0	0	0	2	5	7	0	0	8	8	15
Apprch %	0	0	0		0	0	0		0	28.6	71.4		0	0	100		
Total %	0	0	0	0	0	0	0	0	0	13.3	33.3	46.7	0	0	53.3	53.3	

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112th Pl and Hamlet St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 6/7/2012

Groups Printed- Peds & Bikes

	Hamlet St Crossing North Leg			112th Pl Crossing East Leg			Hamlet St Crossing South Leg			112th Pl Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	3	3	0	0	0	0	0	0	0	0	0	3
07:15 AM	0	12	12	0	0	0	0	0	0	0	0	0	12
07:30 AM	0	6	6	1	2	3	0	2	2	0	0	0	11
07:45 AM	1	8	9	0	0	0	0	0	0	0	0	0	9
Total	1	29	30	1	2	3	0	2	2	0	0	0	35
08:00 AM	0	6	6	0	0	0	0	0	0	0	0	0	6
08:15 AM	2	10	12	1	2	3	0	0	0	0	0	0	15
08:30 AM	0	4	4	0	1	1	0	2	2	0	0	0	7
08:45 AM	0	12	12	0	0	0	0	0	0	0	0	0	12
Total	2	32	34	1	3	4	0	2	2	0	0	0	40
Grand Total	3	61	64	2	5	7	0	4	4	0	0	0	75
Apprch %	4.7	95.3		28.6	71.4		0	100		0	0		
Total %	4	81.3	85.3	2.7	6.7	9.3	0	5.3	5.3	0	0	0	

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112th Pl and Hamlet St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/7/2012
Page No : 5

Groups Printed- PC - SU - MU

	Hamlet St From North				112th Pl From East				Hamlet St From South				112th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	17	0	17	10	93	90	193	0	14	80	94	304
04:15 PM	0	0	0	0	0	15	0	15	9	92	83	184	0	24	86	110	309
04:30 PM	0	0	0	0	0	15	0	15	12	84	115	211	0	26	76	102	328
04:45 PM	0	0	0	0	1	18	0	19	18	88	102	208	0	25	75	100	327
Total	0	0	0	0	1	65	0	66	49	357	390	796	0	89	317	406	1268
05:00 PM	0	0	0	0	2	36	0	38	10	76	79	165	0	24	80	104	307
05:15 PM	0	0	0	0	2	22	0	24	15	99	85	199	0	27	74	101	324
05:30 PM	0	0	0	0	0	22	0	22	11	97	104	212	0	16	86	102	336
05:45 PM	0	0	0	0	0	38	0	38	9	97	100	206	0	15	87	102	346
Total	0	0	0	0	4	118	0	122	45	369	368	782	0	82	327	409	1313
Grand Total	0	0	0	0	5	183	0	188	94	726	758	1578	0	171	644	815	2581
Apprch %	0	0	0		2.7	97.3	0		6	46	48		0	21	79		
Total %	0	0	0	0	0.2	7.1	0	7.3	3.6	28.1	29.4	61.1	0	6.6	25	31.6	
PC	0	0	0	0	5	181	0	186	93	719	750	1562	0	168	634	802	2550
% PC	0	0	0	0	100	98.9	0	98.9	98.9	99	98.9	99	0	98.2	98.4	98.4	98.8
SU	0	0	0	0	0	2	0	2	1	4	5	10	0	3	9	12	24
% SU	0	0	0	0	0	1.1	0	1.1	1.1	0.6	0.7	0.6	0	1.8	1.4	1.5	0.9
MU	0	0	0	0	0	0	0	0	0	3	3	6	0	0	1	1	7
% MU	0	0	0	0	0	0	0	0	0	0.4	0.4	0.4	0	0	0.2	0.1	0.3

	Hamlet St From North				112th Pl From East				Hamlet St From South				112th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	**2**	36	0	**38**	10	76	79	165	0	24	80	**104**	307
05:15 PM	0	0	0	0	2	22	0	24	**15**	**99**	85	199	0	**27**	74	101	324
05:30 PM	0	0	0	0	0	22	0	22	11	97	**104**	**212**	0	16	86	102	336
05:45 PM	0	0	0	0	0	**38**	0	38	9	97	100	206	0	15	**87**	102	**346**
Total Volume	0	0	0	0	4	118	0	122	45	369	368	782	0	82	327	409	1313
% App. Total	0	0	0		3.3	96.7	0		5.8	47.2	47.1		0	20	80		
PHF	.000	.000	.000	.000	.500	.776	.000	.803	.750	.932	.885	.922	.000	.759	.940	.983	.949

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112th Pl and Hamlet St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/7/2012
Page No : 6

Groups Printed- SU

	Hamlet St From North				112th Pl From East				Hamlet St From South				112th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	1	0	1	0	2	0	2	0	0	1	1	4
04:15 PM	0	0	0	0	0	1	0	1	0	2	1	3	0	1	3	4	8
04:30 PM	0	0	0	0	0	0	0	0	1	0	1	2	0	0	0	0	2
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	2	0	2	1	4	2	7	0	2	4	6	15
05:00 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	3	3	4
05:15 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	2	3
05:30 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1	2
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	3	3	0	1	5	6	9
Grand Total	0	0	0	0	0	2	0	2	1	4	5	10	0	3	9	12	24
Apprch %	0	0	0		0	100	0		10	40	50		0	25	75		
Total %	0	0	0	0	0	8.3	0	8.3	4.2	16.7	20.8	41.7	0	12.5	37.5	50	

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112th Pl and Hamlet St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/7/2012
Page No : 7

Groups Printed- MU

	Hamlet St From North				112th Pl From East				Hamlet St From South				112th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	2
Total	0	0	0	0	0	0	0	0	0	2	2	4	0	0	0	0	4
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	1	1	2	0	0	1	1	3
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	1	2	0	0	1	1	3
Grand Total	0	0	0	0	0	0	0	0	0	3	3	6	0	0	1	1	7
Apprch %	0	0	0		0	0	0		0	50	50		0	0	100		
Total %	0	0	0	0	0	0	0	0	0	42.9	42.9	85.7	0	0	14.3	14.3	

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112th Pl and Hamlet St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 6/7/2012

Groups Printed- Peds & Bikes

	Hamlet St Crossing North Leg			112th Pl Crossing East Leg			Hamlet St Crossing South Leg			112th Pl Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	2	2	1	0	1	1	0	1	0	0	0	4
04:15 PM	0	3	3	1	1	2	0	1	1	0	0	0	6
04:30 PM	0	2	2	0	1	1	0	0	0	0	0	0	3
04:45 PM	0	2	2	0	0	0	0	0	0	0	0	0	2
Total	0	9	9	2	2	4	1	1	2	0	0	0	15
05:00 PM	1	4	5	1	3	4	0	4	4	0	0	0	13
05:15 PM	0	5	5	0	4	4	0	1	1	0	0	0	10
05:30 PM	0	2	2	1	1	2	0	1	1	0	0	0	5
05:45 PM	0	2	2	0	0	0	0	0	0	0	0	0	2
Total	1	13	14	2	8	10	0	6	6	0	0	0	30
Grand Total	1	22	23	4	10	14	1	7	8	0	0	0	45
Apprch %	4.3	95.7		28.6	71.4		12.5	87.5		0	0		
Total %	2.2	48.9	51.1	8.9	22.2	31.1	2.2	15.6	17.8	0	0	0	

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112th Pl and Marshfield Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/6/2012
Page No : 1

Groups Printed- PC - SU - MU

	Marshfield Ave From North				112th Pl From East				Marshfield Ave From South				112th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	29	37	0	66	0	83	4	87	0	0	0	0	37	108	0	145	298
07:15 AM	48	35	1	84	0	99	5	104	0	0	0	0	63	108	0	171	359
07:30 AM	65	51	1	117	0	148	8	156	0	0	0	0	81	109	0	190	463
07:45 AM	47	54	0	101	0	136	4	140	0	0	0	0	82	135	0	217	458
Total	189	177	2	368	0	466	21	487	0	0	0	0	263	460	0	723	1578
08:00 AM	40	54	1	95	0	149	10	159	0	0	0	0	67	91	0	158	412
08:15 AM	41	56	2	99	0	153	12	165	0	0	0	0	97	107	0	204	468
08:30 AM	38	60	1	99	0	126	7	133	0	0	0	0	80	101	0	181	413
08:45 AM	37	66	3	106	0	152	14	166	0	0	0	0	74	94	0	168	440
Total	156	236	7	399	0	580	43	623	0	0	0	0	318	393	0	711	1733
Grand Total	345	413	9	767	0	1046	64	1110	0	0	0	0	581	853	0	1434	3311
Apprch %	45	53.8	1.2		0	94.2	5.8		0	0	0		40.5	59.5	0		
Total %	10.4	12.5	0.3	23.2	0	31.6	1.9	33.5	0	0	0	0	17.5	25.8	0	43.3	
PC	326	405	9	740	0	1023	62	1085	0	0	0	0	570	829	0	1399	3224
% PC	94.5	98.1	100	96.5	0	97.8	96.9	97.7	0	0	0	0	98.1	97.2	0	97.6	97.4
SU	14	5	0	19	0	21	2	23	0	0	0	0	9	16	0	25	67
% SU	4.1	1.2	0	2.5	0	2	3.1	2.1	0	0	0	0	1.5	1.9	0	1.7	2
MU	5	3	0	8	0	2	0	2	0	0	0	0	2	8	0	10	20
% MU	1.4	0.7	0	1	0	0.2	0	0.2	0	0	0	0	0.3	0.9	0	0.7	0.6

	Marshfield Ave From North				112th Pl From East				Marshfield Ave From South				112th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	**65**	51	1	**117**	0	148	8	156	0	0	0	0	81	109	0	190	463
07:45 AM	47	54	0	101	0	136	4	140	0	0	0	0	82	**135**	0	**217**	458
08:00 AM	40	54	1	95	0	149	10	159	0	0	0	0	67	91	0	158	412
08:15 AM	41	**56**	**2**	99	0	**153**	**12**	**165**	0	0	0	0	**97**	107	0	204	**468**
Total Volume	193	215	4	412	0	586	34	620	0	0	0	0	327	442	0	769	1801
% App. Total	46.8	52.2	1		0	94.5	5.5		0	0	0		42.5	57.5	0		
PHF	.742	.960	.500	.880	.000	.958	.708	.939	.000	.000	.000	.000	.843	.819	.000	.886	.962

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112th Pl and Marshfield Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/6/2012
Page No : 2

Groups Printed- SU

	Marshfield Ave From North				112th Pl From East				Marshfield Ave From South				112th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	2	1	0	3	0	2	0	2	0	0	0	0	0	4	0	4	9
07:15 AM	0	0	0	0	0	5	0	5	0	0	0	0	1	1	0	2	7
07:30 AM	2	0	0	2	0	1	1	2	0	0	0	0	1	0	0	1	5
07:45 AM	4	0	0	4	0	0	0	0	0	0	0	0	3	3	0	6	10
Total	8	1	0	9	0	8	1	9	0	0	0	0	5	8	0	13	31
08:00 AM	1	1	0	2	0	3	0	3	0	0	0	0	0	0	0	0	5
08:15 AM	2	0	0	2	0	3	1	4	0	0	0	0	0	2	0	2	8
08:30 AM	0	0	0	0	0	3	0	3	0	0	0	0	3	3	0	6	9
08:45 AM	3	3	0	6	0	4	0	4	0	0	0	0	1	3	0	4	14
Total	6	4	0	10	0	13	1	14	0	0	0	0	4	8	0	12	36
Grand Total	14	5	0	19	0	21	2	23	0	0	0	0	9	16	0	25	67
Apprch %	73.7	26.3	0		0	91.3	8.7		0	0	0		36	64	0		
Total %	20.9	7.5	0	28.4	0	31.3	3	34.3	0	0	0	0	13.4	23.9	0	37.3	

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7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/6/2012
Page No : 3

Groups Printed- MU

	Marshfield Ave From North				112th Pl From East				Marshfield Ave From South				112th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	3
07:15 AM	2	0	0	2	0	0	0	0	0	0	0	0	0	1	0	1	3
07:30 AM	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	2
07:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	1	2
Total	3	1	0	4	0	0	0	0	0	0	0	0	2	4	0	6	10
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
08:15 AM	1	1	0	2	0	0	0	0	0	0	0	0	0	1	0	1	3
08:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:45 AM	1	1	0	2	0	1	0	1	0	0	0	0	0	1	0	1	4
Total	2	2	0	4	0	2	0	2	0	0	0	0	0	4	0	4	10
Grand Total	5	3	0	8	0	2	0	2	0	0	0	0	2	8	0	10	20
Apprch %	62.5	37.5	0		0	100	0		0	0	0		20	80	0		
Total %	25	15	0	40	0	10	0	10	0	0	0	0	10	40	0	50	

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Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 6/6/2012
Page No : 4

Groups Printed- Peds & Bikes

	Marshfield Ave Crossing North Leg			112th Pl Crossing East Leg			Marshfield Ave Crossing South Leg			112th Pl Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	1	1	4	0	4	0	0	0	0	0	0	5
07:15 AM	1	5	6	5	0	5	0	0	0	0	0	0	11
07:30 AM	1	12	13	7	0	7	0	1	1	0	0	0	21
07:45 AM	0	5	5	4	0	4	0	2	2	0	0	0	11
Total	2	23	25	20	0	20	0	3	3	0	0	0	48
08:00 AM	1	4	5	10	0	10	0	0	0	0	0	0	15
08:15 AM	2	1	3	11	0	11	0	0	0	0	0	0	14
08:30 AM	1	6	7	7	0	7	0	0	0	0	0	0	14
08:45 AM	3	10	13	14	0	14	0	0	0	0	0	0	27
Total	7	21	28	42	0	42	0	0	0	0	0	0	70
Grand Total	9	44	53	62	0	62	0	3	3	0	0	0	118
Apprch %	17	83		100	0		0	100		0	0		
Total %	7.6	37.3	44.9	52.5	0	52.5	0	2.5	2.5	0	0	0	

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Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/6/2012
Page No : 5

Groups Printed- PC - SU - MU

	Marshfield Ave From North				112th Pl From East				Marshfield Ave From South				112th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	86	93	1	180	0	84	9	93	0	0	0	0	80	94	0	174	447
04:15 PM	71	113	1	185	0	99	11	110	0	0	0	0	97	99	0	196	491
04:30 PM	79	81	3	163	0	125	17	142	0	0	0	0	89	90	0	179	484
04:45 PM	85	105	2	192	0	96	7	103	0	0	0	0	90	113	0	203	498
Total	321	392	7	720	0	404	44	448	0	0	0	0	356	396	0	752	1920
05:00 PM	80	89	3	172	0	86	15	101	0	0	0	0	92	86	0	178	451
05:15 PM	54	99	0	153	0	112	20	132	0	0	0	0	101	104	0	205	490
05:30 PM	72	131	4	207	0	122	14	136	0	0	0	0	90	100	0	190	533
05:45 PM	63	113	2	178	0	80	12	92	0	0	0	0	86	92	0	178	448
Total	269	432	9	710	0	400	61	461	0	0	0	0	369	382	0	751	1922
Grand Total	590	824	16	1430	0	804	105	909	0	0	0	0	725	778	0	1503	3842
Apprch %	41.3	57.6	1.1		0	88.4	11.6		0	0	0		48.2	51.8	0		
Total %	15.4	21.4	0.4	37.2	0	20.9	2.7	23.7	0	0	0	0	18.9	20.2	0	39.1	
PC	584	822	16	1422	0	802	104	906	0	0	0	0	714	768	0	1482	3810
% PC	99	99.8	100	99.4	0	99.8	99	99.7	0	0	0	0	98.5	98.7	0	98.6	99.2
SU	6	2	0	8	0	1	1	2	0	0	0	0	8	10	0	18	28
% SU	1	0.2	0	0.6	0	0.1	1	0.2	0	0	0	0	1.1	1.3	0	1.2	0.7
MU	0	0	0	0	0	1	0	1	0	0	0	0	3	0	0	3	4
% MU	0	0	0	0	0	0.1	0	0.1	0	0	0	0	0.4	0	0	0.2	0.1

	Marshfield Ave From North				112th Pl From East				Marshfield Ave From South				112th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**85**	105	2	192	0	96	7	103	0	0	0	0	90	**113**	0	203	498
05:00 PM	80	89	3	172	0	86	15	101	0	0	0	0	92	86	0	178	451
05:15 PM	54	99	0	153	0	112	**20**	132	0	0	0	0	**101**	104	0	**205**	490
05:30 PM	72	**131**	**4**	**207**	0	**122**	14	**136**	0	0	0	0	90	100	0	190	**533**
Total Volume	291	424	9	724	0	416	56	472	0	0	0	0	373	403	0	776	1972
% App. Total	40.2	58.6	1.2		0	88.1	11.9		0	0	0		48.1	51.9	0		
PHF	.856	.809	.563	.874	.000	.852	.700	.868	.000	.000	.000	.000	.923	.892	.000	.946	.925

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Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/6/2012
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Groups Printed- SU

	Marshfield Ave From North				112th Pl From East				Marshfield Ave From South				112th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	3	0	0	3	0	1	0	1	0	0	0	0	2	1	0	3	7
04:15 PM	2	1	0	3	0	0	1	1	0	0	0	0	0	2	0	2	6
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
Total	5	1	0	6	0	1	1	2	0	0	0	0	2	6	0	8	16
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	4	1	0	5	5
05:15 PM	1	1	0	2	0	0	0	0	0	0	0	0	1	0	0	1	3
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	2
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
Total	1	1	0	2	0	0	0	0	0	0	0	0	6	4	0	10	12
Grand Total	6	2	0	8	0	1	1	2	0	0	0	0	8	10	0	18	28
Apprch %	75	25	0		0	50	50		0	0	0		44.4	55.6	0		
Total %	21.4	7.1	0	28.6	0	3.6	3.6	7.1	0	0	0	0	28.6	35.7	0	64.3	

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Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/6/2012
Page No : 7

Groups Printed- MU

	Marshfield Ave From North				112th Pl From East				Marshfield Ave From South				112th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	3
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	3
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Grand Total	0	0	0	0	0	1	0	1	0	0	0	0	3	0	0	3	4
Apprch %	0	0	0		0	100	0		0	0	0		100	0	0		
Total %	0	0	0	0	0	25	0	25	0	0	0	0	75	0	0	75	

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112th Pl and Marshfield Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 6/6/2012

Groups Printed- Peds & Bikes

	Marshfield Ave Crossing North Leg			112th Pl Crossing East Leg			Marshfield Ave Crossing South Leg			112th Pl Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	1	9	10	9	0	9	0	1	1	0	0	0	20
04:15 PM	1	3	4	10	0	10	0	0	0	0	0	0	14
04:30 PM	3	0	3	17	0	17	0	3	3	0	0	0	23
04:45 PM	2	5	7	7	0	7	0	1	1	0	1	1	16
Total	7	17	24	43	0	43	0	5	5	0	1	1	73
05:00 PM	3	3	6	15	0	15	0	2	2	0	0	0	23
05:15 PM	0	1	1	20	0	20	0	0	0	0	0	0	21
05:30 PM	4	2	6	14	0	14	0	5	5	0	0	0	25
05:45 PM	2	2	4	12	0	12	0	1	1	0	3	3	20
Total	9	8	17	61	0	61	0	8	8	0	3	3	89
Grand Total	16	25	41	104	0	104	0	13	13	0	4	4	162
Apprch %	39	61		100	0		0	100		0	100		
Total %	9.9	15.4	25.3	64.2	0	64.2	0	8	8	0	2.5	2.5	

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115th St and Bishop Ford Fwy
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/6/2012
Page No : 1

Groups Printed- PC - SU - MU

	Bishop Ford Fwy From North				115th St From East				Bishop Ford Fwy From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	48	0	0	48	0	101	9	110	0	0	0	0	39	22	0	61	219
07:15 AM	47	0	1	48	0	115	2	117	0	0	0	0	42	43	0	85	250
07:30 AM	48	0	2	50	0	117	9	126	0	0	0	0	55	44	0	99	275
07:45 AM	56	0	0	56	0	155	7	162	0	0	0	0	51	49	0	100	318
Total	199	0	3	202	0	488	27	515	0	0	0	0	187	158	0	345	1062
08:00 AM	48	0	0	48	0	112	4	116	0	0	0	0	37	49	0	86	250
08:15 AM	44	0	1	45	0	123	3	126	0	0	0	0	39	34	0	73	244
08:30 AM	52	0	0	52	0	115	6	121	0	0	0	0	54	38	0	92	265
08:45 AM	57	0	0	57	0	93	2	95	0	0	0	0	45	40	0	85	237
Total	201	0	1	202	0	443	15	458	0	0	0	0	175	161	0	336	996
Grand Total	400	0	4	404	0	931	42	973	0	0	0	0	362	319	0	681	2058
Apprch %	99	0	1		0	95.7	4.3		0	0	0		53.2	46.8	0		
Total %	19.4	0	0.2	19.6	0	45.2	2	47.3	0	0	0	0	17.6	15.5	0	33.1	
PC	388	0	4	392	0	893	14	907	0	0	0	0	336	307	0	643	1942
% PC	97	0	100	97	0	95.9	33.3	93.2	0	0	0	0	92.8	96.2	0	94.4	94.4
SU	10	0	0	10	0	9	5	14	0	0	0	0	6	6	0	12	36
% SU	2.5	0	0	2.5	0	1	11.9	1.4	0	0	0	0	1.7	1.9	0	1.8	1.7
MU	2	0	0	2	0	29	23	52	0	0	0	0	20	6	0	26	80
% MU	0.5	0	0	0.5	0	3.1	54.8	5.3	0	0	0	0	5.5	1.9	0	3.8	3.9

	Bishop Ford Fwy From North				115th St From East				Bishop Ford Fwy From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	47	0	1	48	0	115	2	117	0	0	0	0	42	43	0	85	250
07:30 AM	48	0	**2**	50	0	117	**9**	126	0	0	0	0	**55**	44	0	99	275
07:45 AM	**56**	0	0	**56**	0	**155**	7	**162**	0	0	0	0	51	**49**	0	**100**	**318**
08:00 AM	48	0	0	48	0	112	4	116	0	0	0	0	37	49	0	86	250
Total Volume	199	0	3	202	0	499	22	521	0	0	0	0	185	185	0	370	1093
% App. Total	98.5	0	1.5		0	95.8	4.2		0	0	0		50	50	0		
PHF	.888	.000	.375	.902	.000	.805	.611	.804	.000	.000	.000	.000	.841	.944	.000	.925	.859

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115th St and Bishop Ford Fwy
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/6/2012

Groups Printed- SU

	Bishop Ford Fwy From North				115th St From East				Bishop Ford Fwy From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	2	0	0	2	0	1	0	1	0	0	0	0	0	0	0	0	3
07:15 AM	3	0	0	3	0	1	1	2	0	0	0	0	0	0	0	0	5
07:30 AM	2	0	0	2	0	2	1	3	0	0	0	0	0	0	0	0	5
07:45 AM	1	0	0	1	0	0	1	1	0	0	0	0	2	2	0	4	6
Total	8	0	0	8	0	4	3	7	0	0	0	0	2	2	0	4	19
08:00 AM	1	0	0	1	0	1	0	1	0	0	0	0	1	0	0	1	3
08:15 AM	1	0	0	1	0	2	0	2	0	0	0	0	0	0	0	0	3
08:30 AM	0	0	0	0	0	0	2	2	0	0	0	0	1	2	0	3	5
08:45 AM	0	0	0	0	0	2	0	2	0	0	0	0	2	2	0	4	6
Total	2	0	0	2	0	5	2	7	0	0	0	0	4	4	0	8	17
Grand Total	10	0	0	10	0	9	5	14	0	0	0	0	6	6	0	12	36
Apprch %	100	0	0		0	64.3	35.7		0	0	0		50	50	0		
Total %	27.8	0	0	27.8	0	25	13.9	38.9	0	0	0	0	16.7	16.7	0	33.3	

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115th St and Bishop Ford Fwy
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/6/2012
Page No : 3

Groups Printed- MU

	Bishop Ford Fwy From North				115th St From East				Bishop Ford Fwy From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	5	4	9	0	0	0	0	6	0	0	6	15
07:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	3	2	0	5	6
07:30 AM	0	0	0	0	0	3	5	8	0	0	0	0	1	0	0	1	9
07:45 AM	2	0	0	2	0	6	5	11	0	0	0	0	2	0	0	2	15
Total	2	0	0	2	0	15	14	29	0	0	0	0	12	2	0	14	45
08:00 AM	0	0	0	0	0	4	3	7	0	0	0	0	2	3	0	5	12
08:15 AM	0	0	0	0	0	2	1	3	0	0	0	0	1	0	0	1	4
08:30 AM	0	0	0	0	0	5	3	8	0	0	0	0	2	0	0	2	10
08:45 AM	0	0	0	0	0	3	2	5	0	0	0	0	3	1	0	4	9
Total	0	0	0	0	0	14	9	23	0	0	0	0	8	4	0	12	35
Grand Total	2	0	0	2	0	29	23	52	0	0	0	0	20	6	0	26	80
Apprch %	100	0	0		0	55.8	44.2		0	0	0		76.9	23.1	0		
Total %	2.5	0	0	2.5	0	36.2	28.8	65	0	0	0	0	25	7.5	0	32.5	

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115th St and Bishop Ford Fwy
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/6/2012
Page No : 4

Groups Printed- PC - SU - MU

	Bishop Ford Fwy From North				115th St From East				Bishop Ford Fwy From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	40	2	0	42	0	56	19	75	0	0	0	0	80	43	0	123	240
04:15 PM	49	7	4	60	0	59	18	77	0	0	0	0	116	54	0	170	307
04:30 PM	66	1	3	70	0	65	8	73	0	0	0	0	140	44	0	184	327
04:45 PM	46	1	6	53	0	81	8	89	0	0	0	0	83	53	0	136	278
Total	201	11	13	225	0	261	53	314	0	0	0	0	419	194	0	613	1152
05:00 PM	49	0	0	49	0	88	12	100	0	0	0	0	159	45	0	204	353
05:15 PM	46	1	4	51	0	73	7	80	0	0	0	0	129	53	0	182	313
05:30 PM	52	3	3	58	0	73	2	75	0	0	0	0	128	53	0	181	314
05:45 PM	73	2	8	83	0	77	4	81	0	0	0	0	126	52	0	178	342
Total	220	6	15	241	0	311	25	336	0	0	0	0	542	203	0	745	1322
Grand Total	421	17	28	466	0	572	78	650	0	0	0	0	961	397	0	1358	2474
Apprch %	90.3	3.6	6		0	88	12		0	0	0		70.8	29.2	0		
Total %	17	0.7	1.1	18.8	0	23.1	3.2	26.3	0	0	0	0	38.8	16	0	54.9	
PC	412	17	27	456	0	558	72	630	0	0	0	0	953	392	0	1345	2431
% PC	97.9	100	96.4	97.9	0	97.6	92.3	96.9	0	0	0	0	99.2	98.7	0	99	98.3
SU	7	0	1	8	0	5	1	6	0	0	0	0	5	3	0	8	22
% SU	1.7	0	3.6	1.7	0	0.9	1.3	0.9	0	0	0	0	0.5	0.8	0	0.6	0.9
MU	2	0	0	2	0	9	5	14	0	0	0	0	3	2	0	5	21
% MU	0.5	0	0	0.4	0	1.6	6.4	2.2	0	0	0	0	0.3	0.5	0	0.4	0.8

	Bishop Ford Fwy From North				115th St From East				Bishop Ford Fwy From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	49	0	0	49	0	**88**	**12**	**100**	0	0	0	0	**159**	45	0	**204**	**353**
05:15 PM	46	1	4	51	0	73	7	80	0	0	0	0	129	**53**	0	182	313
05:30 PM	52	**3**	3	58	0	73	2	75	0	0	0	0	128	53	0	181	314
05:45 PM	**73**	2	**8**	**83**	0	77	4	81	0	0	0	0	126	52	0	178	342
Total Volume	220	6	15	241	0	311	25	336	0	0	0	0	542	203	0	745	1322
% App. Total	91.3	2.5	6.2		0	92.6	7.4		0	0	0		72.8	27.2	0		
PHF	.753	.500	.469	.726	.000	.884	.521	.840	.000	.000	.000	.000	.852	.958	.000	.913	.936

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115th St and Bishop Ford Fwy
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/6/2012

Groups Printed- SU

	Bishop Ford Fwy From North				115th St From East				Bishop Ford Fwy From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	3	3
04:30 PM	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
04:45 PM	3	0	1	4	0	1	0	1	0	0	0	0	1	0	0	1	6
Total	5	0	1	6	0	3	0	3	0	0	0	0	2	3	0	5	14
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
05:15 PM	0	0	0	0	0	0	1	1	0	0	0	0	2	0	0	2	3
05:30 PM	1	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
05:45 PM	1	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
Total	2	0	0	2	0	2	1	3	0	0	0	0	3	0	0	3	8
Grand Total	7	0	1	8	0	5	1	6	0	0	0	0	5	3	0	8	22
Apprch %	87.5	0	12.5		0	83.3	16.7		0	0	0		62.5	37.5	0		
Total %	31.8	0	4.5	36.4	0	22.7	4.5	27.3	0	0	0	0	22.7	13.6	0	36.4	

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Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/6/2012
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Groups Printed- MU

	Bishop Ford Fwy From North				115th St From East				Bishop Ford Fwy From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	3	1	4	0	0	0	0	0	0	0	0	4
04:15 PM	0	0	0	0	0	1	2	3	0	0	0	0	1	0	0	1	4
04:30 PM	0	0	0	0	0	2	2	4	0	0	0	0	0	0	0	0	4
04:45 PM	0	0	0	0	0	2	0	2	0	0	0	0	1	1	0	2	4
Total	0	0	0	0	0	8	5	13	0	0	0	0	2	1	0	3	16
05:00 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
*** BREAK ***																	
05:45 PM	1	0	0	1	0	1	0	1	0	0	0	0	0	1	0	1	3
Total	2	0	0	2	0	1	0	1	0	0	0	0	1	1	0	2	5
Grand Total	2	0	0	2	0	9	5	14	0	0	0	0	3	2	0	5	21
Apprch %	100	0	0		0	64.3	35.7		0	0	0		60	40	0		
Total %	9.5	0	0	9.5	0	42.9	23.8	66.7	0	0	0	0	14.3	9.5	0	23.8	

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115th St and Cottage Grove Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/10/2012
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Groups Printed- PC - SU - MU

	Cottage Grove Ave From North				115th St From East				Cottage Grove Ave From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	15	1	7	23	6	82	16	104	1	0	0	1	2	57	6	65	193
07:15 AM	11	0	3	14	19	124	19	162	0	0	0	0	1	84	19	104	280
07:30 AM	14	1	7	22	14	92	16	122	1	0	0	1	1	96	13	110	255
07:45 AM	25	1	13	39	20	138	15	173	0	0	0	0	0	112	20	132	344
Total	65	3	30	98	59	436	66	561	2	0	0	2	4	349	58	411	1072
08:00 AM	15	0	10	25	15	141	9	165	0	0	0	0	1	99	20	120	310
08:15 AM	11	1	8	20	22	116	7	145	0	0	0	0	0	81	16	97	262
08:30 AM	12	0	6	18	29	143	2	174	0	0	1	1	0	77	14	91	284
08:45 AM	28	0	14	42	15	122	1	138	0	0	0	0	0	87	21	108	288
Total	66	1	38	105	81	522	19	622	0	0	1	1	1	344	71	416	1144
Grand Total	131	4	68	203	140	958	85	1183	2	0	1	3	5	693	129	827	2216
Apprch %	64.5	2	33.5		11.8	81	7.2		66.7	0	33.3		0.6	83.8	15.6		
Total %	5.9	0.2	3.1	9.2	6.3	43.2	3.8	53.4	0.1	0	0	0.1	0.2	31.3	5.8	37.3	
PC	117	4	64	185	139	923	85	1147	2	0	1	3	5	672	124	801	2136
% PC	89.3	100	94.1	91.1	99.3	96.3	100	97	100	0	100	100	100	97	96.1	96.9	96.4
SU	14	0	2	16	1	30	0	31	0	0	0	0	0	21	5	26	73
% SU	10.7	0	2.9	7.9	0.7	3.1	0	2.6	0	0	0	0	0	3	3.9	3.1	3.3
MU	0	0	2	2	0	5	0	5	0	0	0	0	0	0	0	0	7
% MU	0	0	2.9	1	0	0.5	0	0.4	0	0	0	0	0	0	0	0	0.3

	Cottage Grove Ave From North				115th St From East				Cottage Grove Ave From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	**25**	**1**	**13**	**39**	20	138	**15**	173	0	0	0	0	0	**112**	**20**	**132**	**344**
08:00 AM	15	0	10	25	15	141	9	165	0	0	0	0	**1**	99	20	120	310
08:15 AM	11	1	8	20	22	116	7	145	0	0	0	0	0	81	16	97	262
08:30 AM	12	0	6	18	**29**	**143**	2	**174**	0	0	**1**	**1**	0	77	14	91	284
Total Volume	63	2	37	102	86	538	33	657	0	0	1	1	1	369	70	440	1200
% App. Total	61.8	2	36.3		13.1	81.9	5		0	0	100		0.2	83.9	15.9		
PHF	.630	.500	.712	.654	.741	.941	.550	.944	.000	.000	.250	.250	.250	.824	.875	.833	.872

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115th St and Cottage Grove Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/10/2012
Page No : 2

Groups Printed- SU

	Cottage Grove Ave From North				115th St From East				Cottage Grove Ave From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	1	0	1	2	0	4	0	4	0	0	0	0	0	1	0	1	7
07:15 AM	0	0	0	0	0	4	0	4	0	0	0	0	0	4	1	5	9
07:30 AM	1	0	0	1	0	1	0	1	0	0	0	0	0	3	1	4	6
07:45 AM	2	0	1	3	0	8	0	8	0	0	0	0	0	1	0	1	12
Total	4	0	2	6	0	17	0	17	0	0	0	0	0	9	2	11	34
08:00 AM	1	0	0	1	0	1	0	1	0	0	0	0	0	3	0	3	5
08:15 AM	3	0	0	3	0	4	0	4	0	0	0	0	0	5	2	7	14
08:30 AM	2	0	0	2	1	3	0	4	0	0	0	0	0	2	1	3	9
08:45 AM	4	0	0	4	0	5	0	5	0	0	0	0	0	2	0	2	11
Total	10	0	0	10	1	13	0	14	0	0	0	0	0	12	3	15	39
Grand Total	14	0	2	16	1	30	0	31	0	0	0	0	0	21	5	26	73
Apprch %	87.5	0	12.5		3.2	96.8	0		0	0	0		0	80.8	19.2		
Total %	19.2	0	2.7	21.9	1.4	41.1	0	42.5	0	0	0	0	0	28.8	6.8	35.6	

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115th St and Cottage Grove Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/10/2012
Page No : 3

Groups Printed- MU

	Cottage Grove Ave From North				115th St From East				Cottage Grove Ave From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	3
07:45 AM	0	0	1	1	0	2	0	2	0	0	0	0	0	0	0	0	3
Total	0	0	1	1	0	5	0	5	0	0	0	0	0	0	0	0	6
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	0	2	2	0	5	0	5	0	0	0	0	0	0	0	0	7
Apprch %	0	0	100		0	100	0		0	0	0		0	0	0		
Total %	0	0	28.6	28.6	0	71.4	0	71.4	0	0	0	0	0	0	0	0	

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115th St and Cottage Grove Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/10/2012

Groups Printed- Peds & Bikes

	Cottage Grove Ave Crossing North Leg			115th St Crossing East Leg			Cottage Grove Ave Crossing South Leg			115th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	8	8	0	0	0	0	0	0	0	7	7	15
07:15 AM	0	10	10	0	3	3	0	2	2	0	5	5	20
07:30 AM	0	5	5	0	8	8	0	9	9	0	9	9	31
07:45 AM	0	7	7	0	1	1	1	0	1	0	10	10	19
Total	0	30	30	0	12	12	1	11	12	0	31	31	85
08:00 AM	0	15	15	0	4	4	0	4	4	0	4	4	27
08:15 AM	1	6	7	0	0	0	0	0	0	0	6	6	13
08:30 AM	0	9	9	0	1	1	0	0	0	0	0	0	10
08:45 AM	0	5	5	0	4	4	0	0	0	0	4	4	13
Total	1	35	36	0	9	9	0	4	4	0	14	14	63
Grand Total	1	65	66	0	21	21	1	15	16	0	45	45	148
Apprch %	1.5	98.5		0	100		6.2	93.8		0	100		
Total %	0.7	43.9	44.6	0	14.2	14.2	0.7	10.1	10.8	0	30.4	30.4	

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115th St and Cottage Grove Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/10/2012
Page No : 5

Groups Printed- PC - SU - MU

	Cottage Grove Ave From North				115th St From East				Cottage Grove Ave From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	22	0	18	40	15	96	0	111	1	0	0	1	1	94	11	106	258
04:15 PM	19	0	31	50	10	133	0	143	3	0	0	3	0	95	10	105	301
04:30 PM	26	0	17	43	10	139	0	149	11	0	0	11	0	113	12	125	328
04:45 PM	36	0	44	80	10	171	0	181	2	0	2	4	0	126	11	137	402
Total	103	0	110	213	45	539	0	584	17	0	2	19	1	428	44	473	1289
05:00 PM	20	0	37	57	6	128	0	134	21	0	2	23	0	108	6	114	328
05:15 PM	38	0	44	82	12	166	2	180	14	0	2	16	0	105	13	118	396
05:30 PM	21	0	37	58	9	178	0	187	9	0	0	9	0	105	10	115	369
05:45 PM	24	0	38	62	7	188	0	195	9	2	1	12	0	144	8	152	421
Total	103	0	156	259	34	660	2	696	53	2	5	60	0	462	37	499	1514
Grand Total	206	0	266	472	79	1199	2	1280	70	2	7	79	1	890	81	972	2803
Apprch %	43.6	0	56.4		6.2	93.7	0.2		88.6	2.5	8.9		0.1	91.6	8.3		
Total %	7.3	0	9.5	16.8	2.8	42.8	0.1	45.7	2.5	0.1	0.2	2.8	0	31.8	2.9	34.7	
PC	191	0	262	453	78	1188	2	1268	70	2	6	78	1	877	81	959	2758
% PC	92.7	0	98.5	96	98.7	99.1	100	99.1	100	100	85.7	98.7	100	98.5	100	98.7	98.4
SU	15	0	3	18	0	10	0	10	0	0	1	1	0	12	0	12	41
% SU	7.3	0	1.1	3.8	0	0.8	0	0.8	0	0	14.3	1.3	0	1.3	0	1.2	1.5
MU	0	0	1	1	1	1	0	2	0	0	0	0	0	1	0	1	4
% MU	0	0	0.4	0.2	1.3	0.1	0	0.2	0	0	0	0	0	0.1	0	0.1	0.1

	Cottage Grove Ave From North				115th St From East				Cottage Grove Ave From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	20	0	37	57	6	128	0	134	**21**	0	**2**	**23**	0	108	6	114	328
05:15 PM	**38**	0	**44**	**82**	**12**	166	**2**	180	14	0	2	16	0	105	**13**	118	396
05:30 PM	21	0	37	58	9	178	0	187	9	0	0	9	0	105	10	115	369
05:45 PM	24	0	38	62	7	**188**	0	**195**	9	**2**	1	12	0	**144**	8	**152**	**421**
Total Volume	103	0	156	259	34	660	2	696	53	2	5	60	0	462	37	499	1514
% App. Total	39.8	0	60.2		4.9	94.8	0.3		88.3	3.3	8.3		0	92.6	7.4		
PHF	.678	.000	.886	.790	.708	.878	.250	.892	.631	.250	.625	.652	.000	.802	.712	.821	.899

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115th St and Cottage Grove Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
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Groups Printed- SU

	Cottage Grove Ave From North				115th St From East				Cottage Grove Ave From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	3	0	2	5	0	0	0	0	0	0	0	0	0	0	0	0	5
04:15 PM	2	0	0	2	0	0	0	0	0	0	0	0	0	1	0	1	3
04:30 PM	2	0	0	2	0	2	0	2	0	0	0	0	0	4	0	4	8
04:45 PM	1	0	1	2	0	2	0	2	0	0	0	0	0	1	0	1	5
Total	8	0	3	11	0	4	0	4	0	0	0	0	0	6	0	6	21
05:00 PM	3	0	0	3	0	1	0	1	0	0	0	0	0	2	0	2	6
05:15 PM	2	0	0	2	0	1	0	1	0	0	1	1	0	2	0	2	6
05:30 PM	1	0	0	1	0	1	0	1	0	0	0	0	0	1	0	1	3
05:45 PM	1	0	0	1	0	3	0	3	0	0	0	0	0	1	0	1	5
Total	7	0	0	7	0	6	0	6	0	0	1	1	0	6	0	6	20
Grand Total	15	0	3	18	0	10	0	10	0	0	1	1	0	12	0	12	41
Apprch %	83.3	0	16.7		0	100	0		0	0	100		0	100	0		
Total %	36.6	0	7.3	43.9	0	24.4	0	24.4	0	0	2.4	2.4	0	29.3	0	29.3	

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4:00 PM - 6:00 PM
Sunny, Dry

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Groups Printed- MU

	Cottage Grove Ave From North				115th St From East				Cottage Grove Ave From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
05:00 PM	0	0	1	1	1	0	0	1	0	0	0	0	0	0	0	0	2
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	1	1	0	0	1	0	0	0	0	0	0	0	0	2
Grand Total	0	0	1	1	1	1	0	2	0	0	0	0	0	1	0	1	4
Apprch %	0	0	100		50	50	0		0	0	0		0	100	0		
Total %	0	0	25	25	25	25	0	50	0	0	0	0	0	25	0	25	

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Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/10/2012

Groups Printed- Peds & Bikes

	Cottage Grove Ave Crossing North Leg			115th St Crossing East Leg			Cottage Grove Ave Crossing South Leg			115th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	2	2	0	1	1	0	0	0	0	0	0	3
04:15 PM	0	10	10	0	0	0	0	1	1	0	0	0	11
04:30 PM	0	5	5	0	0	0	0	10	10	0	4	4	19
04:45 PM	0	5	5	0	0	0	0	0	0	0	0	0	5
Total	0	22	22	0	1	1	0	11	11	0	4	4	38
05:00 PM	0	17	17	0	0	0	0	15	15	0	5	5	37
05:15 PM	0	8	8	0	1	1	0	11	11	0	2	2	22
05:30 PM	1	18	19	0	0	0	0	9	9	0	4	4	32
05:45 PM	0	17	17	0	9	9	0	9	9	0	3	3	38
Total	1	60	61	0	10	10	0	44	44	0	14	14	129
Grand Total	1	82	83	0	11	11	0	55	55	0	18	18	167
Apprch %	1.2	98.8		0	100		0	100		0	100		
Total %	0.6	49.1	49.7	0	6.6	6.6	0	32.9	32.9	0	10.8	10.8	

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Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/9/2012
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Groups Printed- PC - SU - MU

	Halsted St From North				115th St From East				Halsted St From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	11	59	5	75	17	30	8	55	9	185	7	201	7	46	21	74	405
07:15 AM	21	62	8	91	24	52	8	84	7	201	9	217	4	38	30	72	464
07:30 AM	15	77	14	106	15	48	11	74	10	189	19	218	6	44	42	92	490
07:45 AM	24	76	20	120	18	44	14	76	15	246	8	269	14	55	55	124	589
Total	71	274	47	392	74	174	41	289	41	821	43	905	31	183	148	362	1948
08:00 AM	10	104	16	130	15	54	12	81	9	184	14	207	11	44	30	85	503
08:15 AM	21	116	16	153	14	30	13	57	24	209	18	251	8	59	42	109	570
08:30 AM	18	96	18	132	26	41	12	79	16	172	9	197	11	47	30	88	496
08:45 AM	25	81	18	124	13	44	12	69	16	161	19	196	21	40	37	98	487
Total	74	397	68	539	68	169	49	286	65	726	60	851	51	190	139	380	2056
Grand Total	145	671	115	931	142	343	90	575	106	1547	103	1756	82	373	287	742	4004
Apprch %	15.6	72.1	12.4		24.7	59.7	15.7		6	88.1	5.9		11.1	50.3	38.7		
Total %	3.6	16.8	2.9	23.3	3.5	8.6	2.2	14.4	2.6	38.6	2.6	43.9	2	9.3	7.2	18.5	
PC	139	619	112	870	135	323	89	547	104	1471	100	1675	80	355	282	717	3809
% PC	95.9	92.3	97.4	93.4	95.1	94.2	98.9	95.1	98.1	95.1	97.1	95.4	97.6	95.2	98.3	96.6	95.1
SU	6	48	3	57	7	20	1	28	2	64	3	69	2	18	4	24	178
% SU	4.1	7.2	2.6	6.1	4.9	5.8	1.1	4.9	1.9	4.1	2.9	3.9	2.4	4.8	1.4	3.2	4.4
MU	0	4	0	4	0	0	0	0	0	12	0	12	0	0	1	1	17
% MU	0	0.6	0	0.4	0	0	0	0	0	0.8	0	0.7	0	0	0.3	0.1	0.4

	Halsted St From North				115th St From East				Halsted St From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	**24**	76	**20**	120	18	44	**14**	76	15	**246**	8	**269**	**14**	55	**55**	**124**	**589**
08:00 AM	10	104	16	130	15	**54**	12	**81**	9	184	14	207	11	44	30	85	503
08:15 AM	21	**116**	16	**153**	14	30	13	57	**24**	209	**18**	251	8	**59**	42	109	570
08:30 AM	18	96	18	132	**26**	41	12	79	16	172	9	197	11	47	30	88	496
Total Volume	73	392	70	535	73	169	51	293	64	811	49	924	44	205	157	406	2158
% App. Total	13.6	73.3	13.1		24.9	57.7	17.4		6.9	87.8	5.3		10.8	50.5	38.7		
PHF	.760	.845	.875	.874	.702	.782	.911	.904	.667	.824	.681	.859	.786	.869	.714	.819	.916

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115th St and Halsted St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
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Groups Printed- SU

	Halsted St From North				115th St From East				Halsted St From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	5	0	5	2	4	0	6	0	11	0	11	1	3	0	4	26
07:15 AM	0	8	0	8	0	3	1	4	0	3	1	4	0	2	0	2	18
07:30 AM	1	4	1	6	0	2	0	2	0	3	0	3	0	4	2	6	17
07:45 AM	1	6	0	7	0	2	0	2	0	10	1	11	0	2	1	3	23
Total	2	23	1	26	2	11	1	14	0	27	2	29	1	11	3	15	84
08:00 AM	0	2	0	2	0	5	0	5	0	11	1	12	0	1	0	1	20
08:15 AM	1	7	1	9	1	1	0	2	0	10	0	10	0	1	1	2	23
08:30 AM	3	8	1	12	3	2	0	5	2	7	0	9	0	3	0	3	29
08:45 AM	0	8	0	8	1	1	0	2	0	9	0	9	1	2	0	3	22
Total	4	25	2	31	5	9	0	14	2	37	1	40	1	7	1	9	94
Grand Total	6	48	3	57	7	20	1	28	2	64	3	69	2	18	4	24	178
Apprch %	10.5	84.2	5.3		25	71.4	3.6		2.9	92.8	4.3		8.3	75	16.7		
Total %	3.4	27	1.7	32	3.9	11.2	0.6	15.7	1.1	36	1.7	38.8	1.1	10.1	2.2	13.5	

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Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
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Groups Printed- MU

	Halsted St From North				115th St From East				Halsted St From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
07:15 AM	0	0	0	0	0	0	0	0	0	3	0	3	0	0	1	1	4
07:30 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
07:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	2	0	2	0	0	0	0	0	7	0	7	0	0	1	1	10
08:00 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
08:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:45 AM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
Total	0	2	0	2	0	0	0	0	0	5	0	5	0	0	0	0	7
Grand Total	0	4	0	4	0	0	0	0	0	12	0	12	0	0	1	1	17
Apprch %	0	100	0		0	0	0		0	100	0		0	0	100		
Total %	0	23.5	0	23.5	0	0	0	0	0	70.6	0	70.6	0	0	5.9	5.9	

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Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
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Start Date : 5/9/2012

Groups Printed- Peds & Bikes

	Halsted St Crossing North Leg			115th St Crossing East Leg			Halsted St Crossing South Leg			115th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	1	7	8	0	7	7	0	3	3	0	8	8	26
07:15 AM	0	9	9	0	4	4	0	1	1	0	12	12	26
07:30 AM	0	7	7	0	4	4	0	2	2	0	9	9	22
07:45 AM	0	3	3	0	0	0	0	1	1	0	9	9	13
Total	1	26	27	0	15	15	0	7	7	0	38	38	87
08:00 AM	0	1	1	0	6	6	0	2	2	0	7	7	16
08:15 AM	0	20	20	1	2	3	0	2	2	0	12	12	37
08:30 AM	0	13	13	0	8	8	0	4	4	0	9	9	34
08:45 AM	0	13	13	0	1	1	0	2	2	0	13	13	29
Total	0	47	47	1	17	18	0	10	10	0	41	41	116
Grand Total	1	73	74	1	32	33	0	17	17	0	79	79	203
Apprch %	1.4	98.6		3	97		0	100		0	100		
Total %	0.5	36	36.5	0.5	15.8	16.3	0	8.4	8.4	0	38.9	38.9	

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4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
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Groups Printed- PC - SU - MU

	Halsted St From North				115th St From East				Halsted St From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	32	170	22	224	14	53	27	94	12	109	19	140	15	51	22	88	546
04:15 PM	24	143	29	196	11	52	24	87	20	122	21	163	27	59	19	105	551
04:30 PM	37	166	15	218	26	64	28	118	17	98	21	136	26	60	30	116	588
04:45 PM	32	163	28	223	16	55	31	102	13	118	32	163	35	34	23	92	580
Total	125	642	94	861	67	224	110	401	62	447	93	602	103	204	94	401	2265
05:00 PM	24	166	13	203	20	72	41	133	13	102	23	138	21	56	22	99	573
05:15 PM	36	190	18	244	16	77	36	129	12	100	20	132	23	43	30	96	601
05:30 PM	25	201	20	246	18	77	37	132	12	116	25	153	27	51	34	112	643
05:45 PM	32	195	25	252	11	85	45	141	15	97	28	140	17	51	20	88	621
Total	117	752	76	945	65	311	159	535	52	415	96	563	88	201	106	395	2438
Grand Total	242	1394	170	1806	132	535	269	936	114	862	189	1165	191	405	200	796	4703
Apprch %	13.4	77.2	9.4		14.1	57.2	28.7		9.8	74	16.2		24	50.9	25.1		
Total %	5.1	29.6	3.6	38.4	2.8	11.4	5.7	19.9	2.4	18.3	4	24.8	4.1	8.6	4.3	16.9	
PC	240	1347	166	1753	130	521	267	918	112	823	184	1119	188	395	198	781	4571
% PC	99.2	96.6	97.6	97.1	98.5	97.4	99.3	98.1	98.2	95.5	97.4	96.1	98.4	97.5	99	98.1	97.2
SU	2	45	3	50	2	14	2	18	2	37	5	44	2	10	2	14	126
% SU	0.8	3.2	1.8	2.8	1.5	2.6	0.7	1.9	1.8	4.3	2.6	3.8	1	2.5	1	1.8	2.7
MU	0	2	1	3	0	0	0	0	0	2	0	2	1	0	0	1	6
% MU	0	0.1	0.6	0.2	0	0	0	0	0	0.2	0	0.2	0.5	0	0	0.1	0.1

	Halsted St From North				115th St From East				Halsted St From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	24	166	13	203	**20**	72	41	133	13	102	23	138	21	**56**	22	99	573
05:15 PM	**36**	190	18	244	16	77	36	129	12	100	20	132	23	43	30	96	601
05:30 PM	25	**201**	20	246	18	77	37	132	12	**116**	25	**153**	**27**	51	**34**	**112**	**643**
05:45 PM	32	195	**25**	**252**	11	**85**	**45**	**141**	**15**	97	**28**	140	17	51	20	88	621
Total Volume	117	752	76	945	65	311	159	535	52	415	96	563	88	201	106	395	2438
% App. Total	12.4	79.6	8		12.1	58.1	29.7		9.2	73.7	17.1		22.3	50.9	26.8		
PHF	.813	.935	.760	.938	.813	.915	.883	.949	.867	.894	.857	.920	.815	.897	.779	.882	.948

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File Name : AM + PM
Site Code : 00000000
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Groups Printed- SU

	Halsted St From North				115th St From East				Halsted St From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	2	6	0	8	0	2	0	2	0	6	0	6	0	3	0	3	19
04:15 PM	0	5	2	7	0	2	1	3	0	3	1	4	1	0	0	1	15
04:30 PM	0	6	0	6	1	3	0	4	0	5	1	6	1	1	0	2	18
04:45 PM	0	6	0	6	0	1	0	1	2	7	1	10	0	2	0	2	19
Total	2	23	2	27	1	8	1	10	2	21	3	26	2	6	0	8	71
05:00 PM	0	6	1	7	0	0	0	0	0	6	1	7	0	2	0	2	16
05:15 PM	0	7	0	7	0	3	0	3	0	4	0	4	0	0	1	1	15
05:30 PM	0	4	0	4	1	2	0	3	0	1	1	2	0	2	0	2	11
05:45 PM	0	5	0	5	0	1	1	2	0	5	0	5	0	0	1	1	13
Total	0	22	1	23	1	6	1	8	0	16	2	18	0	4	2	6	55
Grand Total	2	45	3	50	2	14	2	18	2	37	5	44	2	10	2	14	126
Apprch %	4	90	6		11.1	77.8	11.1		4.5	84.1	11.4		14.3	71.4	14.3		
Total %	1.6	35.7	2.4	39.7	1.6	11.1	1.6	14.3	1.6	29.4	4	34.9	1.6	7.9	1.6	11.1	

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115th St and Halsted St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/9/2012
Page No : 7

Groups Printed- MU

	Halsted St From North				115th St From East				Halsted St From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	1	2
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	1	0	0	0	0	0	1	0	1	1	0	0	1	3
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
05:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
Grand Total	0	2	1	3	0	0	0	0	0	2	0	2	1	0	0	1	6
Apprch %	0	66.7	33.3		0	0	0		0	100	0		100	0	0		
Total %	0	33.3	16.7	50	0	0	0	0	0	33.3	0	33.3	16.7	0	0	16.7	

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Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/9/2012

Groups Printed- Peds & Bikes

	Halsted St Crossing North Leg			115th St Crossing East Leg			Halsted St Crossing South Leg			115th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	1	7	8	1	16	17	0	0	0	0	4	4	29
04:15 PM	0	2	2	1	7	8	0	10	10	0	7	7	27
04:30 PM	0	14	14	1	5	6	1	7	8	0	7	7	35
04:45 PM	0	8	8	0	1	1	0	6	6	0	1	1	16
Total	1	31	32	3	29	32	1	23	24	0	19	19	107
05:00 PM	0	3	3	0	13	13	0	10	10	0	5	5	31
05:15 PM	0	9	9	0	2	2	0	2	2	0	4	4	17
05:30 PM	0	4	4	0	5	5	0	3	3	0	4	4	16
05:45 PM	0	3	3	0	5	5	0	1	1	0	9	9	18
Total	0	19	19	0	25	25	0	16	16	0	22	22	82
Grand Total	1	50	51	3	54	57	1	39	40	0	41	41	189
Apprch %	2	98		5.3	94.7		2.5	97.5		0	100		
Total %	0.5	26.5	27	1.6	28.6	30.2	0.5	20.6	21.2	0	21.7	21.7	

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115th St and Martin Luther King Dr
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/12/2012
Page No : 1

Groups Printed- PC - SU - MU

	Martin Luther King Dr From North				115th St From East				Martin Luther King Dr From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	8	0	13	21	9	68	0	77	0	0	0	0	0	62	19	81	179
07:15 AM	9	0	11	20	5	82	0	87	0	0	0	0	0	76	15	91	198
07:30 AM	9	0	16	25	9	74	0	83	0	0	0	0	0	77	14	91	199
07:45 AM	14	0	14	28	7	102	0	109	0	0	0	0	0	93	27	120	257
Total	40	0	54	94	30	326	0	356	0	0	0	0	0	308	75	383	833
08:00 AM	21	0	15	36	13	96	0	109	0	0	0	0	0	81	19	100	245
08:15 AM	22	0	13	35	13	98	0	111	0	0	0	0	0	72	16	88	234
08:30 AM	14	0	11	25	9	123	0	132	0	0	0	0	0	89	18	107	264
08:45 AM	21	0	5	26	8	124	0	132	0	0	0	0	0	92	30	122	280
Total	78	0	44	122	43	441	0	484	0	0	0	0	0	334	83	417	1023
Grand Total	118	0	98	216	73	767	0	840	0	0	0	0	0	642	158	800	1856
Apprch %	54.6	0	45.4		8.7	91.3	0		0	0	0		0	80.2	19.8		
Total %	6.4	0	5.3	11.6	3.9	41.3	0	45.3	0	0	0	0	0	34.6	8.5	43.1	
PC	116	0	97	213	71	729	0	800	0	0	0	0	0	621	144	765	1778
% PC	98.3	0	99	98.6	97.3	95	0	95.2	0	0	0	0	0	96.7	91.1	95.6	95.8
SU	2	0	1	3	2	36	0	38	0	0	0	0	0	21	14	35	76
% SU	1.7	0	1	1.4	2.7	4.7	0	4.5	0	0	0	0	0	3.3	8.9	4.4	4.1
MU	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
% MU	0	0	0	0	0	0.3	0	0.2	0	0	0	0	0	0	0	0	0.1

	Martin Luther King Dr From North				115th St From East				Martin Luther King Dr From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	21	0	**15**	**36**	**13**	96	0	109	0	0	0	0	0	81	19	100	245
08:15 AM	**22**	0	13	35	13	98	0	111	0	0	0	0	0	72	16	88	234
08:30 AM	14	0	11	25	9	123	0	**132**	0	0	0	0	0	89	18	107	264
08:45 AM	21	0	5	26	8	**124**	0	132	0	0	0	0	0	**92**	**30**	**122**	**280**
Total Volume	78	0	44	122	43	441	0	484	0	0	0	0	0	334	83	417	1023
% App. Total	63.9	0	36.1		8.9	91.1	0		0	0	0		0	80.1	19.9		
PHF	.886	.000	.733	.847	.827	.889	.000	.917	.000	.000	.000	.000	.000	.908	.692	.855	.913

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115th St and Martin Luther King Dr
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/12/2012

Groups Printed- SU

	Martin Luther King Dr From North				115th St From East				Martin Luther King Dr From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	1	3	0	4	0	0	0	0	0	1	2	3	7
07:15 AM	1	0	0	1	0	9	0	9	0	0	0	0	0	4	1	5	15
07:30 AM	0	0	1	1	0	2	0	2	0	0	0	0	0	4	3	7	10
07:45 AM	0	0	0	0	0	5	0	5	0	0	0	0	0	2	1	3	8
Total	1	0	1	2	1	19	0	20	0	0	0	0	0	11	7	18	40
08:00 AM	1	0	0	1	0	6	0	6	0	0	0	0	0	2	2	4	11
08:15 AM	0	0	0	0	0	4	0	4	0	0	0	0	0	2	3	5	9
08:30 AM	0	0	0	0	1	3	0	4	0	0	0	0	0	4	1	5	9
08:45 AM	0	0	0	0	0	4	0	4	0	0	0	0	0	2	1	3	7
Total	1	0	0	1	1	17	0	18	0	0	0	0	0	10	7	17	36
Grand Total	2	0	1	3	2	36	0	38	0	0	0	0	0	21	14	35	76
Apprch %	66.7	0	33.3		5.3	94.7	0		0	0	0		0	60	40		
Total %	2.6	0	1.3	3.9	2.6	47.4	0	50	0	0	0	0	0	27.6	18.4	46.1	

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115th St and Martin Luther King Dr
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/12/2012

Groups Printed- MU

	Martin Luther King Dr From North				115th St From East				Martin Luther King Dr From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
Total	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
Apprch %	0	0	0		0	100	0		0	0	0		0	0	0		
Total %	0	0	0	0	0	100	0	100	0	0	0	0	0	0	0	0	

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115th St and Martin Luther King Dr
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Ped
Site Code : 00000000
Start Date : 6/12/2012
Page No : 4

Groups Printed- Peds & Bikes

	Martin Luther King Dr Crossing North Leg			115th St Crossing East Leg			Martin Luther King Dr Crossing South Leg			115th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	3	3	0	0	0	0	3	3	0	0	0	6
07:15 AM	0	1	1	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	7	7	0	0	0	0	6	6	0	2	2	15
07:45 AM	0	6	6	1	2	3	2	3	5	0	1	1	15
Total	0	17	17	1	2	3	2	12	14	0	3	3	37
08:00 AM	0	5	5	0	2	2	0	3	3	0	0	0	10
08:15 AM	0	3	3	1	1	2	0	7	7	0	0	0	12
08:30 AM	0	8	8	0	3	3	0	6	6	0	3	3	20
08:45 AM	0	8	8	0	0	0	0	2	2	0	2	2	12
Total	0	24	24	1	6	7	0	18	18	0	5	5	54
Grand Total	0	41	41	2	8	10	2	30	32	0	8	8	91
Apprch %	0	100		20	80		6.2	93.8		0	100		
Total %	0	45.1	45.1	2.2	8.8	11	2.2	33	35.2	0	8.8	8.8	

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115th St and Martin Luther King Dr
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/12/2012
Page No : 5

Groups Printed- PC - SU - MU

	Martin Luther King Dr From North				115th St From East				Martin Luther King Dr From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	20	0	12	32	9	92	0	101	0	0	0	0	0	96	26	122	255
04:15 PM	38	0	21	59	6	112	0	118	0	0	0	0	0	93	15	108	285
04:30 PM	30	0	24	54	5	104	0	109	0	0	0	0	0	86	17	103	266
04:45 PM	33	0	10	43	3	84	0	87	0	0	0	0	0	58	21	79	209
Total	121	0	67	188	23	392	0	415	0	0	0	0	0	333	79	412	1015
05:00 PM	27	0	26	53	8	103	0	111	0	0	0	0	0	94	19	113	277
05:15 PM	36	0	21	57	6	103	0	109	0	0	0	0	0	87	23	110	276
05:30 PM	54	0	30	84	12	128	0	140	0	0	0	0	0	96	14	110	334
05:45 PM	32	0	35	67	8	99	0	107	0	0	0	0	0	95	17	112	286
Total	149	0	112	261	34	433	0	467	0	0	0	0	0	372	73	445	1173
Grand Total	270	0	179	449	57	825	0	882	0	0	0	0	0	705	152	857	2188
Apprch %	60.1	0	39.9		6.5	93.5	0		0	0	0		0	82.3	17.7		
Total %	12.3	0	8.2	20.5	2.6	37.7	0	40.3	0	0	0	0	0	32.2	6.9	39.2	
PC	270	0	179	449	57	800	0	857	0	0	0	0	0	695	144	839	2145
% PC	100	0	100	100	100	97	0	97.2	0	0	0	0	0	98.6	94.7	97.9	98
SU	0	0	0	0	0	24	0	24	0	0	0	0	0	10	8	18	42
% SU	0	0	0	0	0	2.9	0	2.7	0	0	0	0	0	1.4	5.3	2.1	1.9
MU	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
% MU	0	0	0	0	0	0.1	0	0.1	0	0	0	0	0	0	0	0	0

	Martin Luther King Dr From North				115th St From East				Martin Luther King Dr From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	27	0	26	53	8	103	0	111	0	0	0	0	0	94	19	**113**	277
05:15 PM	36	0	21	57	6	103	0	109	0	0	0	0	0	87	**23**	110	276
05:30 PM	**54**	0	30	**84**	**12**	**128**	0	**140**	0	0	0	0	0	**96**	14	110	**334**
05:45 PM	32	0	**35**	67	8	99	0	107	0	0	0	0	0	95	17	112	286
Total Volume	149	0	112	261	34	433	0	467	0	0	0	0	0	372	73	445	1173
% App. Total	57.1	0	42.9		7.3	92.7	0		0	0	0		0	83.6	16.4		
PHF	.690	.000	.800	.777	.708	.846	.000	.834	.000	.000	.000	.000	.000	.969	.793	.985	.878

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Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/12/2012
Page No : 6

Groups Printed- SU

	Martin Luther King Dr From North				115th St From East				Martin Luther King Dr From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	4	0	4	0	0	0	0	0	1	0	1	5
04:15 PM	0	0	0	0	0	5	0	5	0	0	0	0	0	2	2	4	9
04:30 PM	0	0	0	0	0	4	0	4	0	0	0	0	0	1	1	2	6
04:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	1	2
Total	0	0	0	0	0	14	0	14	0	0	0	0	0	4	4	8	22
05:00 PM	0	0	0	0	0	5	0	5	0	0	0	0	0	2	1	3	8
05:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	1	3	4
05:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	1	1	3
05:45 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	1	3	5
Total	0	0	0	0	0	10	0	10	0	0	0	0	0	6	4	10	20
Grand Total	0	0	0	0	0	24	0	24	0	0	0	0	0	10	8	18	42
Apprch %	0	0	0		0	100	0		0	0	0		0	55.6	44.4		
Total %	0	0	0	0	0	57.1	0	57.1	0	0	0	0	0	23.8	19	42.9	

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115th St and Martin Luther King Dr
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/12/2012
Page No : 7

Groups Printed- MU

	Martin Luther King Dr From North				115th St From East				Martin Luther King Dr From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Apprch %	0	0	0		0	100	0		0	0	0		0	0	0		
Total %	0	0	0	0	0	100	0	100	0	0	0	0	0	0	0	0	

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115th St and Martin Luther King Dr
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Ped
Site Code : 00000000
Start Date : 6/12/2012

Groups Printed- Peds & Bikes

	Martin Luther King Dr Crossing North Leg			115th St Crossing East Leg			Martin Luther King Dr Crossing South Leg			115th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	1	1	0	3	3	0	0	0	4
04:15 PM	0	4	4	0	0	0	0	0	0	0	1	1	5
04:30 PM	0	7	7	0	0	0	0	1	1	0	0	0	8
04:45 PM	0	7	7	0	0	0	0	0	0	1	1	2	9
Total	0	18	18	0	1	1	0	4	4	1	2	3	26
05:00 PM	0	2	2	0	3	3	0	6	6	0	0	0	11
05:15 PM	2	11	13	0	0	0	0	2	2	0	4	4	19
05:30 PM	1	3	4	1	2	3	0	1	1	0	1	1	9
05:45 PM	0	1	1	0	1	1	0	4	4	0	0	0	6
Total	3	17	20	1	6	7	0	13	13	0	5	5	45
Grand Total	3	35	38	1	7	8	0	17	17	1	7	8	71
Apprch %	7.9	92.1		12.5	87.5		0	100		12.5	87.5		
Total %	4.2	49.3	53.5	1.4	9.9	11.3	0	23.9	23.9	1.4	9.9	11.3	

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115th St and Wentworth Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/17/2012
Page No : 1

Groups Printed- PC - SU - MU

	Wentworth Ave From North				115th St From East				Wentworth Ave From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	7	11	4	22	2	41	2	45	10	32	5	47	2	55	6	63	177
07:15 AM	9	17	3	29	3	64	3	70	8	17	10	35	4	48	7	59	193
07:30 AM	10	18	3	31	0	60	2	62	8	32	6	46	4	62	7	73	212
07:45 AM	15	12	7	34	2	49	3	54	9	23	15	47	6	76	13	95	230
Total	41	58	17	116	7	214	10	231	35	104	36	175	16	241	33	290	812
08:00 AM	8	15	7	30	1	54	5	60	4	26	6	36	5	71	9	85	211
08:15 AM	6	9	2	17	5	53	4	62	4	32	8	44	3	47	9	59	182
08:30 AM	10	18	4	32	5	53	6	64	10	23	12	45	3	61	7	71	212
08:45 AM	11	17	5	33	7	86	6	99	7	17	9	33	4	67	9	80	245
Total	35	59	18	112	18	246	21	285	25	98	35	158	15	246	34	295	850
Grand Total	76	117	35	228	25	460	31	516	60	202	71	333	31	487	67	585	1662
Apprch %	33.3	51.3	15.4		4.8	89.1	6		18	60.7	21.3		5.3	83.2	11.5		
Total %	4.6	7	2.1	13.7	1.5	27.7	1.9	31	3.6	12.2	4.3	20	1.9	29.3	4	35.2	
PC	73	110	33	216	22	438	29	489	57	199	69	325	30	467	64	561	1591
% PC	96.1	94	94.3	94.7	88	95.2	93.5	94.8	95	98.5	97.2	97.6	96.8	95.9	95.5	95.9	95.7
SU	3	7	2	12	3	19	2	24	3	3	2	8	1	20	3	24	68
% SU	3.9	6	5.7	5.3	12	4.1	6.5	4.7	5	1.5	2.8	2.4	3.2	4.1	4.5	4.1	4.1
MU	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	3
% MU	0	0	0	0	0	0.7	0	0.6	0	0	0	0	0	0	0	0	0.2

	Wentworth Ave From North				115th St From East				Wentworth Ave From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	8	15	**7**	30	1	54	5	60	4	26	6	36	**5**	**71**	**9**	**85**	211
08:15 AM	6	9	2	17	5	53	4	62	4	**32**	8	44	3	47	9	59	182
08:30 AM	10	**18**	4	32	5	53	**6**	64	**10**	23	**12**	**45**	3	61	7	71	212
08:45 AM	**11**	17	5	**33**	**7**	**86**	6	**99**	7	17	9	33	4	67	9	80	**245**
Total Volume	35	59	18	112	18	246	21	285	25	98	35	158	15	246	34	295	850
% App. Total	31.2	52.7	16.1		6.3	86.3	7.4		15.8	62	22.2		5.1	83.4	11.5		
PHF	.795	.819	.643	.848	.643	.715	.875	.720	.625	.766	.729	.878	.750	.866	.944	.868	.867

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115th St and Wentworth Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/17/2012

Groups Printed- SU

	Wentworth Ave From North				115th St From East				Wentworth Ave From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	1	1	0	2	0	2	0	2	0	0	0	0	0	3	0	3	7
07:15 AM	0	1	0	1	1	4	0	5	1	1	0	2	0	1	1	2	10
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	4
07:45 AM	1	0	0	1	0	3	0	3	0	0	0	0	0	2	0	2	6
Total	2	2	0	4	1	9	0	10	1	1	0	2	0	10	1	11	27
08:00 AM	1	2	0	3	0	2	1	3	1	0	2	3	1	3	0	4	13
08:15 AM	0	1	0	1	1	1	0	2	0	1	0	1	0	3	2	5	9
08:30 AM	0	1	0	1	1	5	0	6	1	1	0	2	0	1	0	1	10
08:45 AM	0	1	2	3	0	2	1	3	0	0	0	0	0	3	0	3	9
Total	1	5	2	8	2	10	2	14	2	2	2	6	1	10	2	13	41
Grand Total	3	7	2	12	3	19	2	24	3	3	2	8	1	20	3	24	68
Apprch %	25	58.3	16.7		12.5	79.2	8.3		37.5	37.5	25		4.2	83.3	12.5		
Total %	4.4	10.3	2.9	17.6	4.4	27.9	2.9	35.3	4.4	4.4	2.9	11.8	1.5	29.4	4.4	35.3	

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115th St and Wentworth Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/17/2012
Page No : 3

Groups Printed- MU

	Wentworth Ave From North				115th St From East				Wentworth Ave From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Grand Total	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	3
Apprch %	0	0	0		0	100	0		0	0	0		0	0	0		
Total %	0	0	0	0	0	100	0	100	0	0	0	0	0	0	0	0	

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115th St and Wentworth Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/17/2012

Groups Printed- Peds and Bikes

	Wentworth Ave Crossing North Leg			115th St Crossing East Leg			Wentworth Ave Crossing South Leg			115th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	1	1	0	0	0	0	6	6	0	1	1	8
07:15 AM	1	1	2	0	1	1	0	4	4	0	3	3	10
07:30 AM	0	0	0	0	0	0	0	1	1	0	4	4	5
07:45 AM	0	2	2	0	0	0	0	1	1	0	1	1	4
Total	1	4	5	0	1	1	0	12	12	0	9	9	27
08:00 AM	0	2	2	0	0	0	0	4	4	0	1	1	7
08:15 AM	0	1	1	0	1	1	0	15	15	0	3	3	20
08:30 AM	1	2	3	2	5	7	0	4	4	0	0	0	14
08:45 AM	1	3	4	0	2	2	0	5	5	0	0	0	11
Total	2	8	10	2	8	10	0	28	28	0	4	4	52
Grand Total	3	12	15	2	9	11	0	40	40	0	13	13	79
Apprch %	20	80		18.2	81.8		0	100		0	100		
Total %	3.8	15.2	19	2.5	11.4	13.9	0	50.6	50.6	0	16.5	16.5	

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115th St and Wentworth Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/17/2012
Page No : 5

Groups Printed- PC - SU - MU

	Wentworth Ave From North				115th St From East				Wentworth Ave From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	12	30	4	46	5	76	10	91	6	18	5	29	3	80	9	92	258
04:15 PM	19	25	2	46	1	48	2	51	6	24	9	39	7	77	8	92	228
04:30 PM	15	31	9	55	6	126	11	143	3	20	4	27	13	69	12	94	319
04:45 PM	13	35	10	58	3	77	5	85	6	15	5	26	6	74	14	94	263
Total	59	121	25	205	15	327	28	370	21	77	23	121	29	300	43	372	1068
05:00 PM	25	30	10	65	8	100	11	119	6	16	5	27	5	66	12	83	294
05:15 PM	11	18	12	41	6	102	5	113	8	15	6	29	11	72	11	94	277
05:30 PM	13	41	7	61	4	85	4	93	6	25	8	39	4	67	11	82	275
05:45 PM	12	28	5	45	5	88	12	105	12	21	7	40	10	90	14	114	304
Total	61	117	34	212	23	375	32	430	32	77	26	135	30	295	48	373	1150
Grand Total	120	238	59	417	38	702	60	800	53	154	49	256	59	595	91	745	2218
Apprch %	28.8	57.1	14.1		4.8	87.8	7.5		20.7	60.2	19.1		7.9	79.9	12.2		
Total %	5.4	10.7	2.7	18.8	1.7	31.7	2.7	36.1	2.4	6.9	2.2	11.5	2.7	26.8	4.1	33.6	
PC	120	237	58	415	38	692	60	790	52	153	49	254	58	582	89	729	2188
% PC	100	99.6	98.3	99.5	100	98.6	100	98.8	98.1	99.4	100	99.2	98.3	97.8	97.8	97.9	98.6
SU	0	1	1	2	0	10	0	10	1	1	0	2	1	13	2	16	30
% SU	0	0.4	1.7	0.5	0	1.4	0	1.2	1.9	0.6	0	0.8	1.7	2.2	2.2	2.1	1.4
MU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% MU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Wentworth Ave From North				115th St From East				Wentworth Ave From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	15	31	9	55	6	**126**	**11**	**143**	3	**20**	4	27	**13**	69	12	**94**	**319**
04:45 PM	13	**35**	10	58	3	77	5	85	6	15	5	26	6	**74**	**14**	94	263
05:00 PM	**25**	30	10	**65**	**8**	100	11	119	6	16	5	27	5	66	12	83	294
05:15 PM	11	18	**12**	41	6	102	5	113	**8**	15	**6**	**29**	11	72	11	94	277
Total Volume	64	114	41	219	23	405	32	460	23	66	20	109	35	281	49	365	1153
% App. Total	29.2	52.1	18.7		5	88	7		21.1	60.6	18.3		9.6	77	13.4		
PHF	.640	.814	.854	.842	.719	.804	.727	.804	.719	.825	.833	.940	.673	.949	.875	.971	.904

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115th St and Wentworth Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/17/2012
Page No : 6

Groups Printed- SU

	Wentworth Ave From North				115th St From East				Wentworth Ave From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	2	0	2	1	0	0	1	0	1	0	1	4
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	2
04:30 PM	0	0	0	0	0	1	0	1	0	1	0	1	0	1	0	1	3
04:45 PM	0	0	1	1	0	1	0	1	0	0	0	0	0	2	0	2	4
Total	0	0	1	1	0	4	0	4	1	1	0	2	1	5	0	6	13
05:00 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	4	1	5	7
05:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
05:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	1	3	5
05:45 PM	0	1	0	1	0	1	0	1	0	0	0	0	0	1	0	1	3
Total	0	1	0	1	0	6	0	6	0	0	0	0	0	8	2	10	17
Grand Total	0	1	1	2	0	10	0	10	1	1	0	2	1	13	2	16	30
Apprch %	0	50	50		0	100	0		50	50	0		6.2	81.2	12.5		
Total %	0	3.3	3.3	6.7	0	33.3	0	33.3	3.3	3.3	0	6.7	3.3	43.3	6.7	53.3	

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115th St and Wentworth Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/17/2012
Page No : 7

Groups Printed- MU

	Wentworth Ave From North				115th St From East				Wentworth Ave From South				115th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

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115th St and Wentworth Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/17/2012

Groups Printed- Peds and Bikes

	Wentworth Ave Crossing North Leg			115th St Crossing East Leg			Wentworth Ave Crossing South Leg			115th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	6	6	0	2	2	0	6	6	0	1	1	15
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	5	5	0	4	4	0	6	6	1	4	5	20
04:45 PM	0	0	0	0	0	0	0	5	5	0	2	2	7
Total	0	11	11	0	6	6	0	17	17	1	7	8	42
05:00 PM	0	3	3	0	1	1	1	5	6	0	0	0	10
05:15 PM	0	2	2	1	3	4	0	4	4	0	0	0	10
05:30 PM	1	2	3	0	0	0	0	5	5	0	1	1	9
05:45 PM	0	4	4	0	0	0	0	6	6	0	0	0	10
Total	1	11	12	1	4	5	1	20	21	0	1	1	39
Grand Total	1	22	23	1	10	11	1	37	38	1	8	9	81
Apprch %	4.3	95.7		9.1	90.9		2.6	97.4		11.1	88.9		
Total %	1.2	27.2	28.4	1.2	12.3	13.6	1.2	45.7	46.9	1.2	9.9	11.1	

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119th St and Halsted Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/10/2012
Page No : 1

Groups Printed- PC - SU - MU

	Halsted Ave From North				119th St From East				Halsted Ave From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	12	47	8	67	19	27	3	49	7	195	13	215	10	38	23	71	402
07:15 AM	14	47	6	67	19	40	2	61	7	205	23	235	10	39	33	82	445
07:30 AM	14	71	8	93	10	31	10	51	16	203	9	228	16	53	44	113	485
07:45 AM	22	88	12	122	13	43	8	64	17	195	25	237	15	70	46	131	554
Total	62	253	34	349	61	141	23	225	47	798	70	915	51	200	146	397	1886
08:00 AM	21	92	15	128	9	26	11	46	10	180	17	207	21	57	50	128	509
08:15 AM	24	97	11	132	12	36	5	53	12	152	27	191	14	58	52	124	500
08:30 AM	24	76	15	115	13	30	10	53	7	155	16	178	19	52	34	105	451
08:45 AM	18	107	11	136	11	35	4	50	9	108	25	142	17	53	32	102	430
Total	87	372	52	511	45	127	30	202	38	595	85	718	71	220	168	459	1890
Grand Total	149	625	86	860	106	268	53	427	85	1393	155	1633	122	420	314	856	3776
Apprch %	17.3	72.7	10		24.8	62.8	12.4		5.2	85.3	9.5		14.3	49.1	36.7		
Total %	3.9	16.6	2.3	22.8	2.8	7.1	1.4	11.3	2.3	36.9	4.1	43.2	3.2	11.1	8.3	22.7	
PC	136	583	83	802	101	252	52	405	77	1332	148	1557	116	386	302	804	3568
% PC	91.3	93.3	96.5	93.3	95.3	94	98.1	94.8	90.6	95.6	95.5	95.3	95.1	91.9	96.2	93.9	94.5
SU	12	39	3	54	5	15	1	21	7	57	6	70	6	33	11	50	195
% SU	8.1	6.2	3.5	6.3	4.7	5.6	1.9	4.9	8.2	4.1	3.9	4.3	4.9	7.9	3.5	5.8	5.2
MU	1	3	0	4	0	1	0	1	1	4	1	6	0	1	1	2	13
% MU	0.7	0.5	0	0.5	0	0.4	0	0.2	1.2	0.3	0.6	0.4	0	0.2	0.3	0.2	0.3

	Halsted Ave From North				119th St From East				Halsted Ave From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	14	71	8	93	10	31	10	51	16	**203**	9	228	16	53	44	113	485
07:45 AM	22	88	12	122	**13**	**43**	8	**64**	**17**	195	25	**237**	15	**70**	46	**131**	**554**
08:00 AM	21	92	**15**	128	9	26	**11**	46	10	180	17	207	**21**	57	50	128	509
08:15 AM	**24**	**97**	11	**132**	12	36	5	53	12	152	**27**	191	14	58	**52**	124	500
Total Volume	81	348	46	475	44	136	34	214	55	730	78	863	66	238	192	496	2048
% App. Total	17.1	73.3	9.7		20.6	63.6	15.9		6.4	84.6	9		13.3	48	38.7		
PHF	.844	.897	.767	.900	.846	.791	.773	.836	.809	.899	.722	.910	.786	.850	.923	.947	.924

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Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/10/2012

Groups Printed- SU

	Halsted Ave From North				119th St From East				Halsted Ave From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	2	5	1	8	2	2	1	5	1	6	0	7	1	4	0	5	25
07:15 AM	1	5	0	6	1	3	0	4	0	7	0	7	1	3	2	6	23
07:30 AM	1	5	1	7	0	0	0	0	1	10	1	12	1	6	3	10	29
07:45 AM	1	8	0	9	0	3	0	3	1	10	0	11	1	5	2	8	31
Total	5	23	2	30	3	8	1	12	3	33	1	37	4	18	7	29	108
08:00 AM	2	2	0	4	1	2	0	3	2	8	1	11	2	6	0	8	26
08:15 AM	2	4	0	6	1	3	0	4	2	7	1	10	0	2	1	3	23
08:30 AM	2	4	1	7	0	2	0	2	0	7	2	9	0	5	2	7	25
08:45 AM	1	6	0	7	0	0	0	0	0	2	1	3	0	2	1	3	13
Total	7	16	1	24	2	7	0	9	4	24	5	33	2	15	4	21	87
Grand Total	12	39	3	54	5	15	1	21	7	57	6	70	6	33	11	50	195
Apprch %	22.2	72.2	5.6		23.8	71.4	4.8		10	81.4	8.6		12	66	22		
Total %	6.2	20	1.5	27.7	2.6	7.7	0.5	10.8	3.6	29.2	3.1	35.9	3.1	16.9	5.6	25.6	

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Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
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Groups Printed- MU

	Halsted Ave From North				119th St From East				Halsted Ave From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	1	2	0	3	0	1	0	1	4
07:15 AM	0	0	0	0	0	0	0	0	0	1	1	2	0	0	1	1	3
07:30 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	2	0	2	0	0	0	0	1	3	1	5	0	1	1	2	9
08:00 AM	1	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	1	0	2	0	1	0	1	0	1	0	1	0	0	0	0	4
Grand Total	1	3	0	4	0	1	0	1	1	4	1	6	0	1	1	2	13
Apprch %	25	75	0		0	100	0		16.7	66.7	16.7		0	50	50		
Total %	7.7	23.1	0	30.8	0	7.7	0	7.7	7.7	30.8	7.7	46.2	0	7.7	7.7	15.4	

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Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/10/2012

Groups Printed- Peds & Bikes

	Halsted Ave Crossing North Leg			119th St Crossing East Leg			Halsted Ave Crossing South Leg			119th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	1	13	14	0	0	0	0	0	0	0	10	10	24
07:15 AM	0	4	4	1	2	3	0	1	1	1	1	2	10
07:30 AM	0	4	4	0	4	4	0	0	0	0	9	9	17
07:45 AM	0	14	14	0	2	2	0	2	2	0	16	16	34
Total	1	35	36	1	8	9	0	3	3	1	36	37	85
08:00 AM	0	6	6	0	1	1	0	1	1	1	5	6	14
08:15 AM	0	9	9	0	1	1	0	0	0	0	12	12	22
08:30 AM	0	1	1	0	0	0	0	0	0	0	5	5	6
08:45 AM	1	5	6	0	1	1	0	2	2	1	2	3	12
Total	1	21	22	0	3	3	0	3	3	2	24	26	54
Grand Total	2	56	58	1	11	12	0	6	6	3	60	63	139
Apprch %	3.4	96.6		8.3	91.7		0	100		4.8	95.2		
Total %	1.4	40.3	41.7	0.7	7.9	8.6	0	4.3	4.3	2.2	43.2	45.3	

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119th St and Halsted Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/10/2012
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Groups Printed- PC - SU - MU

	Halsted Ave From North				119th St From East				Halsted Ave From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	24	141	25	190	19	49	10	78	19	117	24	160	27	64	30	121	549
04:15 PM	34	139	29	202	21	41	16	78	20	98	34	152	30	57	32	119	551
04:30 PM	39	202	39	280	18	38	16	72	15	129	24	168	27	69	38	134	654
04:45 PM	36	179	25	240	16	50	7	73	14	127	28	169	19	50	21	90	572
Total	133	661	118	912	74	178	49	301	68	471	110	649	103	240	121	464	2326
05:00 PM	31	199	22	252	19	51	21	91	13	106	21	140	28	55	48	131	614
05:15 PM	36	216	22	274	11	39	19	69	21	126	18	165	34	58	24	116	624
05:30 PM	26	202	20	248	9	45	21	75	12	110	31	153	37	60	25	122	598
05:45 PM	27	186	32	245	22	55	20	97	14	101	22	137	27	66	33	126	605
Total	120	803	96	1019	61	190	81	332	60	443	92	595	126	239	130	495	2441
Grand Total	253	1464	214	1931	135	368	130	633	128	914	202	1244	229	479	251	959	4767
Apprch %	13.1	75.8	11.1		21.3	58.1	20.5		10.3	73.5	16.2		23.9	49.9	26.2		
Total %	5.3	30.7	4.5	40.5	2.8	7.7	2.7	13.3	2.7	19.2	4.2	26.1	4.8	10	5.3	20.1	
PC	241	1422	213	1876	132	351	126	609	127	876	200	1203	225	463	250	938	4626
% PC	95.3	97.1	99.5	97.2	97.8	95.4	96.9	96.2	99.2	95.8	99	96.7	98.3	96.7	99.6	97.8	97
SU	11	40	1	52	3	17	4	24	1	37	1	39	4	16	1	21	136
% SU	4.3	2.7	0.5	2.7	2.2	4.6	3.1	3.8	0.8	4	0.5	3.1	1.7	3.3	0.4	2.2	2.9
MU	1	2	0	3	0	0	0	0	0	1	1	2	0	0	0	0	5
% MU	0.4	0.1	0	0.2	0	0	0	0	0	0.1	0.5	0.2	0	0	0	0	0.1

	Halsted Ave From North				119th St From East				Halsted Ave From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	**39**	202	**39**	**280**	18	38	16	72	15	**129**	24	168	27	**69**	38	**134**	**654**
04:45 PM	36	179	25	240	16	50	7	73	14	127	**28**	**169**	19	50	21	90	572
05:00 PM	31	199	22	252	**19**	**51**	**21**	**91**	13	106	21	140	28	55	**48**	131	614
05:15 PM	36	**216**	22	274	11	39	19	69	**21**	126	18	165	**34**	58	24	116	624
Total Volume	142	796	108	1046	64	178	63	305	63	488	91	642	108	232	131	471	2464
% App. Total	13.6	76.1	10.3		21	58.4	20.7		9.8	76	14.2		22.9	49.3	27.8		
PHF	.910	.921	.692	.934	.842	.873	.750	.838	.750	.946	.813	.950	.794	.841	.682	.879	.942

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119th St and Halsted Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/10/2012
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Groups Printed- SU

	Halsted Ave From North				119th St From East				Halsted Ave From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	1	3	0	4	2	3	2	7	1	4	0	5	1	2	0	3	19
04:15 PM	1	6	1	8	1	4	1	6	0	5	1	6	0	1	0	1	21
04:30 PM	3	3	0	6	0	1	1	2	0	6	0	6	1	1	0	2	16
04:45 PM	2	7	0	9	0	2	0	2	0	4	0	4	0	1	0	1	16
Total	7	19	1	27	3	10	4	17	1	19	1	21	2	5	0	7	72
05:00 PM	1	6	0	7	0	0	0	0	0	2	0	2	0	3	1	4	13
05:15 PM	1	7	0	8	0	3	0	3	0	9	0	9	1	1	0	2	22
05:30 PM	0	2	0	2	0	3	0	3	0	1	0	1	1	2	0	3	9
05:45 PM	2	6	0	8	0	1	0	1	0	6	0	6	0	5	0	5	20
Total	4	21	0	25	0	7	0	7	0	18	0	18	2	11	1	14	64
Grand Total	11	40	1	52	3	17	4	24	1	37	1	39	4	16	1	21	136
Apprch %	21.2	76.9	1.9		12.5	70.8	16.7		2.6	94.9	2.6		19	76.2	4.8		
Total %	8.1	29.4	0.7	38.2	2.2	12.5	2.9	17.6	0.7	27.2	0.7	28.7	2.9	11.8	0.7	15.4	

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Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/10/2012
Page No : 7

Groups Printed- MU

	Halsted Ave From North				119th St From East				Halsted Ave From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	1	0	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
Total	1	1	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
05:00 PM	0	1	0	1	0	0	0	0	0	0	1	1	0	0	0	0	2
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	0	1	1	0	0	0	0	2
Grand Total	1	2	0	3	0	0	0	0	0	1	1	2	0	0	0	0	5
Apprch %	33.3	66.7	0		0	0	0		0	50	50		0	0	0		
Total %	20	40	0	60	0	0	0	0	0	20	20	40	0	0	0	0	

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119th St and Halsted Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/10/2012

Groups Printed- Peds & Bikes

	Halsted Ave Crossing North Leg			119th St Crossing East Leg			Halsted Ave Crossing South Leg			119th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	6	6	1	3	4	0	2	2	0	2	2	14
04:15 PM	0	4	4	0	2	2	0	2	2	0	8	8	16
04:30 PM	0	2	2	0	4	4	0	2	2	1	25	26	34
04:45 PM	1	8	9	3	5	8	0	5	5	1	12	13	35
Total	1	20	21	4	14	18	0	11	11	2	47	49	99
05:00 PM	0	6	6	0	4	4	0	1	1	0	5	5	16
05:15 PM	0	7	7	0	2	2	0	1	1	0	16	16	26
05:30 PM	0	2	2	0	4	4	0	3	3	0	9	9	18
05:45 PM	3	13	16	2	1	3	0	3	3	1	29	30	52
Total	3	28	31	2	11	13	0	8	8	1	59	60	112
Grand Total	4	48	52	6	25	31	0	19	19	3	106	109	211
Apprch %	7.7	92.3		19.4	80.6		0	100		2.8	97.2		
Total %	1.9	22.7	24.6	2.8	11.8	14.7	0	9	9	1.4	50.2	51.7	

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119th St and Marshfield Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/10/2012
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Groups Printed- PC - SU - MU

	Marshfield Ave From North				119th St From East				Marshfield Ave From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	48	18	8	74	0	99	28	127	0	0	0	0	14	61	0	75	276
07:15 AM	65	23	11	99	0	108	30	138	0	0	0	0	28	78	0	106	343
07:30 AM	71	27	15	113	0	118	35	153	0	0	0	0	36	98	0	134	400
07:45 AM	76	30	20	126	0	125	37	162	0	0	0	0	59	118	0	177	465
Total	260	98	54	412	0	450	130	580	0	0	0	0	137	355	0	492	1484
08:00 AM	59	23	45	127	0	115	53	168	0	0	0	0	62	97	0	159	454
08:15 AM	67	27	34	128	0	115	36	151	0	0	0	0	38	95	0	133	412
08:30 AM	55	30	54	139	0	131	32	163	0	0	0	0	35	136	0	171	473
08:45 AM	67	37	32	136	0	96	32	128	0	0	0	0	43	103	0	146	410
Total	248	117	165	530	0	457	153	610	0	0	0	0	178	431	0	609	1749
Grand Total	508	215	219	942	0	907	283	1190	0	0	0	0	315	786	0	1101	3233
Apprch %	53.9	22.8	23.2		0	76.2	23.8		0	0	0		28.6	71.4	0		
Total %	15.7	6.7	6.8	29.1	0	28.1	8.8	36.8	0	0	0	0	9.7	24.3	0	34.1	
PC	498	211	216	925	0	877	277	1154	0	0	0	0	288	724	0	1012	3091
% PC	98	98.1	98.6	98.2	0	96.7	97.9	97	0	0	0	0	91.4	92.1	0	91.9	95.6
SU	9	3	3	15	0	21	6	27	0	0	0	0	12	38	0	50	92
% SU	1.8	1.4	1.4	1.6	0	2.3	2.1	2.3	0	0	0	0	3.8	4.8	0	4.5	2.8
MU	1	1	0	2	0	9	0	9	0	0	0	0	15	24	0	39	50
% MU	0.2	0.5	0	0.2	0	1	0	0.8	0	0	0	0	4.8	3.1	0	3.5	1.5

	Marshfield Ave From North				119th St From East				Marshfield Ave From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	**76**	**30**	20	126	0	125	37	162	0	0	0	0	59	118	0	**177**	465
08:00 AM	59	23	45	127	0	115	**53**	**168**	0	0	0	0	**62**	97	0	159	454
08:15 AM	67	27	34	128	0	115	36	151	0	0	0	0	38	95	0	133	412
08:30 AM	55	30	**54**	**139**	0	**131**	32	163	0	0	0	0	35	**136**	0	171	**473**
Total Volume	257	110	153	520	0	486	158	644	0	0	0	0	194	446	0	640	1804
% App. Total	49.4	21.2	29.4		0	75.5	24.5		0	0	0		30.3	69.7	0		
PHF	.845	.917	.708	.935	.000	.927	.745	.958	.000	.000	.000	.000	.782	.820	.000	.904	.953

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119th St and Marshfield Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/10/2012
Page No : 2

Groups Printed- SU

	Marshfield Ave From North				119th St From East				Marshfield Ave From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
07:45 AM	1	1	1	3	0	4	1	5	0	0	0	0	0	11	0	11	19
Total	1	1	1	3	0	4	1	5	0	0	0	0	0	12	0	12	20
08:00 AM	3	0	1	4	0	4	2	6	0	0	0	0	5	8	0	13	23
08:15 AM	2	0	0	2	0	2	0	2	0	0	0	0	0	6	0	6	10
08:30 AM	0	0	0	0	0	6	1	7	0	0	0	0	5	9	0	14	21
08:45 AM	3	2	1	6	0	5	2	7	0	0	0	0	2	3	0	5	18
Total	8	2	2	12	0	17	5	22	0	0	0	0	12	26	0	38	72
Grand Total	9	3	3	15	0	21	6	27	0	0	0	0	12	38	0	50	92
Apprch %	60	20	20		0	77.8	22.2		0	0	0		24	76	0		
Total %	9.8	3.3	3.3	16.3	0	22.8	6.5	29.3	0	0	0	0	13	41.3	0	54.3	

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Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/10/2012
Page No : 3

Groups Printed- MU

	Marshfield Ave From North				119th St From East				Marshfield Ave From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	1	0	1	0	3	0	3	0	0	0	0	5	6	0	11	15
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	5	0	7	7
Total	0	1	0	1	0	3	0	3	0	0	0	0	7	11	0	18	22
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	5	4	0	9	9
08:15 AM	0	0	0	0	0	4	0	4	0	0	0	0	0	3	0	3	7
08:30 AM	1	0	0	1	0	1	0	1	0	0	0	0	2	4	0	6	8
08:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	1	2	0	3	4
Total	1	0	0	1	0	6	0	6	0	0	0	0	8	13	0	21	28
Grand Total	1	1	0	2	0	9	0	9	0	0	0	0	15	24	0	39	50
Apprch %	50	50	0		0	100	0		0	0	0		38.5	61.5	0		
Total %	2	2	0	4	0	18	0	18	0	0	0	0	30	48	0	78	

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119th St and Marshfield Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
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Groups Printed- Peds & Bikes

	Marshfield Ave Crossing North Leg			119th St Crossing East Leg			Marshfield Ave Crossing South Leg			119th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	4	4	0	0	0	0	0	0	0	0	0	4
Total	0	4	4	0	0	0	0	0	0	0	0	0	4
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	1	1	0	0	0	0	3	3	0	0	0	4
08:30 AM	0	0	0	0	0	0	0	0	0	0	3	3	3
08:45 AM	0	0	0	0	0	0	0	1	1	0	0	0	1
Total	0	1	1	0	0	0	0	4	4	0	3	3	8
Grand Total	0	5	5	0	0	0	0	4	4	0	3	3	12
Apprch %	0	100		0	0		0	100		0	100		
Total %	0	41.7	41.7	0	0	0	0	33.3	33.3	0	25	25	

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Chicago, IL
4:00 Pm - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/10/2012
Page No : 5

Groups Printed- PC - SU - MU

	Marshfield Ave From North				119th St From East				Marshfield Ave From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	121	57	71	249	0	149	39	188	0	0	0	0	90	120	0	210	647
04:15 PM	103	69	58	230	0	138	58	196	0	0	0	0	71	128	0	199	625
04:30 PM	86	55	57	198	0	140	54	194	0	0	0	0	79	99	0	178	570
04:45 PM	96	63	53	212	0	114	70	184	0	0	0	0	77	91	0	168	564
Total	406	244	239	889	0	541	221	762	0	0	0	0	317	438	0	755	2406
05:00 PM	103	60	74	237	0	155	59	214	0	0	0	0	86	111	0	197	648
05:15 PM	77	65	71	213	0	136	55	191	0	0	0	0	74	91	0	165	569
05:30 PM	96	81	59	236	0	146	49	195	0	0	0	0	74	115	0	189	620
05:45 PM	104	59	72	235	0	129	47	176	0	0	0	0	78	105	0	183	594
Total	380	265	276	921	0	566	210	776	0	0	0	0	312	422	0	734	2431
Grand Total	786	509	515	1810	0	1107	431	1538	0	0	0	0	629	860	0	1489	4837
Apprch %	43.4	28.1	28.5		0	72	28		0	0	0		42.2	57.8	0		
Total %	16.2	10.5	10.6	37.4	0	22.9	8.9	31.8	0	0	0	0	13	17.8	0	30.8	
PC	780	504	513	1797	0	1090	426	1516	0	0	0	0	598	829	0	1427	4740
% PC	99.2	99	99.6	99.3	0	98.5	98.8	98.6	0	0	0	0	95.1	96.4	0	95.8	98
SU	4	4	2	10	0	14	4	18	0	0	0	0	18	21	0	39	67
% SU	0.5	0.8	0.4	0.6	0	1.3	0.9	1.2	0	0	0	0	2.9	2.4	0	2.6	1.4
MU	2	1	0	3	0	3	1	4	0	0	0	0	13	10	0	23	30
% MU	0.3	0.2	0	0.2	0	0.3	0.2	0.3	0	0	0	0	2.1	1.2	0	1.5	0.6

	Marshfield Ave From North				119th St From East				Marshfield Ave From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	103	60	**74**	**237**	0	**155**	**59**	**214**	0	0	0	0	**86**	111	0	**197**	**648**
05:15 PM	77	65	71	213	0	136	55	191	0	0	0	0	74	91	0	165	569
05:30 PM	96	**81**	59	236	0	146	49	195	0	0	0	0	74	**115**	0	189	620
05:45 PM	**104**	59	72	235	0	129	47	176	0	0	0	0	78	105	0	183	594
Total Volume	380	265	276	921	0	566	210	776	0	0	0	0	312	422	0	734	2431
% App. Total	41.3	28.8	30		0	72.9	27.1		0	0	0		42.5	57.5	0		
PHF	.913	.818	.932	.972	.000	.913	.890	.907	.000	.000	.000	.000	.907	.917	.000	.931	.938

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Chicago, IL
4:00 Pm - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
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Groups Printed- SU

	Marshfield Ave From North				119th St From East				Marshfield Ave From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	1	1	2	0	0	0	0	3	2	0	5	7
04:15 PM	0	0	0	0	0	2	0	2	0	0	0	0	1	3	0	4	6
04:30 PM	1	0	0	1	0	2	1	3	0	0	0	0	3	4	0	7	11
04:45 PM	1	1	0	2	0	0	1	1	0	0	0	0	1	0	0	1	4
Total	2	1	0	3	0	5	3	8	0	0	0	0	8	9	0	17	28
05:00 PM	0	1	0	1	0	2	1	3	0	0	0	0	3	3	0	6	10
05:15 PM	1	1	1	3	0	4	0	4	0	0	0	0	3	0	0	3	10
05:30 PM	1	0	1	2	0	2	0	2	0	0	0	0	1	2	0	3	7
05:45 PM	0	1	0	1	0	1	0	1	0	0	0	0	3	7	0	10	12
Total	2	3	2	7	0	9	1	10	0	0	0	0	10	12	0	22	39
Grand Total	4	4	2	10	0	14	4	18	0	0	0	0	18	21	0	39	67
Apprch %	40	40	20		0	77.8	22.2		0	0	0		46.2	53.8	0		
Total %	6	6	3	14.9	0	20.9	6	26.9	0	0	0	0	26.9	31.3	0	58.2	

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Chicago, IL
4:00 Pm - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/10/2012

Groups Printed- MU

	Marshfield Ave From North				119th St From East				Marshfield Ave From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	1	1	0	2	0	0	0	0	0	0	0	0	0	2	0	2	4
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
04:45 PM	1	0	0	1	0	0	0	0	0	0	0	0	3	2	0	5	6
Total	2	1	0	3	0	0	0	0	0	0	0	0	5	4	0	9	12
05:00 PM	0	0	0	0	0	0	1	1	0	0	0	0	1	1	0	2	3
05:15 PM	0	0	0	0	0	3	0	3	0	0	0	0	1	1	0	2	5
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	5	2	0	7	7
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	3	3
Total	0	0	0	0	0	3	1	4	0	0	0	0	8	6	0	14	18
Grand Total	2	1	0	3	0	3	1	4	0	0	0	0	13	10	0	23	30
Apprch %	66.7	33.3	0		0	75	25		0	0	0		56.5	43.5	0		
Total %	6.7	3.3	0	10	0	10	3.3	13.3	0	0	0	0	43.3	33.3	0	76.7	

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Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/10/2012

Groups Printed- Peds & Bikes

	Marshfield Ave Crossing North Leg			119th St Crossing East Leg			Marshfield Ave Crossing South Leg			119th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	8	8	0	0	0	0	0	0	0	0	0	8
04:15 PM	0	3	3	0	0	0	0	4	4	0	0	0	7
04:30 PM	2	3	5	0	0	0	0	1	1	0	0	0	6
04:45 PM	0	2	2	0	0	0	0	8	8	0	0	0	10
Total	2	16	18	0	0	0	0	13	13	0	0	0	31
05:00 PM	0	0	0	0	0	0	0	5	5	0	0	0	5
05:15 PM	0	2	2	0	0	0	0	0	0	0	0	0	2
05:30 PM	0	1	1	0	0	0	0	1	1	0	0	0	2
05:45 PM	0	1	1	0	0	0	0	0	0	0	0	0	1
Total	0	4	4	0	0	0	0	6	6	0	0	0	10
Grand Total	2	20	22	0	0	0	0	19	19	0	0	0	41
Apprch %	9.1	90.9		0	0		0	100		0	0		
Total %	4.9	48.8	53.7	0	0	0	0	46.3	46.3	0	0	0	

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119th St and Michigan Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/15/2012
Page No : 1

Groups Printed- PC - SU - MU

	Michigan Ave From North				119th St From East				Michigan Ave From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	19	28	0	47	2	1	0	3	4	56	5	65	5	2	32	39	154
07:15 AM	22	23	1	46	1	6	1	8	3	70	7	80	6	3	31	40	174
07:30 AM	21	36	0	57	2	4	3	9	4	78	4	86	7	6	35	48	200
07:45 AM	16	53	4	73	4	5	3	12	8	70	7	85	6	6	42	54	224
Total	78	140	5	223	9	16	7	32	19	274	23	316	24	17	140	181	752
08:00 AM	26	36	0	62	0	5	1	6	5	73	10	88	9	3	30	42	198
08:15 AM	19	43	1	63	0	3	2	5	2	65	5	72	5	3	31	39	179
08:30 AM	19	41	0	60	1	4	0	5	2	74	8	84	17	6	29	52	201
08:45 AM	23	48	5	76	3	6	1	10	2	71	12	85	14	7	34	55	226
Total	87	168	6	261	4	18	4	26	11	283	35	329	45	19	124	188	804
Grand Total	165	308	11	484	13	34	11	58	30	557	58	645	69	36	264	369	1556
Apprch %	34.1	63.6	2.3		22.4	58.6	19		4.7	86.4	9		18.7	9.8	71.5		
Total %	10.6	19.8	0.7	31.1	0.8	2.2	0.7	3.7	1.9	35.8	3.7	41.5	4.4	2.3	17	23.7	
PC	147	283	11	441	13	34	11	58	29	542	58	629	66	35	237	338	1466
% PC	89.1	91.9	100	91.1	100	100	100	100	96.7	97.3	100	97.5	95.7	97.2	89.8	91.6	94.2
SU	17	25	0	42	0	0	0	0	1	15	0	16	3	0	25	28	86
% SU	10.3	8.1	0	8.7	0	0	0	0	3.3	2.7	0	2.5	4.3	0	9.5	7.6	5.5
MU	1	0	0	1	0	0	0	0	0	0	0	0	0	1	2	3	4
% MU	0.6	0	0	0.2	0	0	0	0	0	0	0	0	0	2.8	0.8	0.8	0.3

	Michigan Ave From North				119th St From East				Michigan Ave From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	**26**	36	0	62	0	5	1	6	**5**	73	10	**88**	9	3	30	42	198
08:15 AM	19	43	1	63	0	3	**2**	5	2	65	5	72	5	3	31	39	179
08:30 AM	19	41	0	60	1	4	0	5	2	**74**	8	84	**17**	6	29	52	201
08:45 AM	23	**48**	**5**	**76**	**3**	**6**	1	**10**	2	71	**12**	85	14	**7**	**34**	**55**	**226**
Total Volume	87	168	6	261	4	18	4	26	11	283	35	329	45	19	124	188	804
% App. Total	33.3	64.4	2.3		15.4	69.2	15.4		3.3	86	10.6		23.9	10.1	66		
PHF	.837	.875	.300	.859	.333	.750	.500	.650	.550	.956	.729	.935	.662	.679	.912	.855	.889

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119th St and Michigan Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/15/2012
Page No : 2

Groups Printed- SU

	Michigan Ave From North				119th St From East				Michigan Ave From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	4	2	0	6	0	0	0	0	1	1	0	2	0	0	3	3	11
07:15 AM	2	2	0	4	0	0	0	0	0	3	0	3	0	0	6	6	13
07:30 AM	2	3	0	5	0	0	0	0	0	1	0	1	0	0	3	3	9
07:45 AM	2	5	0	7	0	0	0	0	0	1	0	1	2	0	4	6	14
Total	10	12	0	22	0	0	0	0	1	6	0	7	2	0	16	18	47
08:00 AM	1	3	0	4	0	0	0	0	0	1	0	1	0	0	2	2	7
08:15 AM	2	4	0	6	0	0	0	0	0	4	0	4	0	0	3	3	13
08:30 AM	1	4	0	5	0	0	0	0	0	3	0	3	1	0	2	3	11
08:45 AM	3	2	0	5	0	0	0	0	0	1	0	1	0	0	2	2	8
Total	7	13	0	20	0	0	0	0	0	9	0	9	1	0	9	10	39
Grand Total	17	25	0	42	0	0	0	0	1	15	0	16	3	0	25	28	86
Apprch %	40.5	59.5	0		0	0	0		6.2	93.8	0		10.7	0	89.3		
Total %	19.8	29.1	0	48.8	0	0	0	0	1.2	17.4	0	18.6	3.5	0	29.1	32.6	

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119th St and Michigan Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/15/2012
Page No : 3

Groups Printed- MU

	Michigan Ave From North				119th St From East				Michigan Ave From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
08:45 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	2
Total	1	0	0	1	0	0	0	0	0	0	0	0	0	1	2	3	4
Grand Total	1	0	0	1	0	0	0	0	0	0	0	0	0	1	2	3	4
Apprch %	100	0	0		0	0	0		0	0	0		0	33.3	66.7		
Total %	25	0	0	25	0	0	0	0	0	0	0	0	0	25	50	75	

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119th St and Michigan Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/15/2012

Groups Printed- Peds & Bikes

	Michigan Ave Crossing North Leg			119th St Crossing East Leg			Michigan Ave Crossing South Leg			119th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	10	10	0	3	3	0	1	1	0	4	4	18
07:15 AM	0	8	8	0	4	4	0	0	0	0	6	6	18
07:30 AM	1	6	7	0	4	4	0	1	1	0	4	4	16
07:45 AM	0	11	11	0	2	2	0	2	2	0	6	6	21
Total	1	35	36	0	13	13	0	4	4	0	20	20	73
08:00 AM	0	14	14	0	8	8	0	7	7	0	9	9	38
08:15 AM	0	18	18	0	3	3	0	12	12	0	15	15	48
08:30 AM	0	9	9	0	8	8	0	22	22	0	13	13	52
08:45 AM	0	10	10	0	3	3	0	6	6	0	11	11	30
Total	0	51	51	0	22	22	0	47	47	0	48	48	168
Grand Total	1	86	87	0	35	35	0	51	51	0	68	68	241
Apprch %	1.1	98.9		0	100		0	100		0	100		
Total %	0.4	35.7	36.1	0	14.5	14.5	0	21.2	21.2	0	28.2	28.2	

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119th St and Michigan Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/15/2012
Page No : 5

Groups Printed- PC - SU - MU

	Michigan Ave From North				119th St From East				Michigan Ave From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	35	73	3	111	0	5	1	6	1	57	7	65	18	8	26	52	234
04:15 PM	32	79	4	115	4	2	1	7	7	60	11	78	10	8	35	53	253
04:30 PM	32	89	2	123	5	4	1	10	3	57	9	69	21	8	28	57	259
04:45 PM	32	67	2	101	2	4	4	10	3	62	12	77	25	6	31	62	250
Total	131	308	11	450	11	15	7	33	14	236	39	289	74	30	120	224	996
05:00 PM	45	94	4	143	3	6	1	10	2	50	10	62	17	13	31	61	276
05:15 PM	46	91	5	142	1	3	3	7	2	51	8	61	22	7	42	71	281
05:30 PM	30	98	2	130	3	1	1	5	3	57	6	66	17	6	36	59	260
05:45 PM	40	96	6	142	2	4	3	9	1	61	13	75	20	9	38	67	293
Total	161	379	17	557	9	14	8	31	8	219	37	264	76	35	147	258	1110
Grand Total	292	687	28	1007	20	29	15	64	22	455	76	553	150	65	267	482	2106
Apprch %	29	68.2	2.8		31.2	45.3	23.4		4	82.3	13.7		31.1	13.5	55.4		
Total %	13.9	32.6	1.3	47.8	0.9	1.4	0.7	3	1	21.6	3.6	26.3	7.1	3.1	12.7	22.9	
PC	278	660	28	966	19	29	15	63	22	447	76	545	148	64	254	466	2040
% PC	95.2	96.1	100	95.9	95	100	100	98.4	100	98.2	100	98.6	98.7	98.5	95.1	96.7	96.9
SU	14	27	0	41	1	0	0	1	0	8	0	8	2	1	13	16	66
% SU	4.8	3.9	0	4.1	5	0	0	1.6	0	1.8	0	1.4	1.3	1.5	4.9	3.3	3.1
MU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% MU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Michigan Ave From North				119th St From East				Michigan Ave From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	45	94	4	**143**	**3**	**6**	1	**10**	2	50	10	62	17	**13**	31	61	276
05:15 PM	**46**	91	5	142	1	3	**3**	7	2	51	8	61	**22**	7	**42**	**71**	281
05:30 PM	30	**98**	2	130	3	1	1	5	**3**	57	6	66	17	6	36	59	260
05:45 PM	40	96	**6**	142	2	4	3	9	1	**61**	**13**	**75**	20	9	38	67	**293**
Total Volume	161	379	17	557	9	14	8	31	8	219	37	264	76	35	147	258	1110
% App. Total	28.9	68	3.1		29	45.2	25.8		3	83	14		29.5	13.6	57		
PHF	.875	.967	.708	.974	.750	.583	.667	.775	.667	.898	.712	.880	.864	.673	.875	.908	.947

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119th St and Michigan Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/15/2012
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Groups Printed- SU

	Michigan Ave From North				119th St From East				Michigan Ave From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	3	4	0	7	0	0	0	0	0	1	0	1	0	0	2	2	10
04:15 PM	1	3	0	4	1	0	0	1	0	1	0	1	0	0	1	1	7
04:30 PM	2	4	0	6	0	0	0	0	0	1	0	1	0	1	1	2	9
04:45 PM	1	4	0	5	0	0	0	0	0	3	0	3	1	0	3	4	12
Total	7	15	0	22	1	0	0	1	0	6	0	6	1	1	7	9	38
05:00 PM	1	3	0	4	0	0	0	0	0	0	0	0	0	0	1	1	5
05:15 PM	2	4	0	6	0	0	0	0	0	0	0	0	1	0	2	3	9
05:30 PM	1	3	0	4	0	0	0	0	0	1	0	1	0	0	1	1	6
05:45 PM	3	2	0	5	0	0	0	0	0	1	0	1	0	0	2	2	8
Total	7	12	0	19	0	0	0	0	0	2	0	2	1	0	6	7	28
Grand Total	14	27	0	41	1	0	0	1	0	8	0	8	2	1	13	16	66
Apprch %	34.1	65.9	0		100	0	0		0	100	0		12.5	6.2	81.2		
Total %	21.2	40.9	0	62.1	1.5	0	0	1.5	0	12.1	0	12.1	3	1.5	19.7	24.2	

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Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/15/2012
Page No : 7

Groups Printed- MU

	Michigan Ave From North				119th St From East				Michigan Ave From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

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119th St and Michigan Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/15/2012
Page No : 8

Groups Printed- Peds & Bikes

	Michigan Ave Crossing North Leg			119th St Crossing East Leg			Michigan Ave Crossing South Leg			119th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	17	17	0	12	12	0	9	9	0	15	15	53
04:15 PM	0	20	20	0	3	3	0	5	5	0	24	24	52
04:30 PM	0	14	14	0	8	8	0	9	9	0	21	21	52
04:45 PM	0	13	13	0	9	9	0	9	9	1	13	14	45
Total	0	64	64	0	32	32	0	32	32	1	73	74	202
05:00 PM	0	9	9	0	10	10	0	16	16	1	12	13	48
05:15 PM	0	12	12	0	24	24	0	16	16	0	13	13	65
05:30 PM	0	8	8	0	6	6	0	9	9	1	7	8	31
05:45 PM	0	8	8	0	14	14	0	12	12	0	7	7	41
Total	0	37	37	0	54	54	0	53	53	2	39	41	185
Grand Total	0	101	101	0	86	86	0	85	85	3	112	115	387
Apprch %	0	100		0	100		0	100		2.6	97.4		
Total %	0	26.1	26.1	0	22.2	22.2	0	22	22	0.8	28.9	29.7	

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119th St and State St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/12/2012
Page No : 1

Groups Printed- PC - SU - MU

	State St From North				119th St From East				State St From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	5	4	1	10	1	18	1	20	3	32	5	40	3	29	14	46	116
07:15 AM	12	12	1	25	0	29	0	29	8	33	8	49	10	29	18	57	160
07:30 AM	4	6	5	15	1	23	1	25	4	46	8	58	5	41	11	57	155
07:45 AM	6	15	1	22	3	34	2	39	5	55	8	68	3	38	15	56	185
Total	27	37	8	72	5	104	4	113	20	166	29	215	21	137	58	216	616
08:00 AM	11	10	1	22	1	38	2	41	3	39	6	48	4	43	17	64	175
08:15 AM	5	14	1	20	1	38	1	40	5	36	10	51	7	38	15	60	171
08:30 AM	9	18	3	30	2	47	2	51	10	35	13	58	9	35	16	60	199
08:45 AM	11	18	1	30	2	36	1	39	2	41	8	51	8	35	17	60	180
Total	36	60	6	102	6	159	6	171	20	151	37	208	28	151	65	244	725
Grand Total	63	97	14	174	11	263	10	284	40	317	66	423	49	288	123	460	1341
Apprch %	36.2	55.7	8		3.9	92.6	3.5		9.5	74.9	15.6		10.7	62.6	26.7		
Total %	4.7	7.2	1	13	0.8	19.6	0.7	21.2	3	23.6	4.9	31.5	3.7	21.5	9.2	34.3	
PC	59	95	14	168	11	238	8	257	38	312	63	413	46	265	118	429	1267
% PC	93.7	97.9	100	96.6	100	90.5	80	90.5	95	98.4	95.5	97.6	93.9	92	95.9	93.3	94.5
SU	4	2	0	6	0	24	2	26	2	5	3	10	3	22	5	30	72
% SU	6.3	2.1	0	3.4	0	9.1	20	9.2	5	1.6	4.5	2.4	6.1	7.6	4.1	6.5	5.4
MU	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
% MU	0	0	0	0	0	0.4	0	0.4	0	0	0	0	0	0.3	0	0.2	0.1

	State St From North				119th St From East				State St From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	6	15	1	22	**3**	34	**2**	39	5	**55**	8	**68**	3	38	15	56	185
08:00 AM	**11**	10	1	22	1	38	2	41	3	39	6	48	4	**43**	**17**	**64**	175
08:15 AM	5	14	1	20	1	38	1	40	5	36	10	51	7	38	15	60	171
08:30 AM	9	**18**	**3**	**30**	2	**47**	2	**51**	**10**	35	**13**	58	**9**	35	16	60	**199**
Total Volume	31	57	6	94	7	157	7	171	23	165	37	225	23	154	63	240	730
% App. Total	33	60.6	6.4		4.1	91.8	4.1		10.2	73.3	16.4		9.6	64.2	26.2		
PHF	.705	.792	.500	.783	.583	.835	.875	.838	.575	.750	.712	.827	.639	.895	.926	.938	.917

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7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/12/2012
Page No : 2

Groups Printed- SU

	State St From North				119th St From East				State St From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	2	4	6	9
07:15 AM	1	0	0	1	0	2	0	2	1	1	1	3	1	1	0	2	8
07:30 AM	1	0	0	1	0	4	0	4	0	1	0	1	0	3	0	3	9
07:45 AM	1	0	0	1	0	4	1	5	0	1	0	1	1	5	0	6	13
Total	3	0	0	3	0	13	1	14	1	3	1	5	2	11	4	17	39
08:00 AM	0	0	0	0	0	2	1	3	1	0	0	1	0	3	0	3	7
08:15 AM	0	0	0	0	0	3	0	3	0	0	2	2	0	4	0	4	9
08:30 AM	0	0	0	0	0	1	0	1	0	2	0	2	0	2	0	2	5
08:45 AM	1	2	0	3	0	5	0	5	0	0	0	0	1	2	1	4	12
Total	1	2	0	3	0	11	1	12	1	2	2	5	1	11	1	13	33
Grand Total	4	2	0	6	0	24	2	26	2	5	3	10	3	22	5	30	72
Apprch %	66.7	33.3	0		0	92.3	7.7		20	50	30		10	73.3	16.7		
Total %	5.6	2.8	0	8.3	0	33.3	2.8	36.1	2.8	6.9	4.2	13.9	4.2	30.6	6.9	41.7	

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119th St and State St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/12/2012
Page No : 3

Groups Printed- MU

	State St From North				119th St From East				State St From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Apprch %	0	0	0		0	100	0		0	0	0		0	100	0		
Total %	0	0	0	0	0	50	0	50	0	0	0	0	0	50	0	50	

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119th St and State St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 6/12/2012

Groups Printed- Peds & Bikes

	State St Crossing North Leg			119th St Crossing East Leg			State St Crossing South Leg			119th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	1	1	0	0	0	1	0	1	0	0	0	2
07:15 AM	0	4	4	0	1	1	0	6	6	0	0	0	11
07:30 AM	1	2	3	0	4	4	0	6	6	0	2	2	15
07:45 AM	0	2	2	0	2	2	1	4	5	1	0	1	10
Total	1	9	10	0	7	7	2	16	18	1	2	3	38
08:00 AM	0	5	5	0	2	2	0	4	4	0	1	1	12
08:15 AM	0	2	2	0	9	9	0	3	3	0	1	1	15
08:30 AM	0	12	12	0	4	4	0	9	9	0	5	5	30
08:45 AM	0	7	7	1	1	2	0	3	3	0	0	0	12
Total	0	26	26	1	16	17	0	19	19	0	7	7	69
Grand Total	1	35	36	1	23	24	2	35	37	1	9	10	107
Apprch %	2.8	97.2		4.2	95.8		5.4	94.6		10	90		
Total %	0.9	32.7	33.6	0.9	21.5	22.4	1.9	32.7	34.6	0.9	8.4	9.3	

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119th St and State St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/12/2012
Page No : 5

Groups Printed- PC - SU - MU

	State St From North				119th St From East				State St From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	15	36	5	56	2	41	2	45	3	37	6	46	8	41	13	62	209
04:15 PM	15	39	3	57	4	34	2	40	3	27	7	37	13	46	14	73	207
04:30 PM	11	34	4	49	3	49	4	56	2	16	4	22	11	49	7	67	194
04:45 PM	11	46	2	59	0	35	2	37	3	23	9	35	14	54	15	83	214
Total	52	155	14	221	9	159	10	178	11	103	26	140	46	190	49	285	824
05:00 PM	12	40	1	53	2	49	1	52	1	31	8	40	4	47	12	63	208
05:15 PM	10	36	4	50	5	53	4	62	2	14	7	23	10	48	11	69	204
05:30 PM	14	41	6	61	1	47	0	48	5	22	6	33	10	38	19	67	209
05:45 PM	18	25	1	44	1	31	5	37	7	21	7	35	13	39	11	63	179
Total	54	142	12	208	9	180	10	199	15	88	28	131	37	172	53	262	800
Grand Total	106	297	26	429	18	339	20	377	26	191	54	271	83	362	102	547	1624
Apprch %	24.7	69.2	6.1		4.8	89.9	5.3		9.6	70.5	19.9		15.2	66.2	18.6		
Total %	6.5	18.3	1.6	26.4	1.1	20.9	1.2	23.2	1.6	11.8	3.3	16.7	5.1	22.3	6.3	33.7	
PC	103	296	26	425	18	325	20	363	26	185	54	265	82	352	102	536	1589
% PC	97.2	99.7	100	99.1	100	95.9	100	96.3	100	96.9	100	97.8	98.8	97.2	100	98	97.8
SU	3	1	0	4	0	14	0	14	0	5	0	5	1	10	0	11	34
% SU	2.8	0.3	0	0.9	0	4.1	0	3.7	0	2.6	0	1.8	1.2	2.8	0	2	2.1
MU	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
% MU	0	0	0	0	0	0	0	0	0	0.5	0	0.4	0	0	0	0	0.1

	State St From North				119th St From East				State St From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	11	**46**	2	59	0	35	2	37	3	23	**9**	35	**14**	**54**	15	**83**	**214**
05:00 PM	12	40	1	53	2	49	1	52	1	**31**	8	**40**	4	47	12	63	208
05:15 PM	10	36	4	50	**5**	**53**	**4**	**62**	2	14	7	23	10	48	11	69	204
05:30 PM	**14**	41	**6**	**61**	1	47	0	48	**5**	22	6	33	10	38	**19**	67	209
Total Volume	47	163	13	223	8	184	7	199	11	90	30	131	38	187	57	282	835
% App. Total	21.1	73.1	5.8		4	92.5	3.5		8.4	68.7	22.9		13.5	66.3	20.2		
PHF	.839	.886	.542	.914	.400	.868	.438	.802	.550	.726	.833	.819	.679	.866	.750	.849	.975

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119th St and State St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/12/2012
Page No : 6

Groups Printed- SU

	State St From North				119th St From East				State St From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	3	0	3	0	1	0	1	0	2	0	2	6
04:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	1	1	0	2	3
04:30 PM	2	0	0	2	0	2	0	2	0	0	0	0	0	1	0	1	5
04:45 PM	0	1	0	1	0	1	0	1	0	1	0	1	0	2	0	2	5
Total	2	1	0	3	0	7	0	7	0	2	0	2	1	6	0	7	19
05:00 PM	1	0	0	1	0	2	0	2	0	1	0	1	0	1	0	1	5
05:15 PM	0	0	0	0	0	1	0	1	0	2	0	2	0	1	0	1	4
05:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
05:45 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
Total	1	0	0	1	0	7	0	7	0	3	0	3	0	4	0	4	15
Grand Total	3	1	0	4	0	14	0	14	0	5	0	5	1	10	0	11	34
Apprch %	75	25	0		0	100	0		0	100	0		9.1	90.9	0		
Total %	8.8	2.9	0	11.8	0	41.2	0	41.2	0	14.7	0	14.7	2.9	29.4	0	32.4	

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Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/12/2012
Page No : 7

Groups Printed- MU

	State St From North				119th St From East				State St From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Grand Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Apprch %	0	0	0		0	0	0		0	100	0		0	0	0		
Total %	0	0	0	0	0	0	0	0	0	100	0	100	0	0	0	0	

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119th St and State St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 6/12/2012

Groups Printed- Peds & Bikes

	State St Crossing North Leg			119th St Crossing East Leg			State St Crossing South Leg			119th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	2	7	9	0	3	3	0	6	6	0	3	3	21
04:15 PM	1	4	5	0	0	0	0	3	3	1	0	1	9
04:30 PM	1	3	4	0	4	4	1	5	6	1	0	1	15
04:45 PM	0	4	4	1	0	1	0	6	6	0	0	0	11
Total	4	18	22	1	7	8	1	20	21	2	3	5	56
05:00 PM	0	7	7	0	1	1	0	3	3	0	2	2	13
05:15 PM	0	3	3	1	0	1	0	7	7	0	0	0	11
05:30 PM	0	1	1	0	2	2	1	8	9	0	0	0	12
05:45 PM	1	8	9	0	3	3	1	7	8	0	1	1	21
Total	1	19	20	1	6	7	2	25	27	0	3	3	57
Grand Total	5	37	42	2	13	15	3	45	48	2	6	8	113
Apprch %	11.9	88.1		13.3	86.7		6.2	93.8		25	75		
Total %	4.4	32.7	37.2	1.8	11.5	13.3	2.7	39.8	42.5	1.8	5.3	7.1	

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119th St and Wentworth Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012
Page No : 1

Groups Printed- PC - SU - MU

	Wentworth Ave From North				119th St From East				Wentworth Ave From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	5	2	3	10	4	27	1	32	1	10	7	18	7	39	3	49	109
07:15 AM	9	8	4	21	1	40	0	41	6	26	4	36	2	45	7	54	152
07:30 AM	4	6	0	10	5	34	1	40	6	19	6	31	2	62	11	75	156
07:45 AM	11	10	0	21	11	47	1	59	4	23	9	36	3	61	11	75	191
Total	29	26	7	62	21	148	3	172	17	78	26	121	14	207	32	253	608
08:00 AM	9	9	5	23	2	59	2	63	3	18	4	25	4	61	8	73	184
08:15 AM	9	12	5	26	1	42	1	44	2	15	14	31	6	59	10	75	176
08:30 AM	9	10	3	22	2	53	0	55	2	19	9	30	5	58	12	75	182
08:45 AM	14	8	3	25	3	53	4	60	4	21	9	34	4	49	8	61	180
Total	41	39	16	96	8	207	7	222	11	73	36	120	19	227	38	284	722
Grand Total	70	65	23	158	29	355	10	394	28	151	62	241	33	434	70	537	1330
Apprch %	44.3	41.1	14.6		7.4	90.1	2.5		11.6	62.7	25.7		6.1	80.8	13		
Total %	5.3	4.9	1.7	11.9	2.2	26.7	0.8	29.6	2.1	11.4	4.7	18.1	2.5	32.6	5.3	40.4	
PC	69	64	22	155	26	333	10	369	28	150	61	239	32	405	70	507	1270
% PC	98.6	98.5	95.7	98.1	89.7	93.8	100	93.7	100	99.3	98.4	99.2	97	93.3	100	94.4	95.5
SU	1	1	1	3	3	21	0	24	0	1	1	2	1	27	0	28	57
% SU	1.4	1.5	4.3	1.9	10.3	5.9	0	6.1	0	0.7	1.6	0.8	3	6.2	0	5.2	4.3
MU	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
% MU	0	0	0	0	0	0.3	0	0.3	0	0	0	0	0	0.5	0	0.4	0.2

	Wentworth Ave From North				119th St From East				Wentworth Ave From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	**11**	10	0	21	**11**	47	1	59	**4**	**23**	9	**36**	3	**61**	11	**75**	**191**
08:00 AM	9	9	**5**	23	2	**59**	**2**	**63**	3	18	4	25	4	61	8	73	184
08:15 AM	9	**12**	5	**26**	1	42	1	44	2	15	**14**	31	**6**	59	10	75	176
08:30 AM	9	10	3	22	2	53	0	55	2	19	9	30	5	58	**12**	75	182
Total Volume	38	41	13	92	16	201	4	221	11	75	36	122	18	239	41	298	733
% App. Total	41.3	44.6	14.1		7.2	91	1.8		9	61.5	29.5		6	80.2	13.8		
PHF	.864	.854	.650	.885	.364	.852	.500	.877	.688	.815	.643	.847	.750	.980	.854	.993	.959

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119th St and Wentworth Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012

Groups Printed- SU

	Wentworth Ave From North				119th St From East				Wentworth Ave From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	3	0	3	0	1	0	1	1	3	0	4	8
07:15 AM	0	1	0	1	0	4	0	4	0	0	0	0	0	3	0	3	8
07:30 AM	1	0	0	1	1	2	0	3	0	0	0	0	0	4	0	4	8
07:45 AM	0	0	0	0	1	3	0	4	0	0	0	0	0	6	0	6	10
Total	1	1	0	2	2	12	0	14	0	1	0	1	1	16	0	17	34
08:00 AM	0	0	0	0	1	1	0	2	0	0	0	0	0	3	0	3	5
08:15 AM	0	0	1	1	0	2	0	2	0	0	0	0	0	3	0	3	6
08:30 AM	0	0	0	0	0	3	0	3	0	0	1	1	0	4	0	4	8
08:45 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	1	0	1	4
Total	0	0	1	1	1	9	0	10	0	0	1	1	0	11	0	11	23
Grand Total	1	1	1	3	3	21	0	24	0	1	1	2	1	27	0	28	57
Apprch %	33.3	33.3	33.3		12.5	87.5	0		0	50	50		3.6	96.4	0		
Total %	1.8	1.8	1.8	5.3	5.3	36.8	0	42.1	0	1.8	1.8	3.5	1.8	47.4	0	49.1	

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119th St and Wentworth Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012
Page No : 3

Groups Printed- MU

	Wentworth Ave From North				119th St From East				Wentworth Ave From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
07:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
Apprch %	0	0	0		0	100	0		0	0	0		0	100	0		
Total %	0	0	0	0	0	33.3	0	33.3	0	0	0	0	0	66.7	0	66.7	

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Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 6/5/2012

Groups Printed- Peds & Bikes

	Wentworth Ave Crossing North Leg			119th St Crossing East Leg			Wentworth Ave Crossing South Leg			119th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	1	1	0	3	3	0	1	1	5
07:15 AM	0	0	0	0	1	1	0	8	8	0	1	1	10
07:30 AM	0	1	1	0	1	1	1	6	7	0	2	2	11
07:45 AM	0	1	1	1	0	1	0	2	2	0	0	0	4
Total	0	2	2	1	3	4	1	19	20	0	4	4	30
08:00 AM	1	1	2	0	4	4	0	1	1	0	1	1	8
08:15 AM	0	3	3	0	3	3	0	2	2	0	1	1	9
08:30 AM	0	4	4	0	0	0	0	8	8	0	0	0	12
08:45 AM	1	1	2	0	1	1	0	8	8	0	3	3	14
Total	2	9	11	0	8	8	0	19	19	0	5	5	43
Grand Total	2	11	13	1	11	12	1	38	39	0	9	9	73
Apprch %	15.4	84.6		8.3	91.7		2.6	97.4		0	100		
Total %	2.7	15.1	17.8	1.4	15.1	16.4	1.4	52.1	53.4	0	12.3	12.3	

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119th St and Wentworth Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012
Page No : 5

Groups Printed- PC - SU - MU

	Wentworth Ave From North				119th St From East				Wentworth Ave From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	15	17	1	33	5	53	4	62	4	13	2	19	8	59	6	73	187
04:15 PM	9	8	4	21	5	61	3	69	1	9	8	18	7	78	12	97	205
04:30 PM	11	14	2	27	3	67	1	71	8	12	5	25	11	64	15	90	213
04:45 PM	9	27	11	47	4	62	2	68	4	10	6	20	9	61	8	78	213
Total	44	66	18	128	17	243	10	270	17	44	21	82	35	262	41	338	818
05:00 PM	13	20	6	39	4	67	4	75	3	16	11	30	18	74	11	103	247
05:15 PM	15	19	6	40	8	55	2	65	2	9	9	20	14	77	11	102	227
05:30 PM	18	12	3	33	5	76	2	83	7	12	6	25	11	53	7	71	212
05:45 PM	12	25	3	40	2	53	3	58	5	14	6	25	11	71	6	88	211
Total	58	76	18	152	19	251	11	281	17	51	32	100	54	275	35	364	897
Grand Total	102	142	36	280	36	494	21	551	34	95	53	182	89	537	76	702	1715
Apprch %	36.4	50.7	12.9		6.5	89.7	3.8		18.7	52.2	29.1		12.7	76.5	10.8		
Total %	5.9	8.3	2.1	16.3	2.1	28.8	1.2	32.1	2	5.5	3.1	10.6	5.2	31.3	4.4	40.9	
PC	99	140	36	275	36	475	21	532	34	94	53	181	88	524	75	687	1675
% PC	97.1	98.6	100	98.2	100	96.2	100	96.6	100	98.9	100	99.5	98.9	97.6	98.7	97.9	97.7
SU	3	2	0	5	0	18	0	18	0	1	0	1	1	12	1	14	38
% SU	2.9	1.4	0	1.8	0	3.6	0	3.3	0	1.1	0	0.5	1.1	2.2	1.3	2	2.2
MU	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
% MU	0	0	0	0	0	0.2	0	0.2	0	0	0	0	0	0.2	0	0.1	0.1

	Wentworth Ave From North				119th St From East				Wentworth Ave From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	11	14	2	27	3	**67**	1	71	**8**	12	5	25	11	64	**15**	90	213
04:45 PM	9	**27**	**11**	**47**	4	62	2	68	4	10	6	20	9	61	8	78	213
05:00 PM	13	20	6	39	4	67	**4**	**75**	3	**16**	**11**	**30**	**18**	74	11	**103**	**247**
05:15 PM	**15**	19	6	40	**8**	55	2	65	2	9	9	20	14	**77**	11	102	227
Total Volume	48	80	25	153	19	251	9	279	17	47	31	95	52	276	45	373	900
% App. Total	31.4	52.3	16.3		6.8	90	3.2		17.9	49.5	32.6		13.9	74	12.1		
PHF	.800	.741	.568	.814	.594	.937	.563	.930	.531	.734	.705	.792	.722	.896	.750	.905	.911

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4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012
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Groups Printed- SU

	Wentworth Ave From North				119th St From East				Wentworth Ave From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	1	1	0	2	0	4	0	4	0	1	0	1	0	2	0	2	9
04:15 PM	0	0	0	0	0	3	0	3	0	0	0	0	1	3	0	4	7
04:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
04:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Total	1	1	0	2	0	10	0	10	0	1	0	1	1	6	0	7	20
05:00 PM	1	0	0	1	0	1	0	1	0	0	0	0	0	2	1	3	5
05:15 PM	0	1	0	1	0	3	0	3	0	0	0	0	0	1	0	1	5
05:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
05:45 PM	1	0	0	1	0	3	0	3	0	0	0	0	0	1	0	1	5
Total	2	1	0	3	0	8	0	8	0	0	0	0	0	6	1	7	18
Grand Total	3	2	0	5	0	18	0	18	0	1	0	1	1	12	1	14	38
Apprch %	60	40	0		0	100	0		0	100	0		7.1	85.7	7.1		
Total %	7.9	5.3	0	13.2	0	47.4	0	47.4	0	2.6	0	2.6	2.6	31.6	2.6	36.8	

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4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012
Page No : 7

Groups Printed- MU

	Wentworth Ave From North				119th St From East				Wentworth Ave From South				119th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Grand Total	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Apprch %	0	0	0		0	100	0		0	0	0		0	100	0		
Total %	0	0	0	0	0	50	0	50	0	0	0	0	0	50	0	50	

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Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 6/5/2012

Groups Printed- Peds & Bikes

	Wentworth Ave Crossing North Leg			119th St Crossing East Leg			Wentworth Ave Crossing South Leg			119th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	6	6	0	4	4	0	0	0	0	3	3	13
04:15 PM	0	2	2	0	5	5	1	12	13	0	0	0	20
04:30 PM	0	4	4	0	5	5	1	8	9	0	6	6	24
04:45 PM	0	3	3	1	3	4	0	4	4	0	1	1	12
Total	0	15	15	1	17	18	2	24	26	0	10	10	69
05:00 PM	0	1	1	0	0	0	0	6	6	0	0	0	7
05:15 PM	0	4	4	0	1	1	0	6	6	0	3	3	14
05:30 PM	0	7	7	0	0	0	2	2	4	0	1	1	12
05:45 PM	1	0	1	1	1	2	0	6	6	0	4	4	13
Total	1	12	13	1	2	3	2	20	22	0	8	8	46
Grand Total	1	27	28	2	19	21	4	44	48	0	18	18	115
Apprch %	3.6	96.4		9.5	90.5		8.3	91.7		0	100		
Total %	0.9	23.5	24.3	1.7	16.5	18.3	3.5	38.3	41.7	0	15.7	15.7	

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127th St and Ashland Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/23/2012
Page No : 1

Groups Printed- PC - SU - MU

	Ashland Ave From North				127th St From East				Ashland Ave From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	14	19	7	40	6	130	18	154	13	35	60	108	45	89	35	169	471
07:15 AM	23	17	7	47	16	153	15	184	11	45	62	118	51	124	32	207	556
07:30 AM	21	18	5	44	9	182	12	203	12	47	57	116	52	119	26	197	560
07:45 AM	31	32	9	72	6	183	23	212	5	38	51	94	36	94	29	159	537
Total	89	86	28	203	37	648	68	753	41	165	230	436	184	426	122	732	2124
08:00 AM	18	29	8	55	13	145	18	176	7	43	51	101	57	77	21	155	487
08:15 AM	21	32	15	68	10	173	18	201	16	50	67	133	59	115	19	193	595
08:30 AM	23	29	10	62	5	179	31	215	15	30	38	83	62	129	16	207	567
08:45 AM	23	22	8	53	12	145	25	182	12	37	65	114	56	98	20	174	523
Total	85	112	41	238	40	642	92	774	50	160	221	431	234	419	76	729	2172
Grand Total	174	198	69	441	77	1290	160	1527	91	325	451	867	418	845	198	1461	4296
Apprch %	39.5	44.9	15.6		5	84.5	10.5		10.5	37.5	52		28.6	57.8	13.6		
Total %	4.1	4.6	1.6	10.3	1.8	30	3.7	35.5	2.1	7.6	10.5	20.2	9.7	19.7	4.6	34	
PC	165	184	67	416	73	1226	157	1456	84	310	406	800	392	780	192	1364	4036
% PC	94.8	92.9	97.1	94.3	94.8	95	98.1	95.4	92.3	95.4	90	92.3	93.8	92.3	97	93.4	93.9
SU	7	11	2	20	4	42	2	48	7	13	34	54	21	37	5	63	185
% SU	4	5.6	2.9	4.5	5.2	3.3	1.2	3.1	7.7	4	7.5	6.2	5	4.4	2.5	4.3	4.3
MU	2	3	0	5	0	22	1	23	0	2	11	13	5	28	1	34	75
% MU	1.1	1.5	0	1.1	0	1.7	0.6	1.5	0	0.6	2.4	1.5	1.2	3.3	0.5	2.3	1.7

	Ashland Ave From North				127th St From East				Ashland Ave From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	**31**	**32**	9	**72**	6	**183**	23	212	5	38	51	94	36	94	**29**	159	537
08:00 AM	18	29	8	55	**13**	145	18	176	7	43	51	101	57	77	21	155	487
08:15 AM	21	32	**15**	68	10	173	18	201	**16**	**50**	**67**	**133**	59	115	19	193	**595**
08:30 AM	23	29	10	62	5	179	**31**	**215**	15	30	38	83	**62**	**129**	16	**207**	567
Total Volume	93	122	42	257	34	680	90	804	43	161	207	411	214	415	85	714	2186
% App. Total	36.2	47.5	16.3		4.2	84.6	11.2		10.5	39.2	50.4		30	58.1	11.9		
PHF	.750	.953	.700	.892	.654	.929	.726	.935	.672	.805	.772	.773	.863	.804	.733	.862	.918

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Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/23/2012
Page No : 2

Groups Printed- SU

	Ashland Ave From North				127th St From East				Ashland Ave From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	5	1	6	3	3	2	8	3	6	0	9	23
07:15 AM	3	1	0	4	0	6	0	6	2	4	9	15	3	7	0	10	35
07:30 AM	0	0	0	0	0	8	0	8	1	0	3	4	5	7	0	12	24
07:45 AM	1	5	0	6	0	4	0	4	0	3	2	5	0	2	1	3	18
Total	4	6	0	10	0	23	1	24	6	10	16	32	11	22	1	34	100
08:00 AM	0	2	0	2	1	4	1	6	0	0	4	4	3	2	0	5	17
08:15 AM	2	0	1	3	0	5	0	5	0	1	6	7	1	6	0	7	22
08:30 AM	1	1	1	3	0	6	0	6	0	0	3	3	2	4	1	7	19
08:45 AM	0	2	0	2	3	4	0	7	1	2	5	8	4	3	3	10	27
Total	3	5	2	10	4	19	1	24	1	3	18	22	10	15	4	29	85
Grand Total	7	11	2	20	4	42	2	48	7	13	34	54	21	37	5	63	185
Apprch %	35	55	10		8.3	87.5	4.2		13	24.1	63		33.3	58.7	7.9		
Total %	3.8	5.9	1.1	10.8	2.2	22.7	1.1	25.9	3.8	7	18.4	29.2	11.4	20	2.7	34.1	

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Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/23/2012
Page No : 3

Groups Printed- MU

	Ashland Ave From North				127th St From East				Ashland Ave From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	4	0	4	0	1	1	2	1	2	0	3	9
07:15 AM	0	0	0	0	0	0	0	0	0	0	2	2	1	3	0	4	6
07:30 AM	0	1	0	1	0	5	1	6	0	0	3	3	1	7	0	8	18
07:45 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	3	1	4	7
Total	0	1	0	1	0	12	1	13	0	1	6	7	3	15	1	19	40
08:00 AM	0	0	0	0	0	3	0	3	0	0	2	2	0	4	0	4	9
08:15 AM	1	0	0	1	0	0	0	0	0	1	2	3	1	2	0	3	7
08:30 AM	0	0	0	0	0	4	0	4	0	0	0	0	0	2	0	2	6
08:45 AM	1	2	0	3	0	3	0	3	0	0	1	1	1	5	0	6	13
Total	2	2	0	4	0	10	0	10	0	1	5	6	2	13	0	15	35
Grand Total	2	3	0	5	0	22	1	23	0	2	11	13	5	28	1	34	75
Apprch %	40	60	0		0	95.7	4.3		0	15.4	84.6		14.7	82.4	2.9		
Total %	2.7	4	0	6.7	0	29.3	1.3	30.7	0	2.7	14.7	17.3	6.7	37.3	1.3	45.3	

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7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/23/2012

Groups Printed- Peds & Bikes

	Ashland Ave Crossing North Leg			127th St Crossing East Leg			Ashland Ave Crossing South Leg			127th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	3	3	0	1	1	4
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	1	1	0	2	2	0	2	2	0	2	2	7
07:45 AM	0	0	0	0	1	1	0	2	2	0	2	2	5
Total	0	1	1	0	3	3	0	7	7	0	5	5	16
08:00 AM	0	0	0	0	3	3	0	4	4	0	1	1	8
08:15 AM	0	2	2	0	0	0	0	4	4	0	4	4	10
08:30 AM	0	1	1	0	0	0	0	0	0	0	3	3	4
08:45 AM	0	2	2	0	3	3	0	3	3	0	0	0	8
Total	0	5	5	0	6	6	0	11	11	0	8	8	30
Grand Total	0	6	6	0	9	9	0	18	18	0	13	13	46
Apprch %	0	100		0	100		0	100		0	100		
Total %	0	13	13	0	19.6	19.6	0	39.1	39.1	0	28.3	28.3	

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4:00 PM - 6:00 PM
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File Name : AM + PM
Site Code : 00000000
Start Date : 5/23/2012
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Groups Printed- PC - SU - MU

	Ashland Ave From North				127th St From East				Ashland Ave From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	31	48	20	99	14	170	26	210	14	56	70	140	90	153	36	279	728
04:15 PM	18	50	13	81	17	193	22	232	15	43	79	137	98	165	20	283	733
04:30 PM	20	27	22	69	9	173	20	202	21	38	74	133	93	156	20	269	673
04:45 PM	19	28	14	61	16	164	28	208	20	40	49	109	116	161	38	315	693
Total	88	153	69	310	56	700	96	852	70	177	272	519	397	635	114	1146	2827
05:00 PM	23	39	19	81	11	157	33	201	11	37	52	100	80	146	25	251	633
05:15 PM	34	42	17	93	9	136	26	171	23	42	56	121	114	164	27	305	690
05:30 PM	31	44	23	98	14	149	19	182	12	43	56	111	90	146	31	267	658
05:45 PM	33	37	15	85	14	122	16	152	20	57	63	140	84	115	39	238	615
Total	121	162	74	357	48	564	94	706	66	179	227	472	368	571	122	1061	2596
Grand Total	209	315	143	667	104	1264	190	1558	136	356	499	991	765	1206	236	2207	5423
Apprch %	31.3	47.2	21.4		6.7	81.1	12.2		13.7	35.9	50.4		34.7	54.6	10.7		
Total %	3.9	5.8	2.6	12.3	1.9	23.3	3.5	28.7	2.5	6.6	9.2	18.3	14.1	22.2	4.4	40.7	
PC	208	314	141	663	102	1227	187	1516	133	350	489	972	745	1189	230	2164	5315
% PC	99.5	99.7	98.6	99.4	98.1	97.1	98.4	97.3	97.8	98.3	98	98.1	97.4	98.6	97.5	98.1	98
SU	0	1	2	3	1	29	3	33	2	4	7	13	13	8	3	24	73
% SU	0	0.3	1.4	0.4	1	2.3	1.6	2.1	1.5	1.1	1.4	1.3	1.7	0.7	1.3	1.1	1.3
MU	1	0	0	1	1	8	0	9	1	2	3	6	7	9	3	19	35
% MU	0.5	0	0	0.1	1	0.6	0	0.6	0.7	0.6	0.6	0.6	0.9	0.7	1.3	0.9	0.6

	Ashland Ave From North				127th St From East				Ashland Ave From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	**31**	48	20	**99**	14	170	26	210	14	**56**	70	**140**	90	153	36	279	728
04:15 PM	18	**50**	13	81	**17**	**193**	22	**232**	15	43	**79**	137	98	**165**	20	283	**733**
04:30 PM	20	27	**22**	69	9	173	20	202	**21**	38	74	133	93	156	20	269	673
04:45 PM	19	28	14	61	16	164	**28**	208	20	40	49	109	**116**	161	**38**	**315**	693
Total Volume	88	153	69	310	56	700	96	852	70	177	272	519	397	635	114	1146	2827
% App. Total	28.4	49.4	22.3		6.6	82.2	11.3		13.5	34.1	52.4		34.6	55.4	9.9		
PHF	.710	.765	.784	.783	.824	.907	.857	.918	.833	.790	.861	.927	.856	.962	.750	.910	.964

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127th St and Ashland Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/23/2012
Page No : 6

Groups Printed- SU

	Ashland Ave From North				127th St From East				Ashland Ave From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	1	0	1	0	3	0	3	1	2	1	4	2	3	1	6	14
04:15 PM	0	0	0	0	1	6	0	7	0	1	1	2	1	0	0	1	10
04:30 PM	0	0	0	0	0	4	0	4	0	0	1	1	3	1	1	5	10
04:45 PM	0	0	0	0	0	2	0	2	0	1	1	2	1	1	0	2	6
Total	0	1	0	1	1	15	0	16	1	4	4	9	7	5	2	14	40
05:00 PM	0	0	0	0	0	4	3	7	0	0	3	3	2	2	0	4	14
05:15 PM	0	0	1	1	0	3	0	3	1	0	0	1	0	0	0	0	5
05:30 PM	0	0	0	0	0	6	0	6	0	0	0	0	3	1	1	5	11
05:45 PM	0	0	1	1	0	1	0	1	0	0	0	0	1	0	0	1	3
Total	0	0	2	2	0	14	3	17	1	0	3	4	6	3	1	10	33
Grand Total	0	1	2	3	1	29	3	33	2	4	7	13	13	8	3	24	73
Apprch %	0	33.3	66.7		3	87.9	9.1		15.4	30.8	53.8		54.2	33.3	12.5		
Total %	0	1.4	2.7	4.1	1.4	39.7	4.1	45.2	2.7	5.5	9.6	17.8	17.8	11	4.1	32.9	

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Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/23/2012
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Groups Printed- MU

	Ashland Ave From North				127th St From East				Ashland Ave From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	1	0	1	1	0	2	3	0	0	1	1	5
04:15 PM	0	0	0	0	0	2	0	2	0	1	1	2	0	1	1	2	6
04:30 PM	0	0	0	0	1	1	0	2	0	0	0	0	1	2	0	3	5
04:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	2	3	0	5	6
Total	0	0	0	0	1	5	0	6	1	1	3	5	3	6	2	11	22
05:00 PM	1	0	0	1	0	1	0	1	0	0	0	0	0	1	0	1	3
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
05:30 PM	0	0	0	0	0	1	0	1	0	1	0	1	2	1	0	3	5
05:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	1	2	3
Total	1	0	0	1	0	3	0	3	0	1	0	1	4	3	1	8	13
Grand Total	1	0	0	1	1	8	0	9	1	2	3	6	7	9	3	19	35
Apprch %	100	0	0		11.1	88.9	0		16.7	33.3	50		36.8	47.4	15.8		
Total %	2.9	0	0	2.9	2.9	22.9	0	25.7	2.9	5.7	8.6	17.1	20	25.7	8.6	54.3	

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Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/23/2012

Groups Printed- Peds & Bikes

	Ashland Ave Crossing North Leg			127th St Crossing East Leg			Ashland Ave Crossing South Leg			127th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	4	4	0	3	3	0	5	5	0	1	1	13
04:15 PM	0	3	3	0	6	6	0	13	13	0	1	1	23
04:30 PM	1	2	3	0	0	0	0	4	4	0	6	6	13
04:45 PM	0	1	1	0	0	0	0	4	4	0	2	2	7
Total	1	10	11	0	9	9	0	26	26	0	10	10	56
05:00 PM	0	0	0	0	3	3	0	5	5	0	3	3	11
05:15 PM	0	2	2	0	4	4	0	4	4	0	1	1	11
05:30 PM	0	3	3	0	2	2	0	3	3	0	0	0	8
05:45 PM	0	6	6	1	3	4	0	11	11	0	4	4	25
Total	0	11	11	1	12	13	0	23	23	0	8	8	55
Grand Total	1	21	22	1	21	22	0	49	49	0	18	18	111
Apprch %	4.5	95.5		4.5	95.5		0	100		0	100		
Total %	0.9	18.9	19.8	0.9	18.9	19.8	0	44.1	44.1	0	16.2	16.2	

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127th St and Halsted Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/16/2012
Page No : 1

Groups Printed- PC - SU - MU

	Halsted Ave From North				127th St From East				Halsted Ave From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	19	33	17	69	18	77	1	96	2	107	26	135	12	61	20	93	393
07:15 AM	19	45	14	78	21	84	0	105	0	127	13	140	10	95	50	155	478
07:30 AM	20	52	15	87	23	106	0	129	3	120	14	137	20	74	46	140	493
07:45 AM	23	57	15	95	25	102	1	128	1	141	11	153	29	115	52	196	572
Total	81	187	61	329	87	369	2	458	6	495	64	565	71	345	168	584	1936
08:00 AM	20	72	22	114	20	87	3	110	1	97	15	113	14	99	25	138	475
08:15 AM	18	70	13	101	32	77	2	111	1	132	16	149	10	71	28	109	470
08:30 AM	37	69	18	124	29	70	4	103	2	104	16	122	12	92	16	120	469
08:45 AM	22	90	14	126	20	72	0	92	9	111	16	136	13	84	26	123	477
Total	97	301	67	465	101	306	9	416	13	444	63	520	49	346	95	490	1891
Grand Total	178	488	128	794	188	675	11	874	19	939	127	1085	120	691	263	1074	3827
Apprch %	22.4	61.5	16.1		21.5	77.2	1.3		1.8	86.5	11.7		11.2	64.3	24.5		
Total %	4.7	12.8	3.3	20.7	4.9	17.6	0.3	22.8	0.5	24.5	3.3	28.4	3.1	18.1	6.9	28.1	
PC	173	451	121	745	173	639	5	817	12	900	118	1030	103	649	253	1005	3597
% PC	97.2	92.4	94.5	93.8	92	94.7	45.5	93.5	63.2	95.8	92.9	94.9	85.8	93.9	96.2	93.6	94
SU	4	35	5	44	13	22	1	36	0	31	7	38	8	24	7	39	157
% SU	2.2	7.2	3.9	5.5	6.9	3.3	9.1	4.1	0	3.3	5.5	3.5	6.7	3.5	2.7	3.6	4.1
MU	1	2	2	5	2	14	5	21	7	8	2	17	9	18	3	30	73
% MU	0.6	0.4	1.6	0.6	1.1	2.1	45.5	2.4	36.8	0.9	1.6	1.6	7.5	2.6	1.1	2.8	1.9

	Halsted Ave From North				127th St From East				Halsted Ave From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	19	45	14	78	21	84	0	105	0	127	13	140	10	95	50	155	478
07:30 AM	20	52	15	87	23	**106**	0	**129**	**3**	120	14	137	20	74	46	140	493
07:45 AM	**23**	57	15	95	**25**	102	1	128	1	**141**	11	**153**	**29**	**115**	**52**	**196**	**572**
08:00 AM	20	**72**	**22**	**114**	20	87	**3**	110	1	97	**15**	113	14	99	25	138	475
Total Volume	82	226	66	374	89	379	4	472	5	485	53	543	73	383	173	629	2018
% App. Total	21.9	60.4	17.6		18.9	80.3	0.8		0.9	89.3	9.8		11.6	60.9	27.5		
PHF	.891	.785	.750	.820	.890	.894	.333	.915	.417	.860	.883	.887	.629	.833	.832	.802	.882

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127th St and Halsted Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/16/2012
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Groups Printed- SU

	Halsted Ave From North				127th St From East				Halsted Ave From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	2	1	3	1	2	0	3	0	6	2	8	0	5	1	6	20
07:15 AM	1	5	1	7	4	2	0	6	0	3	2	5	1	2	1	4	22
07:30 AM	1	4	0	5	1	2	0	3	0	5	0	5	2	0	1	3	16
07:45 AM	0	4	1	5	1	5	0	6	0	2	1	3	3	3	1	7	21
Total	2	15	3	20	7	11	0	18	0	16	5	21	6	10	4	20	79
08:00 AM	0	4	1	5	2	4	0	6	0	3	1	4	2	5	0	7	22
08:15 AM	1	5	0	6	2	4	1	7	0	5	0	5	0	3	0	3	21
08:30 AM	1	5	0	6	1	2	0	3	0	3	0	3	0	3	0	3	15
08:45 AM	0	6	1	7	1	1	0	2	0	4	1	5	0	3	3	6	20
Total	2	20	2	24	6	11	1	18	0	15	2	17	2	14	3	19	78
Grand Total	4	35	5	44	13	22	1	36	0	31	7	38	8	24	7	39	157
Apprch %	9.1	79.5	11.4		36.1	61.1	2.8		0	81.6	18.4		20.5	61.5	17.9		
Total %	2.5	22.3	3.2	28	8.3	14	0.6	22.9	0	19.7	4.5	24.2	5.1	15.3	4.5	24.8	

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Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/16/2012
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Groups Printed- MU

	Halsted Ave From North				127th St From East				Halsted Ave From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	1	1	1	1	0	2	1	2	0	3	6
07:15 AM	1	0	0	1	1	4	0	5	0	2	0	2	1	0	1	2	10
07:30 AM	0	0	0	0	0	1	0	1	2	0	1	3	2	3	1	6	10
07:45 AM	0	0	0	0	0	2	0	2	1	1	0	2	2	5	0	7	11
Total	1	0	0	1	1	7	1	9	4	4	1	9	6	10	2	18	37
08:00 AM	0	1	1	2	0	4	1	5	0	1	0	1	1	0	1	2	10
08:15 AM	0	0	1	1	0	0	1	1	0	0	1	1	1	3	0	4	7
08:30 AM	0	0	0	0	1	2	2	5	0	2	0	2	0	3	0	3	10
08:45 AM	0	1	0	1	0	1	0	1	3	1	0	4	1	2	0	3	9
Total	0	2	2	4	1	7	4	12	3	4	1	8	3	8	1	12	36
Grand Total	1	2	2	5	2	14	5	21	7	8	2	17	9	18	3	30	73
Apprch %	20	40	40		9.5	66.7	23.8		41.2	47.1	11.8		30	60	10		
Total %	1.4	2.7	2.7	6.8	2.7	19.2	6.8	28.8	9.6	11	2.7	23.3	12.3	24.7	4.1	41.1	

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7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/16/2012

Groups Printed- Peds & Bikes

	Halsted Ave Crossing North Leg			127th St Crossing East Leg			Halsted Ave Crossing South Leg			127th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	1	1	0	6	6	0	3	3	0	3	3	13
07:15 AM	0	0	0	0	3	3	0	1	1	0	2	2	6
07:30 AM	0	4	4	0	2	2	0	3	3	0	4	4	13
07:45 AM	0	2	2	0	4	4	0	0	0	0	2	2	8
Total	0	7	7	0	15	15	0	7	7	0	11	11	40
08:00 AM	0	1	1	0	4	4	0	4	4	0	3	3	12
08:15 AM	0	2	2	0	4	4	0	4	4	0	2	2	12
08:30 AM	0	1	1	0	3	3	0	2	2	0	2	2	8
08:45 AM	0	3	3	0	3	3	0	2	2	0	4	4	12
Total	0	7	7	0	14	14	0	12	12	0	11	11	44
Grand Total	0	14	14	0	29	29	0	19	19	0	22	22	84
Apprch %	0	100		0	100		0	100		0	100		
Total %	0	16.7	16.7	0	34.5	34.5	0	22.6	22.6	0	26.2	26.2	

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Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
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Groups Printed- PC - SU - MU

	Halsted Ave From North				127th St From East				Halsted Ave From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	38	106	23	167	23	101	6	130	3	84	25	112	18	108	24	150	559
04:15 PM	33	114	38	185	18	76	3	97	3	78	23	104	27	121	33	181	567
04:30 PM	47	113	34	194	13	67	2	82	3	61	19	83	31	127	43	201	560
04:45 PM	34	125	33	192	8	84	1	93	1	60	12	73	31	101	27	159	517
Total	152	458	128	738	62	328	12	402	10	283	79	372	107	457	127	691	2203
05:00 PM	34	104	38	176	11	77	2	90	2	54	26	82	18	125	18	161	509
05:15 PM	47	120	39	206	16	114	2	132	3	73	20	96	22	138	17	177	611
05:30 PM	27	126	37	190	16	97	3	116	1	50	26	77	40	123	30	193	576
05:45 PM	33	119	39	191	23	88	3	114	3	82	22	107	35	105	21	161	573
Total	141	469	153	763	66	376	10	452	9	259	94	362	115	491	86	692	2269
Grand Total	293	927	281	1501	128	704	22	854	19	542	173	734	222	948	213	1383	4472
Apprch %	19.5	61.8	18.7		15	82.4	2.6		2.6	73.8	23.6		16.1	68.5	15.4		
Total %	6.6	20.7	6.3	33.6	2.9	15.7	0.5	19.1	0.4	12.1	3.9	16.4	5	21.2	4.8	30.9	
PC	285	893	277	1455	115	691	22	828	19	531	160	710	209	923	210	1342	4335
% PC	97.3	96.3	98.6	96.9	89.8	98.2	100	97	100	98	92.5	96.7	94.1	97.4	98.6	97	96.9
SU	8	32	3	43	13	8	0	21	0	9	4	13	8	16	3	27	104
% SU	2.7	3.5	1.1	2.9	10.2	1.1	0	2.5	0	1.7	2.3	1.8	3.6	1.7	1.4	2	2.3
MU	0	2	1	3	0	5	0	5	0	2	9	11	5	9	0	14	33
% MU	0	0.2	0.4	0.2	0	0.7	0	0.6	0	0.4	5.2	1.5	2.3	0.9	0	1	0.7

	Halsted Ave From North				127th St From East				Halsted Ave From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	34	104	38	176	11	77	2	90	2	54	**26**	82	18	125	18	161	509
05:15 PM	**47**	120	**39**	**206**	16	**114**	2	**132**	**3**	73	20	96	22	**138**	17	177	**611**
05:30 PM	27	**126**	37	190	16	97	**3**	116	1	50	26	77	**40**	123	**30**	**193**	576
05:45 PM	33	119	39	191	**23**	88	3	114	3	**82**	22	**107**	35	105	21	161	573
Total Volume	141	469	153	763	66	376	10	452	9	259	94	362	115	491	86	692	2269
% App. Total	18.5	61.5	20.1		14.6	83.2	2.2		2.5	71.5	26		16.6	71	12.4		
PHF	.750	.931	.981	.926	.717	.825	.833	.856	.750	.790	.904	.846	.719	.889	.717	.896	.928

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127th St and Halsted Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/16/2012
Page No : 6

Groups Printed- SU

	Halsted Ave From North				127th St From East				Halsted Ave From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	2	5	2	9	2	1	0	3	0	2	2	4	0	2	2	4	20
04:15 PM	0	3	0	3	2	0	0	2	0	2	0	2	3	2	0	5	12
04:30 PM	2	2	1	5	4	0	0	4	0	0	0	0	2	2	0	4	13
04:45 PM	0	6	0	6	1	2	0	3	0	0	0	0	1	2	0	3	12
Total	4	16	3	23	9	3	0	12	0	4	2	6	6	8	2	16	57
05:00 PM	1	4	0	5	1	3	0	4	0	2	1	3	0	1	0	1	13
05:15 PM	1	5	0	6	1	1	0	2	0	1	0	1	1	2	0	3	12
05:30 PM	0	5	0	5	1	1	0	2	0	2	0	2	0	2	1	3	12
05:45 PM	2	2	0	4	1	0	0	1	0	0	1	1	1	3	0	4	10
Total	4	16	0	20	4	5	0	9	0	5	2	7	2	8	1	11	47
Grand Total	8	32	3	43	13	8	0	21	0	9	4	13	8	16	3	27	104
Apprch %	18.6	74.4	7		61.9	38.1	0		0	69.2	30.8		29.6	59.3	11.1		
Total %	7.7	30.8	2.9	41.3	12.5	7.7	0	20.2	0	8.7	3.8	12.5	7.7	15.4	2.9	26	

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Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/16/2012

Groups Printed- MU

	Halsted Ave From North				127th St From East				Halsted Ave From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	1	0	1	0	1	2	3	1	0	0	1	5
04:15 PM	0	0	0	0	0	2	0	2	0	0	1	1	0	4	0	4	7
04:30 PM	0	0	0	0	0	0	0	0	0	1	2	3	1	2	0	3	6
04:45 PM	0	2	0	2	0	1	0	1	0	0	0	0	3	1	0	4	7
Total	0	2	0	2	0	4	0	4	0	2	5	7	5	7	0	12	25
05:00 PM	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	2
05:15 PM	0	0	0	0	0	0	0	0	0	0	2	2	0	1	0	1	3
05:30 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
05:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Total	0	0	1	1	0	1	0	1	0	0	4	4	0	2	0	2	8
Grand Total	0	2	1	3	0	5	0	5	0	2	9	11	5	9	0	14	33
Apprch %	0	66.7	33.3		0	100	0		0	18.2	81.8		35.7	64.3	0		
Total %	0	6.1	3	9.1	0	15.2	0	15.2	0	6.1	27.3	33.3	15.2	27.3	0	42.4	

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4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/16/2012

Groups Printed- Peds & Bikes

	Halsted Ave Crossing North Leg			127th St Crossing East Leg			Halsted Ave Crossing South Leg			127th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	11	11	1	2	3	0	1	1	15
04:15 PM	0	3	3	0	1	1	0	3	3	0	10	10	17
04:30 PM	0	2	2	1	3	4	0	3	3	0	4	4	13
04:45 PM	2	1	3	0	5	5	1	0	1	2	8	10	19
Total	2	6	8	1	20	21	2	8	10	2	23	25	64
05:00 PM	0	0	0	0	1	1	0	0	0	0	3	3	4
05:15 PM	0	4	4	0	1	1	0	0	0	2	1	3	8
05:30 PM	0	0	0	0	0	0	0	0	0	0	1	1	1
05:45 PM	0	0	0	0	2	2	0	2	2	0	3	3	7
Total	0	4	4	0	4	4	0	2	2	2	8	10	20
Grand Total	2	10	12	1	24	25	2	10	12	4	31	35	84
Apprch %	16.7	83.3		4	96		16.7	83.3		11.4	88.6		
Total %	2.4	11.9	14.3	1.2	28.6	29.8	2.4	11.9	14.3	4.8	36.9	41.7	

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127th St and Marshfield Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/22/2012
Page No : 1

Groups Printed- PC - SU - MU

	Marshfield Ave From North				127th St From East				Marshfield Ave From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	61	118	0	179	70	77	105	252	0	151	84	235	666
07:15 AM	0	0	0	0	61	148	0	209	83	76	109	268	0	162	81	243	720
07:30 AM	0	0	0	0	64	156	0	220	100	72	131	303	0	160	73	233	756
07:45 AM	0	0	0	0	53	162	0	215	75	77	132	284	0	191	87	278	777
Total	0	0	0	0	239	584	0	823	328	302	477	1107	0	664	325	989	2919
08:00 AM	0	0	0	0	62	139	0	201	60	64	97	221	0	225	73	298	720
08:15 AM	0	0	0	0	55	138	0	193	62	68	94	224	0	159	69	228	645
08:30 AM	0	0	0	0	59	169	0	228	45	64	66	175	0	177	94	271	674
08:45 AM	0	0	0	0	61	170	0	231	50	73	82	205	0	173	70	243	679
Total	0	0	0	0	237	616	0	853	217	269	339	825	0	734	306	1040	2718
Grand Total	0	0	0	0	476	1200	0	1676	545	571	816	1932	0	1398	631	2029	5637
Apprch %	0	0	0		28.4	71.6	0		28.2	29.6	42.2		0	68.9	31.1		
Total %	0	0	0	0	8.4	21.3	0	29.7	9.7	10.1	14.5	34.3	0	24.8	11.2	36	
PC	0	0	0	0	456	1094	0	1550	519	554	777	1850	0	1283	564	1847	5247
% PC	0	0	0	0	95.8	91.2	0	92.5	95.2	97	95.2	95.8	0	91.8	89.4	91	93.1
SU	0	0	0	0	12	73	0	85	16	15	17	48	0	83	52	135	268
% SU	0	0	0	0	2.5	6.1	0	5.1	2.9	2.6	2.1	2.5	0	5.9	8.2	6.7	4.8
MU	0	0	0	0	8	33	0	41	10	2	22	34	0	32	15	47	122
% MU	0	0	0	0	1.7	2.8	0	2.4	1.8	0.4	2.7	1.8	0	2.3	2.4	2.3	2.2

	Marshfield Ave From North				127th St From East				Marshfield Ave From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	61	148	0	209	83	76	109	268	0	162	81	243	720
07:30 AM	0	0	0	0	**64**	156	0	**220**	**100**	72	131	**303**	0	160	73	233	756
07:45 AM	0	0	0	0	53	**162**	0	215	75	**77**	**132**	284	0	191	**87**	278	**777**
08:00 AM	0	0	0	0	62	139	0	201	60	64	97	221	0	**225**	73	**298**	720
Total Volume	0	0	0	0	240	605	0	845	318	289	469	1076	0	738	314	1052	2973
% App. Total	0	0	0		28.4	71.6	0		29.6	26.9	43.6		0	70.2	29.8		
PHF	.000	.000	.000	.000	.938	.934	.000	.960	.795	.938	.888	.888	.000	.820	.902	.883	.957

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127th St and Marshfield Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/22/2012
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Groups Printed- SU

	Marshfield Ave From North				127th St From East				Marshfield Ave From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	2	7	0	9	1	2	4	7	0	9	10	19	35
07:15 AM	0	0	0	0	4	14	0	18	2	0	1	3	0	5	9	14	35
07:30 AM	0	0	0	0	1	5	0	6	5	4	7	16	0	15	9	24	46
07:45 AM	0	0	0	0	0	7	0	7	1	2	2	5	0	12	10	22	34
Total	0	0	0	0	7	33	0	40	9	8	14	31	0	41	38	79	150
08:00 AM	0	0	0	0	3	10	0	13	1	1	0	2	0	11	3	14	29
08:15 AM	0	0	0	0	0	6	0	6	1	1	1	3	0	9	1	10	19
08:30 AM	0	0	0	0	1	14	0	15	1	1	0	2	0	12	6	18	35
08:45 AM	0	0	0	0	1	10	0	11	4	4	2	10	0	10	4	14	35
Total	0	0	0	0	5	40	0	45	7	7	3	17	0	42	14	56	118
Grand Total	0	0	0	0	12	73	0	85	16	15	17	48	0	83	52	135	268
Apprch %	0	0	0		14.1	85.9	0		33.3	31.2	35.4		0	61.5	38.5		
Total %	0	0	0	0	4.5	27.2	0	31.7	6	5.6	6.3	17.9	0	31	19.4	50.4	

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Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/22/2012
Page No : 3

Groups Printed- MU

	Marshfield Ave From North				127th St From East				Marshfield Ave From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	1	1	0	2	1	0	5	6	0	1	3	4	12
07:15 AM	0	0	0	0	1	4	0	5	1	0	2	3	0	4	1	5	13
07:30 AM	0	0	0	0	0	4	0	4	2	0	4	6	0	3	2	5	15
07:45 AM	0	0	0	0	2	0	0	2	4	0	2	6	0	5	1	6	14
Total	0	0	0	0	4	9	0	13	8	0	13	21	0	13	7	20	54
08:00 AM	0	0	0	0	1	6	0	7	1	0	2	3	0	6	2	8	18
08:15 AM	0	0	0	0	2	7	0	9	0	1	1	2	0	4	1	5	16
08:30 AM	0	0	0	0	0	3	0	3	1	1	2	4	0	4	3	7	14
08:45 AM	0	0	0	0	1	8	0	9	0	0	4	4	0	5	2	7	20
Total	0	0	0	0	4	24	0	28	2	2	9	13	0	19	8	27	68
Grand Total	0	0	0	0	8	33	0	41	10	2	22	34	0	32	15	47	122
Apprch %	0	0	0		19.5	80.5	0		29.4	5.9	64.7		0	68.1	31.9		
Total %	0	0	0	0	6.6	27	0	33.6	8.2	1.6	18	27.9	0	26.2	12.3	38.5	

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7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
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Groups Printed- Peds & Bikes

	Marshfield Ave Crossing North Leg			127th St Crossing East Leg			Marshfield Ave Crossing South Leg			127th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	1	1	0	1	1	0	0	0	2
07:15 AM	0	1	1	0	0	0	0	1	1	0	0	0	2
07:30 AM	0	3	3	0	0	0	0	0	0	0	0	0	3
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	4	4	0	1	1	0	2	2	0	0	0	7
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	1	1	0	0	0	0	0	0	0	0	0	1
08:30 AM	0	1	1	0	1	1	0	1	1	0	0	0	3
08:45 AM	0	3	3	0	0	0	0	2	2	0	0	0	5
Total	0	5	5	0	1	1	0	3	3	0	0	0	9
Grand Total	0	9	9	0	2	2	0	5	5	0	0	0	16
Apprch %	0	100		0	100		0	100		0	0		
Total %	0	56.2	56.2	0	12.5	12.5	0	31.2	31.2	0	0	0	

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Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/22/2012
Page No : 5

Groups Printed- PC - SU - MU

	Marshfield Ave From North				127th St From East				Marshfield Ave From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	57	157	0	214	62	70	74	206	0	247	83	330	750
04:15 PM	0	0	0	0	66	176	0	242	68	66	67	201	0	256	94	350	793
04:30 PM	0	0	0	0	63	160	0	223	54	63	83	200	0	280	105	385	808
04:45 PM	0	0	0	0	82	207	0	289	52	68	74	194	0	243	95	338	821
Total	0	0	0	0	268	700	0	968	236	267	298	801	0	1026	377	1403	3172
05:00 PM	0	0	0	0	70	176	0	246	60	67	79	206	0	265	69	334	786
05:15 PM	0	0	0	0	67	172	0	239	67	62	83	212	0	254	101	355	806
05:30 PM	0	0	0	0	58	124	0	182	62	70	96	228	0	229	79	308	718
05:45 PM	0	0	0	0	66	182	0	248	48	71	62	181	0	248	78	326	755
Total	0	0	0	0	261	654	0	915	237	270	320	827	0	996	327	1323	3065
Grand Total	0	0	0	0	529	1354	0	1883	473	537	618	1628	0	2022	704	2726	6237
Apprch %	0	0	0		28.1	71.9	0		29.1	33	38		0	74.2	25.8		
Total %	0	0	0	0	8.5	21.7	0	30.2	7.6	8.6	9.9	26.1	0	32.4	11.3	43.7	
PC	0	0	0	0	518	1312	0	1830	458	526	607	1591	0	1968	674	2642	6063
% PC	0	0	0	0	97.9	96.9	0	97.2	96.8	98	98.2	97.7	0	97.3	95.7	96.9	97.2
SU	0	0	0	0	6	27	0	33	6	5	6	17	0	31	11	42	92
% SU	0	0	0	0	1.1	2	0	1.8	1.3	0.9	1	1	0	1.5	1.6	1.5	1.5
MU	0	0	0	0	5	15	0	20	9	6	5	20	0	23	19	42	82
% MU	0	0	0	0	0.9	1.1	0	1.1	1.9	1.1	0.8	1.2	0	1.1	2.7	1.5	1.3

	Marshfield Ave From North				127th St From East				Marshfield Ave From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	63	160	0	223	54	63	**83**	200	0	**280**	**105**	**385**	808
04:45 PM	0	0	0	0	**82**	**207**	0	**289**	52	**68**	74	194	0	243	95	338	**821**
05:00 PM	0	0	0	0	70	176	0	246	60	67	79	206	0	265	69	334	786
05:15 PM	0	0	0	0	67	172	0	239	**67**	62	83	**212**	0	254	101	355	806
Total Volume	0	0	0	0	282	715	0	997	233	260	319	812	0	1042	370	1412	3221
% App. Total	0	0	0		28.3	71.7	0		28.7	32	39.3		0	73.8	26.2		
PHF	.000	.000	.000	.000	.860	.864	.000	.862	.869	.956	.961	.958	.000	.930	.881	.917	.981

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127th St and Marshfield Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/22/2012
Page No : 6

Groups Printed- SU

	Marshfield Ave From North				127th St From East				Marshfield Ave From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	6	0	6	0	0	1	1	0	5	1	6	13
04:15 PM	0	0	0	0	3	3	0	6	0	0	0	0	0	5	2	7	13
04:30 PM	0	0	0	0	0	4	0	4	1	1	0	2	0	4	1	5	11
04:45 PM	0	0	0	0	1	5	0	6	2	1	3	6	0	5	5	10	22
Total	0	0	0	0	4	18	0	22	3	2	4	9	0	19	9	28	59
05:00 PM	0	0	0	0	1	0	0	1	1	0	2	3	0	3	0	3	7
05:15 PM	0	0	0	0	1	4	0	5	1	1	0	2	0	4	1	5	12
05:30 PM	0	0	0	0	0	1	0	1	1	2	0	3	0	2	0	2	6
05:45 PM	0	0	0	0	0	4	0	4	0	0	0	0	0	3	1	4	8
Total	0	0	0	0	2	9	0	11	3	3	2	8	0	12	2	14	33
Grand Total	0	0	0	0	6	27	0	33	6	5	6	17	0	31	11	42	92
Apprch %	0	0	0		18.2	81.8	0		35.3	29.4	35.3		0	73.8	26.2		
Total %	0	0	0	0	6.5	29.3	0	35.9	6.5	5.4	6.5	18.5	0	33.7	12	45.7	

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127th St and Marshfield Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/22/2012
Page No : 7

Groups Printed- MU

	Marshfield Ave From North				127th St From East				Marshfield Ave From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	1	0	0	1	0	1	1	2	0	4	5	9	12
04:15 PM	0	0	0	0	1	5	0	6	3	2	0	5	0	2	3	5	16
04:30 PM	0	0	0	0	1	2	0	3	0	0	0	0	0	2	7	9	12
04:45 PM	0	0	0	0	1	2	0	3	2	2	0	4	0	2	0	2	9
Total	0	0	0	0	4	9	0	13	5	5	1	11	0	10	15	25	49
05:00 PM	0	0	0	0	0	4	0	4	0	0	1	1	0	5	0	5	10
05:15 PM	0	0	0	0	1	1	0	2	0	0	2	2	0	4	1	5	9
05:30 PM	0	0	0	0	0	1	0	1	3	1	1	5	0	2	0	2	8
05:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	2	3	5	6
Total	0	0	0	0	1	6	0	7	4	1	4	9	0	13	4	17	33
Grand Total	0	0	0	0	5	15	0	20	9	6	5	20	0	23	19	42	82
Apprch %	0	0	0		25	75	0		45	30	25		0	54.8	45.2		
Total %	0	0	0	0	6.1	18.3	0	24.4	11	7.3	6.1	24.4	0	28	23.2	51.2	

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Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/22/2012
Page No : 8

Groups Printed- Peds & Bikes

	Marshfield Ave Crossing North Leg			127th St Crossing East Leg			Marshfield Ave Crossing South Leg			127th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	1	1	0	0	0	0	0	0	0	0	0	1
04:15 PM	1	2	3	0	0	0	0	1	1	0	0	0	4
04:30 PM	0	3	3	0	2	2	1	0	1	0	0	0	6
04:45 PM	1	2	3	0	0	0	0	2	2	0	0	0	5
Total	2	8	10	0	2	2	1	3	4	0	0	0	16
05:00 PM	0	4	4	0	0	0	0	1	1	0	0	0	5
05:15 PM	1	0	1	0	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	1	2	3	0	0	0	3
05:45 PM	0	3	3	0	0	0	0	2	2	0	0	0	5
Total	1	7	8	0	0	0	1	5	6	0	0	0	14
Grand Total	3	15	18	0	2	2	2	8	10	0	0	0	30
Apprch %	16.7	83.3		0	100		20	80		0	0		
Total %	10	50	60	0	6.7	6.7	6.7	26.7	33.3	0	0	0	

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Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/17/2012
Page No : 1

Groups Printed- PC - SU - MU

	Michigan Ave From North				127th St From East				Michigan Ave From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	6	0	15	21	28	108	0	136	0	0	0	0	0	106	6	112	269
07:15 AM	16	0	28	44	35	114	0	149	0	0	0	0	0	116	17	133	326
07:30 AM	11	0	31	42	40	122	0	162	0	0	0	0	0	121	9	130	334
07:45 AM	15	0	34	49	40	136	0	176	0	0	0	0	0	128	12	140	365
Total	48	0	108	156	143	480	0	623	0	0	0	0	0	471	44	515	1294
08:00 AM	11	0	31	42	45	124	0	169	0	0	0	0	0	113	13	126	337
08:15 AM	12	0	22	34	44	134	0	178	0	0	0	0	0	102	12	114	326
08:30 AM	6	0	34	40	45	117	0	162	0	0	0	0	0	121	16	137	339
08:45 AM	18	0	30	48	46	150	0	196	0	0	0	0	0	106	13	119	363
Total	47	0	117	164	180	525	0	705	0	0	0	0	0	442	54	496	1365
Grand Total	95	0	225	320	323	1005	0	1328	0	0	0	0	0	913	98	1011	2659
Apprch %	29.7	0	70.3		24.3	75.7	0		0	0	0		0	90.3	9.7		
Total %	3.6	0	8.5	12	12.1	37.8	0	49.9	0	0	0	0	0	34.3	3.7	38	
PC	92	0	203	295	285	916	0	1201	0	0	0	0	0	824	95	919	2415
% PC	96.8	0	90.2	92.2	88.2	91.1	0	90.4	0	0	0	0	0	90.3	96.9	90.9	90.8
SU	3	0	22	25	38	52	0	90	0	0	0	0	0	45	3	48	163
% SU	3.2	0	9.8	7.8	11.8	5.2	0	6.8	0	0	0	0	0	4.9	3.1	4.7	6.1
MU	0	0	0	0	0	37	0	37	0	0	0	0	0	44	0	44	81
% MU	0	0	0	0	0	3.7	0	2.8	0	0	0	0	0	4.8	0	4.4	3

	Michigan Ave From North				127th St From East				Michigan Ave From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	**15**	0	**34**	**49**	40	**136**	0	176	0	0	0	0	0	**128**	12	**140**	**365**
08:00 AM	11	0	31	42	**45**	124	0	169	0	0	0	0	0	113	13	126	337
08:15 AM	12	0	22	34	44	134	0	**178**	0	0	0	0	0	102	12	114	326
08:30 AM	6	0	34	40	45	117	0	162	0	0	0	0	0	121	**16**	137	339
Total Volume	44	0	121	165	174	511	0	685	0	0	0	0	0	464	53	517	1367
% App. Total	26.7	0	73.3		25.4	74.6	0		0	0	0		0	89.7	10.3		
PHF	.733	.000	.890	.842	.967	.939	.000	.962	.000	.000	.000	.000	.000	.906	.828	.923	.936

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Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/17/2012
Page No : 2

Groups Printed- SU

	Michigan Ave From North				127th St From East				Michigan Ave From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	4	4	5	4	0	9	0	0	0	0	0	6	1	7	20
07:15 AM	0	0	2	2	6	9	0	15	0	0	0	0	0	11	0	11	28
07:30 AM	1	0	3	4	4	4	0	8	0	0	0	0	0	7	0	7	19
07:45 AM	0	0	2	2	4	4	0	8	0	0	0	0	0	3	0	3	13
Total	1	0	11	12	19	21	0	40	0	0	0	0	0	27	1	28	80
08:00 AM	1	0	5	6	5	8	0	13	0	0	0	0	0	3	1	4	23
08:15 AM	0	0	1	1	7	9	0	16	0	0	0	0	0	4	1	5	22
08:30 AM	1	0	3	4	3	7	0	10	0	0	0	0	0	4	0	4	18
08:45 AM	0	0	2	2	4	7	0	11	0	0	0	0	0	7	0	7	20
Total	2	0	11	13	19	31	0	50	0	0	0	0	0	18	2	20	83
Grand Total	3	0	22	25	38	52	0	90	0	0	0	0	0	45	3	48	163
Apprch %	12	0	88		42.2	57.8	0		0	0	0		0	93.8	6.2		
Total %	1.8	0	13.5	15.3	23.3	31.9	0	55.2	0	0	0	0	0	27.6	1.8	29.4	

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7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/17/2012
Page No : 3

Groups Printed- MU

	Michigan Ave From North				127th St From East				Michigan Ave From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	4	0	4	0	0	0	0	0	6	0	6	10
07:15 AM	0	0	0	0	0	5	0	5	0	0	0	0	0	3	0	3	8
07:30 AM	0	0	0	0	0	6	0	6	0	0	0	0	0	6	0	6	12
07:45 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	7	0	7	9
Total	0	0	0	0	0	17	0	17	0	0	0	0	0	22	0	22	39
08:00 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	7	0	7	9
08:15 AM	0	0	0	0	0	6	0	6	0	0	0	0	0	7	0	7	13
08:30 AM	0	0	0	0	0	6	0	6	0	0	0	0	0	2	0	2	8
08:45 AM	0	0	0	0	0	6	0	6	0	0	0	0	0	6	0	6	12
Total	0	0	0	0	0	20	0	20	0	0	0	0	0	22	0	22	42
Grand Total	0	0	0	0	0	37	0	37	0	0	0	0	0	44	0	44	81
Apprch %	0	0	0		0	100	0		0	0	0		0	100	0		
Total %	0	0	0	0	0	45.7	0	45.7	0	0	0	0	0	54.3	0	54.3	

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Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/17/2012
Page No : 4

Groups Printed- Peds & Bikes

	Michigan Ave Crossing North Leg			127th St Crossing East Leg			Michigan Ave Crossing South Leg			127th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	1	1	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	1	1	0	0	0	0	0	0	0	0	0	1
07:45 AM	1	0	1	0	0	0	0	0	0	0	0	0	1
Total	1	2	3	0	0	0	0	0	0	0	0	0	3
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	2	2	0	0	0	0	0	0	0	0	0	2
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	2	0	0	0	0	0	0	0	0	0	2
Grand Total	1	4	5	0	0	0	0	0	0	0	0	0	5
Apprch %	20	80		0	0		0	0		0	0		
Total %	20	80	100	0	0	0	0	0	0	0	0	0	

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Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/17/2012
Page No : 5

Groups Printed- PC - SU - MU

	Michigan Ave From North				127th St From East				Michigan Ave From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	12	0	45	57	43	127	0	170	0	0	0	0	0	159	16	175	402
04:15 PM	26	0	59	85	47	127	0	174	0	0	0	0	0	164	20	184	443
04:30 PM	32	0	52	84	23	99	0	122	0	0	0	0	0	159	17	176	382
04:45 PM	26	0	48	74	37	194	0	231	0	0	0	0	0	185	16	201	506
Total	96	0	204	300	150	547	0	697	0	0	0	0	0	667	69	736	1733
05:00 PM	17	0	50	67	38	137	0	175	0	0	0	0	0	155	15	170	412
05:15 PM	26	0	73	99	30	116	0	146	0	0	0	0	0	186	20	206	451
05:30 PM	19	0	60	79	32	97	0	129	0	0	0	0	0	157	18	175	383
05:45 PM	18	0	56	74	36	140	0	176	0	0	0	0	0	195	17	212	462
Total	80	0	239	319	136	490	0	626	0	0	0	0	0	693	70	763	1708
Grand Total	176	0	443	619	286	1037	0	1323	0	0	0	0	0	1360	139	1499	3441
Apprch %	28.4	0	71.6		21.6	78.4	0		0	0	0		0	90.7	9.3		
Total %	5.1	0	12.9	18	8.3	30.1	0	38.4	0	0	0	0	0	39.5	4	43.6	
PC	172	0	416	588	261	1010	0	1271	0	0	0	0	0	1328	138	1466	3325
% PC	97.7	0	93.9	95	91.3	97.4	0	96.1	0	0	0	0	0	97.6	99.3	97.8	96.6
SU	4	0	27	31	25	18	0	43	0	0	0	0	0	18	1	19	93
% SU	2.3	0	6.1	5	8.7	1.7	0	3.3	0	0	0	0	0	1.3	0.7	1.3	2.7
MU	0	0	0	0	0	9	0	9	0	0	0	0	0	14	0	14	23
% MU	0	0	0	0	0	0.9	0	0.7	0	0	0	0	0	1	0	0.9	0.7

	Michigan Ave From North				127th St From East				Michigan Ave From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**26**	0	48	74	37	**194**	0	**231**	0	0	0	0	0	185	16	201	**506**
05:00 PM	17	0	50	67	**38**	137	0	175	0	0	0	0	0	155	15	170	412
05:15 PM	26	0	**73**	**99**	30	116	0	146	0	0	0	0	0	**186**	**20**	**206**	451
05:30 PM	19	0	60	79	32	97	0	129	0	0	0	0	0	157	18	175	383
Total Volume	88	0	231	319	137	544	0	681	0	0	0	0	0	683	69	752	1752
% App. Total	27.6	0	72.4		20.1	79.9	0		0	0	0		0	90.8	9.2		
PHF	.846	.000	.791	.806	.901	.701	.000	.737	.000	.000	.000	.000	.000	.918	.863	.913	.866

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4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/17/2012
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Groups Printed- SU

	Michigan Ave From North				127th St From East				Michigan Ave From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	4	4	5	2	0	7	0	0	0	0	0	1	0	1	12
04:15 PM	0	0	3	3	3	4	0	7	0	0	0	0	0	6	0	6	16
04:30 PM	0	0	3	3	4	3	0	7	0	0	0	0	0	2	0	2	12
04:45 PM	0	0	3	3	0	1	0	1	0	0	0	0	0	1	0	1	5
Total	0	0	13	13	12	10	0	22	0	0	0	0	0	10	0	10	45
05:00 PM	2	0	6	8	5	1	0	6	0	0	0	0	0	4	0	4	18
05:15 PM	0	0	3	3	1	2	0	3	0	0	0	0	0	1	1	2	8
05:30 PM	2	0	4	6	3	1	0	4	0	0	0	0	0	3	0	3	13
05:45 PM	0	0	1	1	4	4	0	8	0	0	0	0	0	0	0	0	9
Total	4	0	14	18	13	8	0	21	0	0	0	0	0	8	1	9	48
Grand Total	4	0	27	31	25	18	0	43	0	0	0	0	0	18	1	19	93
Apprch %	12.9	0	87.1		58.1	41.9	0		0	0	0		0	94.7	5.3		
Total %	4.3	0	29	33.3	26.9	19.4	0	46.2	0	0	0	0	0	19.4	1.1	20.4	

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Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/17/2012
Page No : 7

Groups Printed- MU

	Michigan Ave From North				127th St From East				Michigan Ave From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
04:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	3	0	3	4
04:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	4
04:45 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	3	0	3	5
Total	0	0	0	0	0	5	0	5	0	0	0	0	0	10	0	10	15
05:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
05:15 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	3
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	4	0	4	0	0	0	0	0	4	0	4	8
Grand Total	0	0	0	0	0	9	0	9	0	0	0	0	0	14	0	14	23
Apprch %	0	0	0		0	100	0		0	0	0		0	100	0		
Total %	0	0	0	0	0	39.1	0	39.1	0	0	0	0	0	60.9	0	60.9	

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127th St and Michigan Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/17/2012
Page No : 8

Groups Printed- Peds & Bikes

	Michigan Ave Crossing North Leg			127th St Crossing East Leg			Michigan Ave Crossing South Leg			127th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	1	1	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	1	0	0	0	0	0	0	0	0	0	1
05:00 PM	0	2	2	0	0	0	0	0	0	0	0	0	2
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	1	1	1
Total	0	2	2	0	0	0	0	0	0	0	1	1	3
Grand Total	0	3	3	0	0	0	0	0	0	0	1	1	4
Apprch %	0	100		0	0		0	0		0	100		
Total %	0	75	75	0	0	0	0	0	0	0	25	25	

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127th St and Paulina St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/22/2012
Page No : 1

Groups Printed- PC - SU - MU

	Paulina St From North				127th St From East				Paulina St From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	72	34	55	161	0	187	52	239	0	0	0	0	42	211	0	253	653
07:15 AM	80	56	76	212	0	299	57	356	0	0	0	0	51	300	0	351	919
07:30 AM	112	58	120	290	0	306	60	366	0	0	0	0	61	368	0	429	1085
07:45 AM	117	85	110	312	0	324	72	396	0	0	0	0	66	377	0	443	1151
Total	381	233	361	975	0	1116	241	1357	0	0	0	0	220	1256	0	1476	3808
08:00 AM	67	46	116	229	0	217	48	265	0	0	0	0	57	418	0	475	969
08:15 AM	86	52	145	283	0	217	77	294	0	0	0	0	30	381	0	411	988
08:30 AM	69	55	112	236	0	217	54	271	0	0	0	0	48	404	0	452	959
08:45 AM	80	49	178	307	0	211	63	274	0	0	0	0	25	268	0	293	874
Total	302	202	551	1055	0	862	242	1104	0	0	0	0	160	1471	0	1631	3790
Grand Total	683	435	912	2030	0	1978	483	2461	0	0	0	0	380	2727	0	3107	7598
Apprch %	33.6	21.4	44.9		0	80.4	19.6		0	0	0		12.2	87.8	0		
Total %	9	5.7	12	26.7	0	26	6.4	32.4	0	0	0	0	5	35.9	0	40.9	
PC	629	418	878	1925	0	1871	442	2313	0	0	0	0	358	2587	0	2945	7183
% PC	92.1	96.1	96.3	94.8	0	94.6	91.5	94	0	0	0	0	94.2	94.9	0	94.8	94.5
SU	32	11	25	68	0	71	15	86	0	0	0	0	11	89	0	100	254
% SU	4.7	2.5	2.7	3.3	0	3.6	3.1	3.5	0	0	0	0	2.9	3.3	0	3.2	3.3
MU	22	6	9	37	0	36	26	62	0	0	0	0	11	51	0	62	161
% MU	3.2	1.4	1	1.8	0	1.8	5.4	2.5	0	0	0	0	2.9	1.9	0	2	2.1

	Paulina St From North				127th St From East				Paulina St From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	112	58	120	290	0	306	60	366	0	0	0	0	61	368	0	429	1085
07:45 AM	**117**	**85**	110	**312**	0	**324**	72	**396**	0	0	0	0	**66**	377	0	443	**1151**
08:00 AM	67	46	116	229	0	217	48	265	0	0	0	0	57	**418**	0	**475**	969
08:15 AM	86	52	**145**	283	0	217	**77**	294	0	0	0	0	30	381	0	411	988
Total Volume	382	241	491	1114	0	1064	257	1321	0	0	0	0	214	1544	0	1758	4193
% App. Total	34.3	21.6	44.1		0	80.5	19.5		0	0	0		12.2	87.8	0		
PHF	.816	.709	.847	.893	.000	.821	.834	.834	.000	.000	.000	.000	.811	.923	.000	.925	.911

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127th St and Paulina St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/22/2012

Groups Printed- SU

	Paulina St From North				127th St From East				Paulina St From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	3	0	0	3	0	10	2	12	0	0	0	0	2	18	0	20	35
07:15 AM	3	3	1	7	0	12	1	13	0	0	0	0	1	5	0	6	26
07:30 AM	3	2	5	10	0	9	0	9	0	0	0	0	4	19	0	23	42
07:45 AM	3	3	3	9	0	8	4	12	0	0	0	0	1	14	0	15	36
Total	12	8	9	29	0	39	7	46	0	0	0	0	8	56	0	64	139
08:00 AM	3	1	2	6	0	9	1	10	0	0	0	0	0	10	0	10	26
08:15 AM	4	1	1	6	0	5	1	6	0	0	0	0	1	6	0	7	19
08:30 AM	4	1	4	9	0	11	4	15	0	0	0	0	1	10	0	11	35
08:45 AM	9	0	9	18	0	7	2	9	0	0	0	0	1	7	0	8	35
Total	20	3	16	39	0	32	8	40	0	0	0	0	3	33	0	36	115
Grand Total	32	11	25	68	0	71	15	86	0	0	0	0	11	89	0	100	254
Apprch %	47.1	16.2	36.8		0	82.6	17.4		0	0	0		11	89	0		
Total %	12.6	4.3	9.8	26.8	0	28	5.9	33.9	0	0	0	0	4.3	35	0	39.4	

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Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/22/2012
Page No : 3

Groups Printed- MU

	Paulina St From North				127th St From East				Paulina St From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	2	0	1	3	0	5	0	5	0	0	0	0	1	3	0	4	12
07:15 AM	1	0	0	1	0	6	2	8	0	0	0	0	4	10	0	14	23
07:30 AM	6	1	1	8	0	5	5	10	0	0	0	0	4	5	0	9	27
07:45 AM	5	1	1	7	0	1	0	1	0	0	0	0	1	10	0	11	19
Total	14	2	3	19	0	17	7	24	0	0	0	0	10	28	0	38	81
08:00 AM	2	0	0	2	0	5	4	9	0	0	0	0	1	7	0	8	19
08:15 AM	0	0	2	2	0	3	6	9	0	0	0	0	0	4	0	4	15
08:30 AM	3	0	2	5	0	3	2	5	0	0	0	0	0	5	0	5	15
08:45 AM	3	4	2	9	0	8	7	15	0	0	0	0	0	7	0	7	31
Total	8	4	6	18	0	19	19	38	0	0	0	0	1	23	0	24	80
Grand Total	22	6	9	37	0	36	26	62	0	0	0	0	11	51	0	62	161
Apprch %	59.5	16.2	24.3		0	58.1	41.9		0	0	0		17.7	82.3	0		
Total %	13.7	3.7	5.6	23	0	22.4	16.1	38.5	0	0	0	0	6.8	31.7	0	38.5	

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Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/22/2012
Page No : 4

Groups Printed- Peds & Bikes

	Paulina St Crossing North Leg			127th St Crossing East Leg			Paulina St Crossing South Leg			127th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	1	1	0	0	0	0	2	2	0	0	0	3
07:15 AM	0	2	2	0	0	0	0	0	0	0	0	0	2
07:30 AM	0	3	3	0	0	0	0	2	2	0	4	4	9
07:45 AM	0	1	1	0	0	0	0	1	1	0	1	1	3
Total	0	7	7	0	0	0	0	5	5	0	5	5	17
08:00 AM	0	5	5	0	0	0	0	2	2	0	3	3	10
08:15 AM	0	1	1	0	1	1	0	0	0	0	0	0	2
08:30 AM	0	2	2	0	1	1	0	4	4	0	0	0	7
08:45 AM	0	4	4	0	0	0	0	5	5	0	0	0	9
Total	0	12	12	0	2	2	0	11	11	0	3	3	28
Grand Total	0	19	19	0	2	2	0	16	16	0	8	8	45
Apprch %	0	100		0	100		0	100		0	100		
Total %	0	42.2	42.2	0	4.4	4.4	0	35.6	35.6	0	17.8	17.8	

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Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/22/2012
Page No : 5

Groups Printed- PC - SU - MU

	Paulina St From North				127th St From East				Paulina St From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	139	70	286	495	0	173	66	239	0	0	0	0	156	557	0	713	1447
04:15 PM	94	79	260	433	0	187	56	243	0	0	0	0	135	402	0	537	1213
04:30 PM	107	78	304	489	0	192	61	253	0	0	0	0	145	608	0	753	1495
04:45 PM	136	64	267	467	0	242	78	320	0	0	0	0	122	575	0	697	1484
Total	476	291	1117	1884	0	794	261	1055	0	0	0	0	558	2142	0	2700	5639
05:00 PM	128	113	295	536	7	187	87	281	0	0	0	0	132	539	0	671	1488
05:15 PM	123	100	333	556	0	226	77	303	0	0	0	0	102	502	0	604	1463
05:30 PM	108	101	321	530	0	163	72	235	0	0	0	0	135	465	0	600	1365
05:45 PM	118	89	201	408	0	253	60	313	0	0	0	0	61	448	0	509	1230
Total	477	403	1150	2030	7	829	296	1132	0	0	0	0	430	1954	0	2384	5546
Grand Total	953	694	2267	3914	7	1623	557	2187	0	0	0	0	988	4096	0	5084	11185
Apprch %	24.3	17.7	57.9		0.3	74.2	25.5		0	0	0		19.4	80.6	0		
Total %	8.5	6.2	20.3	35	0.1	14.5	5	19.6	0	0	0	0	8.8	36.6	0	45.5	
PC	918	682	2253	3853	7	1575	548	2130	0	0	0	0	969	4016	0	4985	10968
% PC	96.3	98.3	99.4	98.4	100	97	98.4	97.4	0	0	0	0	98.1	98	0	98.1	98.1
SU	25	8	6	39	0	33	5	38	0	0	0	0	8	32	0	40	117
% SU	2.6	1.2	0.3	1	0	2	0.9	1.7	0	0	0	0	0.8	0.8	0	0.8	1
MU	10	4	8	22	0	15	4	19	0	0	0	0	11	48	0	59	100
% MU	1	0.6	0.4	0.6	0	0.9	0.7	0.9	0	0	0	0	1.1	1.2	0	1.2	0.9

	Paulina St From North				127th St From East				Paulina St From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	107	78	304	489	0	192	61	253	0	0	0	0	**145**	**608**	0	**753**	**1495**
04:45 PM	**136**	64	267	467	0	**242**	78	**320**	0	0	0	0	122	575	0	697	1484
05:00 PM	128	**113**	295	536	**7**	187	**87**	281	0	0	0	0	132	539	0	671	1488
05:15 PM	123	100	**333**	**556**	0	226	77	303	0	0	0	0	102	502	0	604	1463
Total Volume	494	355	1199	2048	7	847	303	1157	0	0	0	0	501	2224	0	2725	5930
% App. Total	24.1	17.3	58.5		0.6	73.2	26.2		0	0	0		18.4	81.6	0		
PHF	.908	.785	.900	.921	.250	.875	.871	.904	.000	.000	.000	.000	.864	.914	.000	.905	.992

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127th St and Paulina St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/22/2012

Groups Printed- SU

	Paulina St From North				127th St From East				Paulina St From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	10	3	1	14	0	7	2	9	0	0	0	0	0	5	0	5	28
04:15 PM	6	1	0	7	0	6	0	6	0	0	0	0	0	4	0	4	17
04:30 PM	3	1	2	6	0	3	0	3	0	0	0	0	0	3	0	3	12
04:45 PM	1	0	1	2	0	6	1	7	0	0	0	0	0	9	0	9	18
Total	20	5	4	29	0	22	3	25	0	0	0	0	0	21	0	21	75
05:00 PM	2	2	1	5	0	4	0	4	0	0	0	0	7	2	0	9	18
05:15 PM	0	1	0	1	0	3	2	5	0	0	0	0	1	4	0	5	11
05:30 PM	2	0	0	2	0	1	0	1	0	0	0	0	0	2	0	2	5
05:45 PM	1	0	1	2	0	3	0	3	0	0	0	0	0	3	0	3	8
Total	5	3	2	10	0	11	2	13	0	0	0	0	8	11	0	19	42
Grand Total	25	8	6	39	0	33	5	38	0	0	0	0	8	32	0	40	117
Apprch %	64.1	20.5	15.4		0	86.8	13.2		0	0	0		20	80	0		
Total %	21.4	6.8	5.1	33.3	0	28.2	4.3	32.5	0	0	0	0	6.8	27.4	0	34.2	

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127th St and Paulina St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/22/2012
Page No : 7

Groups Printed- MU

	Paulina St From North				127th St From East				Paulina St From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	4	4	3	11	0	1	1	2	0	0	0	0	6	10	0	16	29
04:15 PM	0	0	4	4	0	2	0	2	0	0	0	0	0	7	0	7	13
04:30 PM	2	0	1	3	0	2	0	2	0	0	0	0	2	7	0	9	14
04:45 PM	1	0	0	1	0	1	2	3	0	0	0	0	2	2	0	4	8
Total	7	4	8	19	0	6	3	9	0	0	0	0	10	26	0	36	64
05:00 PM	1	0	0	1	0	4	1	5	0	0	0	0	1	5	0	6	12
05:15 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	8	0	8	11
05:30 PM	2	0	0	2	0	2	0	2	0	0	0	0	0	4	0	4	8
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5	5
Total	3	0	0	3	0	9	1	10	0	0	0	0	1	22	0	23	36
Grand Total	10	4	8	22	0	15	4	19	0	0	0	0	11	48	0	59	100
Apprch %	45.5	18.2	36.4		0	78.9	21.1		0	0	0		18.6	81.4	0		
Total %	10	4	8	22	0	15	4	19	0	0	0	0	11	48	0	59	

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127th St and Paulina St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/22/2012
Page No : 8

Groups Printed- PC - SU - MU

	Paulina St From North				127th St From East				Paulina St From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	139	70	286	495	0	173	66	239	0	0	0	0	156	557	0	713	1447
04:15 PM	94	79	260	433	0	187	56	243	0	0	0	0	135	402	0	537	1213
04:30 PM	107	78	304	489	0	192	61	253	0	0	0	0	145	608	0	753	1495
04:45 PM	136	64	267	467	0	242	78	320	0	0	0	0	122	575	0	697	1484
Total	476	291	1117	1884	0	794	261	1055	0	0	0	0	558	2142	0	2700	5639
05:00 PM	128	113	295	536	0	187	87	274	0	0	0	0	132	539	0	671	1481
05:15 PM	123	100	333	556	0	226	77	303	0	0	0	0	102	502	0	604	1463
05:30 PM	108	101	321	530	0	163	72	235	0	0	0	0	135	465	0	600	1365
05:45 PM	118	89	201	408	0	253	60	313	0	0	0	0	61	448	0	509	1230
Total	477	403	1150	2030	0	829	296	1125	0	0	0	0	430	1954	0	2384	5539
Grand Total	953	694	2267	3914	0	1623	557	2180	0	0	0	0	988	4096	0	5084	11178
Apprch %	24.3	17.7	57.9		0	74.4	25.6		0	0	0		19.4	80.6	0		
Total %	8.5	6.2	20.3	35	0	14.5	5	19.5	0	0	0	0	8.8	36.6	0	45.5	
PC	918	682	2253	3853	0	1575	548	2123	0	0	0	0	969	4016	0	4985	10961
% PC	96.3	98.3	99.4	98.4	0	97	98.4	97.4	0	0	0	0	98.1	98	0	98.1	98.1
SU	25	8	6	39	0	33	5	38	0	0	0	0	8	32	0	40	117
% SU	2.6	1.2	0.3	1	0	2	0.9	1.7	0	0	0	0	0.8	0.8	0	0.8	1
MU	10	4	8	22	0	15	4	19	0	0	0	0	11	48	0	59	100
% MU	1	0.6	0.4	0.6	0	0.9	0.7	0.9	0	0	0	0	1.1	1.2	0	1.2	0.9

	Paulina St From North				127th St From East				Paulina St From South				127th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	107	78	304	489	0	192	61	253	0	0	0	0	**145**	**608**	0	**753**	**1495**
04:45 PM	**136**	64	267	467	0	**242**	78	**320**	0	0	0	0	122	575	0	697	1484
05:00 PM	128	**113**	295	536	0	187	**87**	274	0	0	0	0	132	539	0	671	1481
05:15 PM	123	100	**333**	**556**	0	226	77	303	0	0	0	0	102	502	0	604	1463
Total Volume	494	355	1199	2048	0	847	303	1150	0	0	0	0	501	2224	0	2725	5923
% App. Total	24.1	17.3	58.5		0	73.7	26.3		0	0	0		18.4	81.6	0		
PHF	.908	.785	.900	.921	.000	.875	.871	.898	.000	.000	.000	.000	.864	.914	.000	.905	.990

Regina Webster & Associates, Inc.
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127th St, Wallace St and Vermont Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : FINAL COMB
Site Code : 00000000
Start Date : 5/23/2012
Page No : 1

Groups Printed- PC - SU - MU

	Wallace St From North					127th St From East					Wallace St From South					Vermont Ave From Southwest					127th St From West						
Start Time	Right	Bear Right	Thru	Left	App. Total	Right	Thru	Bear Left	Left	App. Total	Right	Thru	Left	Hard Left	App. Total	Hard Right	Bear Right	Bear Left	Hard Left	App. Total	Hard Right	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	3	1	0	1	5	1	91	37	0	129	8	1	2	0	11	0	32	0	0	32	0	0	63	0	0	63	240
07:15 AM	0	0	0	0	0	0	114	36	0	150	10	1	4	0	15	0	50	1	0	51	0	0	100	0	0	100	316
07:30 AM	1	0	0	1	2	1	139	45	0	185	13	0	3	0	16	0	50	0	0	50	0	0	95	0	0	95	348
07:45 AM	1	1	0	2	4	6	138	37	0	181	14	2	1	2	19	0	43	0	0	43	0	0	94	0	1	95	342
Total	5	2	0	4	11	8	482	155	0	645	45	4	10	2	61	0	175	1	0	176	0	0	352	0	1	353	1246
08:00 AM	1	0	0	1	2	3	133	38	0	174	8	0	3	1	12	0	43	1	0	44	0	0	89	0	0	89	321
08:15 AM	1	1	0	5	7	3	95	26	0	124	6	1	5	0	12	0	37	0	0	37	0	0	125	0	2	127	307
08:30 AM	2	0	0	1	3	3	116	43	0	162	9	1	5	0	15	0	51	0	0	51	0	0	97	1	4	102	333
08:45 AM	3	0	0	3	6	1	102	28	0	131	8	0	4	1	13	0	38	0	0	38	0	0	68	0	4	72	260
Total	7	1	0	10	18	10	446	135	0	591	31	2	17	2	52	0	169	1	0	170	0	0	379	1	10	390	1221
Grand Total	12	3	0	14	29	18	928	290	0	1236	76	6	27	4	113	0	344	2	0	346	0	0	731	1	11	743	2467
Apprch %	41.4	10.3	0	48.3		1.5	75.1	23.5	0		67.3	5.3	23.9	3.5		0	99.4	0.6	0		0	0	98.4	0.1	1.5		
Total %	0.5	0.1	0	0.6	1.2	0.7	37.6	11.8	0	50.1	3.1	0.2	1.1	0.2	4.6	0	13.9	0.1	0	14	0	0	29.6	0	0.4	30.1	
PC	12	3	0	14	29	18	872	266	0	1156	73	6	26	4	109	0	316	2	0	318	0	0	674	1	11	686	2298
% PC	100	100	0	100	100	100	94	91.7	0	93.5	96.1	100	96.3	100	96.5	0	91.9	100	0	91.9	0	0	92.2	100	100	92.3	93.1
SU	0	0	0	0	0	0	27	21	0	48	3	0	1	0	4	0	22	0	0	22	0	0	28	0	0	28	102
% SU	0	0	0	0	0	0	2.9	7.2	0	3.9	3.9	0	3.7	0	3.5	0	6.4	0	0	6.4	0	0	3.8	0	0	3.8	4.1
MU	0	0	0	0	0	0	29	3	0	32	0	0	0	0	0	0	6	0	0	6	0	0	29	0	0	29	67
% MU	0	0	0	0	0	0	3.1	1	0	2.6	0	0	0	0	0	0	1.7	0	0	1.7	0	0	4	0	0	3.9	2.7

	Wallace St From North					127th St From East					Wallace St From South					Vermont Ave From Southwest					127th St From West						
Start Time	Right	Bear Right	Thru	Left	App. Total	Right	Thru	Bear Left	Left	App. Total	Right	Thru	Left	Hard Left	App. Total	Hard Right	Bear Right	Bear Left	Hard Left	App. Total	Hard Right	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																											
Peak Hour for Entire Intersection Begins at 07:15 AM																											
07:15 AM	0	0	0	0	0	0	114	36	0	150	10	1	**4**	0	15	0	**50**	**1**	0	**51**	0	0	**100**	0	0	**100**	316
07:30 AM	**1**	0	0	1	2	1	**139**	**45**	0	**185**	13	0	3	0	16	0	50	0	0	50	0	0	95	0	0	95	**348**
07:45 AM	1	**1**	0	**2**	**4**	**6**	138	37	0	181	**14**	**2**	1	**2**	**19**	0	43	0	0	43	0	0	94	0	**1**	95	342
08:00 AM	1	0	0	1	2	3	133	38	0	174	8	0	3	1	12	0	43	1	0	44	0	0	89	0	0	89	321
Total Volume	3	1	0	4	8	10	524	156	0	690	45	3	11	3	62	0	186	2	0	188	0	0	378	0	1	379	1327
% App. Total	37.5	12.5	0	50		1.4	75.9	22.6	0		72.6	4.8	17.7	4.8		0	98.9	1.1	0		0	0	99.7	0	0.3		
PHF	.750	.250	.000	.500	.500	.417	.942	.867	.000	.932	.804	.375	.688	.375	.816	.000	.930	.500	.000	.922	.000	.000	.945	.000	.250	.948	.953

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127th St, Wallce St and Vemont Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : FINAL COMB
Site Code : 00000000
Start Date : 5/23/2012
Page No : 2

Groups Printed- SU

	Wallace St From North					127th St From East					Wallace St From South					Vermont Ave From Southwest					127th St From West						
Start Time	Right	Bear Right	Thru	Left	App. Total	Right	Thru	Bear Left	Left	App. Total	Right	Thru	Left	Hard Left	App. Total	Hard Right	Bear Right	Bear Left	Hard Left	App. Total	Hard Right	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	2	2	0	4	0	0	0	0	0	0	6	0	0	6	0	0	5	0	0	5	15
07:15 AM	0	0	0	0	0	0	5	2	0	7	0	0	0	0	0	0	1	0	0	1	0	0	4	0	0	4	12
07:30 AM	0	0	0	0	0	0	4	3	0	7	0	0	0	0	0	0	6	0	0	6	0	0	4	0	0	4	17
07:45 AM	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0	0	5	0	0	5	0	0	6	0	0	6	14
Total	0	0	0	0	0	0	13	8	0	21	0	0	0	0	0	0	18	0	0	18	0	0	19	0	0	19	58
08:00 AM	0	0	0	0	0	0	9	4	0	13	1	0	0	0	1	0	1	0	0	1	0	0	3	0	0	3	18
08:15 AM	0	0	0	0	0	0	1	1	0	2	1	0	1	0	2	0	2	0	0	2	0	0	2	0	0	2	8
08:30 AM	0	0	0	0	0	0	4	7	0	11	0	0	0	0	0	0	1	0	0	1	0	0	3	0	0	3	15
08:45 AM	0	0	0	0	0	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	1	3
Total	0	0	0	0	0	0	14	13	0	27	3	0	1	0	4	0	4	0	0	4	0	0	9	0	0	9	44
Grand Total	0	0	0	0	0	0	27	21	0	48	3	0	1	0	4	0	22	0	0	22	0	0	28	0	0	28	102
Apprch %	0	0	0	0		0	56.2	43.8	0		75	0	25	0		0	100	0	0		0	0	100	0	0		
Total %	0	0	0	0	0	0	26.5	20.6	0	47.1	2.9	0	1	0	3.9	0	21.6	0	0	21.6	0	0	27.5	0	0	27.5	

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127th St, Wallce St and Vemont Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : FINAL COMB
Site Code : 00000000
Start Date : 5/23/2012
Page No : 3

Groups Printed- MU

	Wallace St From North					127th St From East					Wallace St From South					Vermont Ave From Southwest					127th St From West						
Start Time	Right	Bear Right	Thru	Left	App. Total	Right	Thru	Bear Left	Left	App. Total	Right	Thru	Left	Hard Left	App. Total	Hard Right	Bear Right	Bear Left	Hard Left	App. Total	Hard Right	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	3
07:15 AM	0	0	0	0	0	0	5	1	0	6	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	7	13
07:30 AM	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5	12
07:45 AM	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	9
Total	0	0	0	0	0	0	19	1	0	20	0	0	0	0	0	0	1	0	0	1	0	0	16	0	0	16	37
08:00 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	7	0	0	7	11
08:15 AM	0	0	0	0	0	0	2	2	0	4	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	5
08:30 AM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	1	0	0	1	0	0	3	0	0	3	8
08:45 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	2	0	0	2	6
Total	0	0	0	0	0	0	10	2	0	12	0	0	0	0	0	0	5	0	0	5	0	0	13	0	0	13	30
Grand Total	0	0	0	0	0	0	29	3	0	32	0	0	0	0	0	0	6	0	0	6	0	0	29	0	0	29	67
Apprch %	0	0	0	0		0	90.6	9.4	0		0	0	0	0		0	100	0	0		0	0	100	0	0		
Total %	0	0	0	0	0	0	43.3	4.5	0	47.8	0	0	0	0	0	0	9	0	0	9	0	0	43.3	0	0	43.3	

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127th St, Wallce St and Vemont Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/23/2012
Page No : 4

Groups Printed- Peds & Bikes

	Wallace St Crossing North Leg			127th St Crossing East Leg			Wallace St Crossing South Leg			Vermont Ave Crossing Southwest Leg			127th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	2	2	0	0	0	0	2	2	0	0	0	0	0	0	4
07:15 AM	0	2	2	0	1	1	0	5	5	0	0	0	0	0	0	8
07:30 AM	0	2	2	0	0	0	1	3	4	0	0	0	0	0	0	6
07:45 AM	0	1	1	0	0	0	0	1	1	0	0	0	0	1	1	3
Total	0	7	7	0	1	1	1	11	12	0	0	0	0	1	1	21
08:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:15 AM	0	2	2	0	0	0	0	3	3	0	0	0	0	2	2	7
08:30 AM	0	5	5	0	4	4	0	6	6	0	0	0	0	4	4	19
08:45 AM	1	2	3	0	1	1	0	5	5	0	0	0	0	4	4	13
Total	1	10	11	0	5	5	0	14	14	0	0	0	0	10	10	40
Grand Total	1	17	18	0	6	6	1	25	26	0	0	0	0	11	11	61
Apprch %	5.6	94.4		0	100		3.8	96.2		0	0		0	100		
Total %	1.6	27.9	29.5	0	9.8	9.8	1.6	41	42.6	0	0	0	0	18	18	

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127th St, Wallace St and Vermont Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : FINAL COMB
Site Code : 00000000
Start Date : 5/23/2012
Page No : 5

Groups Printed- PC - SU - MU

	Wallace St From North					127th St From East					Wallace St From South					Vermont Ave From Southwest					127th St From West						
Start Time	Right	Bear Right	Thru	Left	App. Total	Right	Thru	Bear Left	Left	App. Total	Right	Thru	Left	Hard Left	App. Total	Hard Right	Bear Right	Bear Left	Hard Left	App. Total	Hard Right	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	1	0	0	3	4	7	145	48	0	200	4	2	2	0	8	0	62	0	0	62	0	0	138	1	0	139	413
04:15 PM	4	0	0	2	6	4	141	44	0	189	3	1	2	0	6	0	52	2	0	54	0	0	146	1	0	147	402
04:30 PM	3	1	0	0	4	1	130	50	0	181	8	1	3	2	14	0	60	1	1	62	0	0	140	2	0	142	403
04:45 PM	1	0	0	4	5	4	131	56	0	191	8	0	3	0	11	0	44	0	0	44	0	0	158	0	0	158	409
Total	9	1	0	9	19	16	547	198	0	761	23	4	10	2	39	0	218	3	1	222	0	0	582	4	0	586	1627
05:00 PM	1	1	0	2	4	0	119	47	0	166	10	1	1	1	13	0	61	0	0	61	0	0	163	1	0	164	408
05:15 PM	1	1	0	2	4	5	132	49	0	186	12	4	2	1	19	0	67	1	0	68	0	0	168	0	1	169	446
05:30 PM	2	0	0	2	4	7	115	49	0	171	9	1	3	1	14	0	51	1	0	52	0	0	175	0	2	177	418
05:45 PM	1	1	0	2	4	4	113	53	0	170	10	2	3	0	15	0	63	1	0	64	0	0	122	1	6	129	382
Total	5	3	0	8	16	16	479	198	0	693	41	8	9	3	61	0	242	3	0	245	0	0	628	2	9	639	1654
Grand Total	14	4	0	17	35	32	1026	396	0	1454	64	12	19	5	100	0	460	6	1	467	0	0	1210	6	9	1225	3281
Apprch %	40	11.4	0	48.6		2.2	70.6	27.2	0		64	12	19	5		0	98.5	1.3	0.2		0	0	98.8	0.5	0.7		
Total %	0.4	0.1	0	0.5	1.1	1	31.3	12.1	0	44.3	2	0.4	0.6	0.2	3	0	14	0.2	0	14.2	0	0	36.9	0.2	0.3	37.3	
PC	14	4	0	17	35	31	1003	382	0	1416	63	12	18	5	98	0	454	6	1	461	0	0	1187	5	7	1199	3209
% PC	100	100	0	100	100	96.9	97.8	96.5	0	97.4	98.4	100	94.7	100	98	0	98.7	100	100	98.7	0	0	98.1	83.3	77.8	97.9	97.8
SU	0	0	0	0	0	1	13	7	0	21	1	0	1	0	2	0	4	0	0	4	0	0	14	1	2	17	44
% SU	0	0	0	0	0	3.1	1.3	1.8	0	1.4	1.6	0	5.3	0	2	0	0.9	0	0	0.9	0	0	1.2	16.7	22.2	1.4	1.3
MU	0	0	0	0	0	0	10	7	0	17	0	0	0	0	0	0	2	0	0	2	0	0	9	0	0	9	28
% MU	0	0	0	0	0	0	1	1.8	0	1.2	0	0	0	0	0	0	0.4	0	0	0.4	0	0	0.7	0	0	0.7	0.9

	Wallace St From North					127th St From East					Wallace St From South					Vermont Ave From Southwest					127th St From West						
Start Time	Right	Bear Right	Thru	Left	App. Total	Right	Thru	Bear Left	Left	App. Total	Right	Thru	Left	Hard Left	App. Total	Hard Right	Bear Right	Bear Left	Hard Left	App. Total	Hard Right	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																											
Peak Hour for Entire Intersection Begins at 04:45 PM																											
04:45 PM	1	0	0	**4**	**5**	4	131	**56**	0	**191**	8	0	**3**	0	11	0	44	0	0	44	0	0	158	0	0	158	409
05:00 PM	1	**1**	0	2	4	0	119	47	0	166	10	1	1	**1**	13	0	61	0	0	61	0	0	163	**1**	0	164	408
05:15 PM	1	1	0	2	4	5	**132**	49	0	186	**12**	**4**	2	1	**19**	0	**67**	**1**	0	**68**	0	0	168	0	1	169	**446**
05:30 PM	**2**	0	0	2	4	**7**	115	49	0	171	9	1	3	1	14	0	51	1	0	52	0	0	**175**	0	**2**	**177**	418
Total Volume	5	2	0	10	17	16	497	201	0	714	39	6	9	3	57	0	223	2	0	225	0	0	664	1	3	668	1681
% App. Total	29.4	11.8	0	58.8		2.2	69.6	28.2	0		68.4	10.5	15.8	5.3		0	99.1	0.9	0		0	0	99.4	0.1	0.4		
PHF	.625	.500	.000	.625	.850	.571	.941	.897	.000	.935	.813	.375	.750	.750	.750	.000	.832	.500	.000	.827	.000	.000	.949	.250	.375	.944	.942

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Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : FINAL COMB
Site Code : 00000000
Start Date : 5/23/2012
Page No : 6

Groups Printed- SU

	Wallace St From North					127th St From East					Wallace St From South					Vermont Ave From Southwest					127th St From West						
Start Time	Right	Bear Right	Thru	Left	App. Total	Right	Thru	Bear Left	Left	App. Total	Right	Thru	Left	Hard Left	App. Total	Hard Right	Bear Right	Bear Left	Hard Left	App. Total	Hard Right	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	3	0	0	3	5
04:15 PM	0	0	0	0	0	0	7	2	0	9	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	11
04:30 PM	0	0	0	0	0	0	3	2	0	5	0	0	0	0	0	0	1	0	0	1	0	0	1	1	0	2	8
04:45 PM	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	2	0	0	2	0	0	2	0	0	2	6
Total	0	0	0	0	0	0	12	4	0	16	1	0	1	0	2	0	3	0	0	3	0	0	8	1	0	9	30
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
05:15 PM	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	1	0	0	1	0	0	2	0	1	3	6
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
05:45 PM	0	0	0	0	0	1	1	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2	5
Total	0	0	0	0	0	1	1	3	0	5	0	0	0	0	0	0	1	0	0	1	0	0	6	0	2	8	14
Grand Total	0	0	0	0	0	1	13	7	0	21	1	0	1	0	2	0	4	0	0	4	0	0	14	1	2	17	44
Apprch %	0	0	0	0		4.8	61.9	33.3	0		50	0	50	0		0	100	0	0		0	0	82.4	5.9	11.8		
Total %	0	0	0	0	0	2.3	29.5	15.9	0	47.7	2.3	0	2.3	0	4.5	0	9.1	0	0	9.1	0	0	31.8	2.3	4.5	38.6	

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127th St, Wallce St and Vemont Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : FINAL COMB
Site Code : 00000000
Start Date : 5/23/2012
Page No : 7

Groups Printed- MU

	Wallace St From North					127th St From East					Wallace St From South					Vermont Ave From Southwest					127th St From West						
Start Time	Right	Bear Right	Thru	Left	App. Total	Right	Thru	Bear Left	Left	App. Total	Right	Thru	Left	Hard Left	App. Total	Hard Right	Bear Right	Bear Left	Hard Left	App. Total	Hard Right	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	1	0	0	1	0	0	2	0	0	2	5
04:15 PM	0	0	0	0	0	0	3	2	0	5	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	7
04:30 PM	0	0	0	0	0	0	1	2	0	3	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	5
04:45 PM	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	4
Total	0	0	0	0	0	0	7	6	0	13	0	0	0	0	0	0	2	0	0	2	0	0	6	0	0	6	21
05:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	3
05:15 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	3
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	3	1	0	4	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	7
Grand Total	0	0	0	0	0	0	10	7	0	17	0	0	0	0	0	0	2	0	0	2	0	0	9	0	0	9	28
Apprch %	0	0	0	0		0	58.8	41.2	0		0	0	0	0		0	100	0	0		0	0	100	0	0		
Total %	0	0	0	0	0	0	35.7	25	0	60.7	0	0	0	0	0	0	7.1	0	0	7.1	0	0	32.1	0	0	32.1	

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Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
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Groups Printed- Peds & Bikes

	Wallace St Crossing North Leg			127th St Crossing East Leg			Wallace St Crossing South Leg			Vermont Ave Crossing Southwest Leg			127th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	1	1	2	0	0	0	0	3	3	0	0	0	0	0	0	5
04:15 PM	0	2	2	0	0	0	1	1	2	0	0	0	0	0	0	4
04:30 PM	0	2	2	0	0	0	0	2	2	0	0	0	0	0	0	4
04:45 PM	0	2	2	0	0	0	0	1	1	0	0	0	0	0	0	3
Total	1	7	8	0	0	0	1	7	8	0	0	0	0	0	0	16
05:00 PM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	5	5	2	2	4	0	2	2	0	0	0	1	0	1	12
05:30 PM	0	0	0	0	0	0	0	2	2	0	0	0	0	2	2	4
05:45 PM	0	1	1	0	0	0	0	0	0	0	0	0	1	5	6	7
Total	0	7	7	2	2	4	0	4	4	0	0	0	2	7	9	24
Grand Total	1	14	15	2	2	4	1	11	12	0	0	0	2	7	9	40
Apprch %	6.7	93.3		50	50		8.3	91.7		0	0		22.2	77.8		
Total %	2.5	35	37.5	5	5	10	2.5	27.5	30	0	0	0	5	17.5	22.5	

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130th St and Ellis Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/23/2012
Page No : 1

Groups Printed- PC - SU - MU

	Water Treatment Plant Entrance From North				130th St From East				Ellis Ave From South				130th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	133	41	174	12	0	8	20	8	81	0	89	283
07:15 AM	0	0	0	0	0	140	44	184	24	0	8	32	8	114	0	122	338
07:30 AM	0	0	0	0	0	147	58	205	31	0	17	48	22	127	0	149	402
07:45 AM	0	0	0	0	7	146	89	242	59	0	18	77	20	118	0	138	457
Total	0	0	0	0	7	566	232	805	126	0	51	177	58	440	0	498	1480
08:00 AM	0	0	0	0	0	150	52	202	31	0	14	45	19	107	0	126	373
08:15 AM	0	0	1	1	1	109	28	138	23	0	7	30	8	102	1	111	280
08:30 AM	0	0	1	1	0	111	34	145	27	0	8	35	6	125	0	131	312
08:45 AM	0	0	0	0	0	138	46	184	28	0	10	38	9	113	1	123	345
Total	0	0	2	2	1	508	160	669	109	0	39	148	42	447	2	491	1310
Grand Total	0	0	2	2	8	1074	392	1474	235	0	90	325	100	887	2	989	2790
Apprch %	0	0	100		0.5	72.9	26.6		72.3	0	27.7		10.1	89.7	0.2		
Total %	0	0	0.1	0.1	0.3	38.5	14.1	52.8	8.4	0	3.2	11.6	3.6	31.8	0.1	35.4	
PC	0	0	1	1	7	980	375	1362	224	0	73	297	96	807	1	904	2564
% PC	0	0	50	50	87.5	91.2	95.7	92.4	95.3	0	81.1	91.4	96	91	50	91.4	91.9
SU	0	0	0	0	0	50	15	65	10	0	17	27	4	43	1	48	140
% SU	0	0	0	0	0	4.7	3.8	4.4	4.3	0	18.9	8.3	4	4.8	50	4.9	5
MU	0	0	1	1	1	44	2	47	1	0	0	1	0	37	0	37	86
% MU	0	0	50	50	12.5	4.1	0.5	3.2	0.4	0	0	0.3	0	4.2	0	3.7	3.1

	Water Treatment Plant Entrance From North				130th St From East				Ellis Ave From South				130th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	140	44	184	24	0	8	32	8	114	0	122	338
07:30 AM	0	0	0	0	0	147	58	205	31	0	17	48	**22**	**127**	0	**149**	402
07:45 AM	0	0	0	0	**7**	146	**89**	**242**	**59**	0	**18**	**77**	20	118	0	138	**457**
08:00 AM	0	0	0	0	0	**150**	52	202	31	0	14	45	19	107	0	126	373
Total Volume	0	0	0	0	7	583	243	833	145	0	57	202	69	466	0	535	1570
% App. Total	0	0	0		0.8	70	29.2		71.8	0	28.2		12.9	87.1	0		
PHF	.000	.000	.000	.000	.250	.972	.683	.861	.614	.000	.792	.656	.784	.917	.000	.898	.859

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130th St and Ellis Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/23/2012
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Groups Printed- SU

	Water Treatment Plant Entrance From North				130th St From East				Ellis Ave From South				130th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	5	2	7	0	0	4	4	1	6	0	7	18
07:15 AM	0	0	0	0	0	6	3	9	1	0	3	4	0	10	0	10	23
07:30 AM	0	0	0	0	0	8	4	12	3	0	5	8	3	4	0	7	27
07:45 AM	0	0	0	0	0	5	1	6	3	0	2	5	0	7	0	7	18
Total	0	0	0	0	0	24	10	34	7	0	14	21	4	27	0	31	86
08:00 AM	0	0	0	0	0	9	3	12	0	0	3	3	0	6	0	6	21
08:15 AM	0	0	0	0	0	3	0	3	2	0	0	2	0	3	0	3	8
08:30 AM	0	0	0	0	0	8	0	8	0	0	0	0	0	5	0	5	13
08:45 AM	0	0	0	0	0	6	2	8	1	0	0	1	0	2	1	3	12
Total	0	0	0	0	0	26	5	31	3	0	3	6	0	16	1	17	54
Grand Total	0	0	0	0	0	50	15	65	10	0	17	27	4	43	1	48	140
Apprch %	0	0	0		0	76.9	23.1		37	0	63		8.3	89.6	2.1		
Total %	0	0	0	0	0	35.7	10.7	46.4	7.1	0	12.1	19.3	2.9	30.7	0.7	34.3	

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130th St and Ellis Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/23/2012
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Groups Printed- MU

	Water Treatment Plant Entrance From North				130th St From East				Ellis Ave From South				130th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	4	1	5	0	0	0	0	0	3	0	3	8
07:15 AM	0	0	0	0	0	8	0	8	0	0	0	0	0	1	0	1	9
07:30 AM	0	0	0	0	0	5	0	5	0	0	0	0	0	8	0	8	13
07:45 AM	0	0	0	0	0	5	0	5	0	0	0	0	0	3	0	3	8
Total	0	0	0	0	0	22	1	23	0	0	0	0	0	15	0	15	38
08:00 AM	0	0	0	0	0	6	0	6	0	0	0	0	0	10	0	10	16
08:15 AM	0	0	1	1	1	6	0	7	0	0	0	0	0	6	0	6	14
08:30 AM	0	0	0	0	0	7	1	8	0	0	0	0	0	3	0	3	11
08:45 AM	0	0	0	0	0	3	0	3	1	0	0	1	0	3	0	3	7
Total	0	0	1	1	1	22	1	24	1	0	0	1	0	22	0	22	48
Grand Total	0	0	1	1	1	44	2	47	1	0	0	1	0	37	0	37	86
Apprch %	0	0	100		2.1	93.6	4.3		100	0	0		0	100	0		
Total %	0	0	1.2	1.2	1.2	51.2	2.3	54.7	1.2	0	0	1.2	0	43	0	43	

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Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
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Groups Printed- PC - SU - MU

	Water Treatment Plant Entrance From North				130th St From East				Ellis Ave From South				130th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	134	24	158	37	0	14	51	11	223	0	234	443
04:15 PM	0	0	0	0	1	151	27	179	33	0	13	46	12	167	0	179	404
04:30 PM	0	0	0	0	0	160	26	186	33	0	8	41	5	218	0	223	450
04:45 PM	0	0	1	1	1	144	18	163	36	0	8	44	10	176	0	186	394
Total	0	0	1	1	2	589	95	686	139	0	43	182	38	784	0	822	1691
05:00 PM	0	0	0	0	0	164	25	189	33	0	7	40	9	192	1	202	431
05:15 PM	0	0	0	0	1	132	18	151	23	0	13	36	10	209	0	219	406
05:30 PM	0	0	0	0	0	141	26	167	32	0	20	52	6	218	0	224	443
05:45 PM	0	0	0	0	0	150	25	175	33	0	8	41	7	204	0	211	427
Total	0	0	0	0	1	587	94	682	121	0	48	169	32	823	1	856	1707
Grand Total	0	0	1	1	3	1176	189	1368	260	0	91	351	70	1607	1	1678	3398
Apprch %	0	0	100		0.2	86	13.8		74.1	0	25.9		4.2	95.8	0.1		
Total %	0	0	0	0	0.1	34.6	5.6	40.3	7.7	0	2.7	10.3	2.1	47.3	0	49.4	
PC	0	0	1	1	1	1135	184	1320	256	0	90	346	69	1571	1	1641	3308
% PC	0	0	100	100	33.3	96.5	97.4	96.5	98.5	0	98.9	98.6	98.6	97.8	100	97.8	97.4
SU	0	0	0	0	1	21	4	26	4	0	1	5	1	25	0	26	57
% SU	0	0	0	0	33.3	1.8	2.1	1.9	1.5	0	1.1	1.4	1.4	1.6	0	1.5	1.7
MU	0	0	0	0	1	20	1	22	0	0	0	0	0	11	0	11	33
% MU	0	0	0	0	33.3	1.7	0.5	1.6	0	0	0	0	0	0.7	0	0.7	1

	Water Treatment Plant Entrance From North				130th St From East				Ellis Ave From South				130th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	**164**	25	**189**	**33**	0	7	40	9	192	**1**	202	431
05:15 PM	0	0	0	0	**1**	132	18	151	23	0	13	36	**10**	209	0	219	406
05:30 PM	0	0	0	0	0	141	**26**	167	32	0	**20**	**52**	6	**218**	0	**224**	**443**
05:45 PM	0	0	0	0	0	150	25	175	33	0	8	41	7	204	0	211	427
Total Volume	0	0	0	0	1	587	94	682	121	0	48	169	32	823	1	856	1707
% App. Total	0	0	0		0.1	86.1	13.8		71.6	0	28.4		3.7	96.1	0.1		
PHF	.000	.000	.000	.000	.250	.895	.904	.902	.917	.000	.600	.813	.800	.944	.250	.955	.963

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130th St and Ellis Ave
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4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
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Groups Printed- SU

	Water Treatment Plant Entrance From North				130th St From East				Ellis Ave From South				130th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	4	1	5	0	0	1	1	0	3	0	3	9
04:15 PM	0	0	0	0	0	2	0	2	1	0	0	1	0	2	0	2	5
04:30 PM	0	0	0	0	0	3	0	3	1	0	0	1	0	2	0	2	6
04:45 PM	0	0	0	0	1	3	0	4	0	0	0	0	1	3	0	4	8
Total	0	0	0	0	1	12	1	14	2	0	1	3	1	10	0	11	28
05:00 PM	0	0	0	0	0	2	2	4	2	0	0	2	0	4	0	4	10
05:15 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	4	0	4	6
05:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	5	0	5	7
05:45 PM	0	0	0	0	0	3	1	4	0	0	0	0	0	2	0	2	6
Total	0	0	0	0	0	9	3	12	2	0	0	2	0	15	0	15	29
Grand Total	0	0	0	0	1	21	4	26	4	0	1	5	1	25	0	26	57
Apprch %	0	0	0		3.8	80.8	15.4		80	0	20		3.8	96.2	0		
Total %	0	0	0	0	1.8	36.8	7	45.6	7	0	1.8	8.8	1.8	43.9	0	45.6	

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130th St and Ellis Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/23/2012
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Groups Printed- MU

	Water Treatment Plant Entrance From North				130th St From East				Ellis Ave From South				130th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	5	0	5	0	0	0	0	0	2	0	2	7
04:15 PM	0	0	0	0	1	3	0	4	0	0	0	0	0	0	0	0	4
04:30 PM	0	0	0	0	0	4	0	4	0	0	0	0	0	1	0	1	5
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	1	12	0	13	0	0	0	0	0	3	0	3	16
05:00 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
05:15 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	3	0	3	5
05:30 PM	0	0	0	0	0	1	1	2	0	0	0	0	0	2	0	2	4
05:45 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	2	0	2	5
Total	0	0	0	0	0	8	1	9	0	0	0	0	0	8	0	8	17
Grand Total	0	0	0	0	1	20	1	22	0	0	0	0	0	11	0	11	33
Apprch %	0	0	0		4.5	90.9	4.5		0	0	0		0	100	0		
Total %	0	0	0	0	3	60.6	3	66.7	0	0	0	0	0	33.3	0	33.3	

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130th St and Indiana Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/3/2012
Page No : 1

Groups Printed- PC - SU - MU

	Indiana Ave From North				130th St From East				Indiana Ave From South				130th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	88	12	100	16	0	49	65	23	96	0	119	284
07:15 AM	0	0	0	0	0	101	18	119	11	0	58	69	20	104	0	124	312
07:30 AM	0	0	0	0	0	99	22	121	16	0	58	74	21	136	0	157	352
07:45 AM	0	0	0	0	0	138	26	164	20	0	120	140	22	100	0	122	426
Total	0	0	0	0	0	426	78	504	63	0	285	348	86	436	0	522	1374
08:00 AM	0	0	0	0	0	106	22	128	12	0	83	95	49	95	0	144	367
08:15 AM	0	0	0	0	0	129	22	151	16	0	65	81	35	89	0	124	356
08:30 AM	0	0	0	0	0	131	26	157	30	0	26	56	22	95	0	117	330
08:45 AM	0	0	0	0	0	109	33	142	27	0	63	90	40	92	0	132	364
Total	0	0	0	0	0	475	103	578	85	0	237	322	146	371	0	517	1417
Grand Total	0	0	0	0	0	901	181	1082	148	0	522	670	232	807	0	1039	2791
Apprch %	0	0	0		0	83.3	16.7		22.1	0	77.9		22.3	77.7	0		
Total %	0	0	0	0	0	32.3	6.5	38.8	5.3	0	18.7	24	8.3	28.9	0	37.2	
PC	0	0	0	0	0	827	163	990	139	0	505	644	216	723	0	939	2573
% PC	0	0	0	0	0	91.8	90.1	91.5	93.9	0	96.7	96.1	93.1	89.6	0	90.4	92.2
SU	0	0	0	0	0	48	15	63	5	0	14	19	15	55	0	70	152
% SU	0	0	0	0	0	5.3	8.3	5.8	3.4	0	2.7	2.8	6.5	6.8	0	6.7	5.4
MU	0	0	0	0	0	26	3	29	4	0	3	7	1	29	0	30	66
% MU	0	0	0	0	0	2.9	1.7	2.7	2.7	0	0.6	1	0.4	3.6	0	2.9	2.4

	Indiana Ave From North				130th St From East				Indiana Ave From South				130th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	99	22	121	16	0	58	74	21	**136**	0	**157**	352
07:45 AM	0	0	0	0	0	**138**	**26**	**164**	**20**	0	**120**	**140**	22	100	0	122	**426**
08:00 AM	0	0	0	0	0	106	22	128	12	0	83	95	**49**	95	0	144	367
08:15 AM	0	0	0	0	0	129	22	151	16	0	65	81	35	89	0	124	356
Total Volume	0	0	0	0	0	472	92	564	64	0	326	390	127	420	0	547	1501
% App. Total	0	0	0		0	83.7	16.3		16.4	0	83.6		23.2	76.8	0		
PHF	.000	.000	.000	.000	.000	.855	.885	.860	.800	.000	.679	.696	.648	.772	.000	.871	.881

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130th St and Indiana Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/3/2012
Page No : 2

Groups Printed- SU

	Indiana Ave From North				130th St From East				Indiana Ave From South				130th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	3	1	4	1	0	2	3	3	5	0	8	15
07:15 AM	0	0	0	0	0	9	5	14	0	0	3	3	1	11	0	12	29
07:30 AM	0	0	0	0	0	8	1	9	0	0	0	0	2	5	0	7	16
07:45 AM	0	0	0	0	0	6	1	7	0	0	2	2	0	10	0	10	19
Total	0	0	0	0	0	26	8	34	1	0	7	8	6	31	0	37	79
08:00 AM	0	0	0	0	0	3	1	4	0	0	1	1	5	7	0	12	17
08:15 AM	0	0	0	0	0	7	0	7	1	0	3	4	1	9	0	10	21
08:30 AM	0	0	0	0	0	6	3	9	1	0	1	2	2	4	0	6	17
08:45 AM	0	0	0	0	0	6	3	9	2	0	2	4	1	4	0	5	18
Total	0	0	0	0	0	22	7	29	4	0	7	11	9	24	0	33	73
Grand Total	0	0	0	0	0	48	15	63	5	0	14	19	15	55	0	70	152
Apprch %	0	0	0		0	76.2	23.8		26.3	0	73.7		21.4	78.6	0		
Total %	0	0	0	0	0	31.6	9.9	41.4	3.3	0	9.2	12.5	9.9	36.2	0	46.1	

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Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/3/2012
Page No : 3

Groups Printed- MU

	Indiana Ave From North				130th St From East				Indiana Ave From South				130th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	4	0	4	0	0	0	0	0	3	0	3	7
07:15 AM	0	0	0	0	0	5	0	5	1	0	0	1	0	3	0	3	9
07:30 AM	0	0	0	0	0	3	0	3	0	0	1	1	0	1	0	1	5
07:45 AM	0	0	0	0	0	4	0	4	0	0	0	0	0	7	0	7	11
Total	0	0	0	0	0	16	0	16	1	0	1	2	0	14	0	14	32
08:00 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	6	0	6	8
08:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	1	2
08:30 AM	0	0	0	0	0	3	0	3	1	0	2	3	0	5	0	5	11
08:45 AM	0	0	0	0	0	4	3	7	2	0	0	2	0	4	0	4	13
Total	0	0	0	0	0	10	3	13	3	0	2	5	1	15	0	16	34
Grand Total	0	0	0	0	0	26	3	29	4	0	3	7	1	29	0	30	66
Apprch %	0	0	0		0	89.7	10.3		57.1	0	42.9		3.3	96.7	0		
Total %	0	0	0	0	0	39.4	4.5	43.9	6.1	0	4.5	10.6	1.5	43.9	0	45.5	

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Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/3/2012
Page No : 4

Groups Printed- Peds & Bikes

	Indiana Ave Crossing North Leg			130th St Crossing East Leg			Indiana Ave Crossing South Leg			130th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	4	4	0	2	2	0	0	0	6
Total	0	0	0	0	4	4	0	2	2	0	0	0	6
08:00 AM	0	0	0	0	3	3	0	2	2	0	0	0	5
08:15 AM	0	0	0	0	1	1	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	1	1	0	1	1	2
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	4	4	0	3	3	0	1	1	8
Grand Total	0	0	0	0	8	8	0	5	5	0	1	1	14
Apprch %	0	0		0	100		0	100		0	100		
Total %	0	0	0	0	57.1	57.1	0	35.7	35.7	0	7.1	7.1	

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130th St and Indiana Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/3/2012
Page No : 5

Groups Printed- PC - SU - MU

	Indiana Ave From North				130th St From East				Indiana Ave From South				130th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	126	34	160	48	0	26	74	58	149	0	207	441
04:15 PM	0	0	0	0	0	126	28	154	20	0	49	69	53	150	0	203	426
04:30 PM	0	0	0	0	0	125	23	148	10	0	44	54	30	146	0	176	378
04:45 PM	0	0	0	0	0	147	21	168	22	0	51	73	48	163	0	211	452
Total	0	0	0	0	0	524	106	630	100	0	170	270	189	608	0	797	1697
05:00 PM	0	0	0	0	0	149	22	171	10	0	38	48	54	145	0	199	418
05:15 PM	0	0	0	0	0	129	26	155	15	0	52	67	63	152	0	215	437
05:30 PM	0	0	0	0	0	132	29	161	11	0	31	42	52	149	0	201	404
05:45 PM	0	0	0	0	0	94	27	121	9	0	37	46	49	116	0	165	332
Total	0	0	0	0	0	504	104	608	45	0	158	203	218	562	0	780	1591
Grand Total	0	0	0	0	0	1028	210	1238	145	0	328	473	407	1170	0	1577	3288
Apprch %	0	0	0		0	83	17		30.7	0	69.3		25.8	74.2	0		
Total %	0	0	0	0	0	31.3	6.4	37.7	4.4	0	10	14.4	12.4	35.6	0	48	
PC	0	0	0	0	0	981	206	1187	143	0	312	455	397	1140	0	1537	3179
% PC	0	0	0	0	0	95.4	98.1	95.9	98.6	0	95.1	96.2	97.5	97.4	0	97.5	96.7
SU	0	0	0	0	0	36	2	38	2	0	16	18	10	21	0	31	87
% SU	0	0	0	0	0	3.5	1	3.1	1.4	0	4.9	3.8	2.5	1.8	0	2	2.6
MU	0	0	0	0	0	11	2	13	0	0	0	0	0	9	0	9	22
% MU	0	0	0	0	0	1.1	1	1.1	0	0	0	0	0	0.8	0	0.6	0.7

	Indiana Ave From North				130th St From East				Indiana Ave From South				130th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	147	21	168	**22**	0	51	**73**	48	**163**	0	211	**452**
05:00 PM	0	0	0	0	0	**149**	22	**171**	10	0	38	48	54	145	0	199	418
05:15 PM	0	0	0	0	0	129	26	155	15	0	**52**	67	**63**	152	0	**215**	437
05:30 PM	0	0	0	0	0	132	**29**	161	11	0	31	42	52	149	0	201	404
Total Volume	0	0	0	0	0	557	98	655	58	0	172	230	217	609	0	826	1711
% App. Total	0	0	0		0	85	15		25.2	0	74.8		26.3	73.7	0		
PHF	.000	.000	.000	.000	.000	.935	.845	.958	.659	.000	.827	.788	.861	.934	.000	.960	.946

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130th St and Indiana Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/3/2012
Page No : 6

Groups Printed- SU

	Indiana Ave From North				130th St From East				Indiana Ave From South				130th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	6	0	6	0	0	1	1	1	2	0	3	10
04:15 PM	0	0	0	0	0	5	1	6	2	0	2	4	2	3	0	5	15
04:30 PM	0	0	0	0	0	4	0	4	0	0	1	1	3	3	0	6	11
04:45 PM	0	0	0	0	0	7	0	7	0	0	1	1	0	4	0	4	12
Total	0	0	0	0	0	22	1	23	2	0	5	7	6	12	0	18	48
05:00 PM	0	0	0	0	0	4	0	4	0	0	1	1	2	0	0	2	7
05:15 PM	0	0	0	0	0	3	0	3	0	0	5	5	0	3	0	3	11
05:30 PM	0	0	0	0	0	2	1	3	0	0	3	3	1	3	0	4	10
05:45 PM	0	0	0	0	0	5	0	5	0	0	2	2	1	3	0	4	11
Total	0	0	0	0	0	14	1	15	0	0	11	11	4	9	0	13	39
Grand Total	0	0	0	0	0	36	2	38	2	0	16	18	10	21	0	31	87
Apprch %	0	0	0		0	94.7	5.3		11.1	0	88.9		32.3	67.7	0		
Total %	0	0	0	0	0	41.4	2.3	43.7	2.3	0	18.4	20.7	11.5	24.1	0	35.6	

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130th St and Indiana Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/3/2012
Page No : 7

Groups Printed- MU

	Indiana Ave From North				130th St From East				Indiana Ave From South				130th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
04:15 PM	0	0	0	0	0	1	1	2	0	0	0	0	0	1	0	1	3
04:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
04:45 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	2	0	2	5
Total	0	0	0	0	0	6	1	7	0	0	0	0	0	6	0	6	13
05:00 PM	0	0	0	0	0	1	1	2	0	0	0	0	0	1	0	1	3
05:15 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
05:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Total	0	0	0	0	0	5	1	6	0	0	0	0	0	3	0	3	9
Grand Total	0	0	0	0	0	11	2	13	0	0	0	0	0	9	0	9	22
Apprch %	0	0	0		0	84.6	15.4		0	0	0		0	100	0		
Total %	0	0	0	0	0	50	9.1	59.1	0	0	0	0	0	40.9	0	40.9	

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130th St and Indiana Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/3/2012
Page No : 8

Groups Printed- Peds & Bikes

	Indiana Ave Crossing North Leg			130th St Crossing East Leg			Indiana Ave Crossing South Leg			130th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	3	3	0	0	0	0	0	0	3
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	3	3	0	0	0	0	0	0	3
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	1	1	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	1	1	0	0	0	0	0	0	1
Grand Total	0	0	0	0	4	4	0	0	0	0	0	0	4
Apprch %	0	0		0	100		0	0		0	0		
Total %	0	0	0	0	100	100	0	0	0	0	0	0	

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95th St & Michigan Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM no ped
Site Code : 00000000
Start Date : 4/26/2012
Page No : 1

Groups Printed- PC - SU - MU

	Michigan Ave From North				95th St From East				Michigan Ave From South				95th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	2	3	5	0	112	12	124	20	0	31	51	37	131	0	168	348
07:15 AM	1	1	1	3	0	164	24	188	19	0	33	52	66	154	0	220	463
07:30 AM	1	3	1	5	0	137	18	155	36	0	41	77	73	212	0	285	522
07:45 AM	0	5	1	6	0	145	12	157	28	0	26	54	47	179	0	226	443
Total	2	11	6	19	0	558	66	624	103	0	131	234	223	676	0	899	1776
08:00 AM	1	0	0	1	0	140	17	157	23	0	21	44	33	207	0	240	442
08:15 AM	0	2	1	3	0	153	7	160	19	0	23	42	44	196	0	240	445
08:30 AM	0	1	0	1	0	150	10	160	18	0	19	37	33	219	0	252	450
08:45 AM	1	0	1	2	0	135	13	148	16	0	16	32	32	213	0	245	427
Total	2	3	2	7	0	578	47	625	76	0	79	155	142	835	0	977	1764
Grand Total	4	14	8	26	0	1136	113	1249	179	0	210	389	365	1511	0	1876	3540
Apprch %	15.4	53.8	30.8		0	91	9		46	0	54		19.5	80.5	0		
Total %	0.1	0.4	0.2	0.7	0	32.1	3.2	35.3	5.1	0	5.9	11	10.3	42.7	0	53	
PC	4	14	7	25	0	1034	111	1145	174	0	158	332	310	1401	0	1711	3213
% PC	100	100	87.5	96.2	0	91	98.2	91.7	97.2	0	75.2	85.3	84.9	92.7	0	91.2	90.8
SU	0	0	1	1	0	81	2	83	5	0	52	57	55	97	0	152	293
% SU	0	0	12.5	3.8	0	7.1	1.8	6.6	2.8	0	24.8	14.7	15.1	6.4	0	8.1	8.3
MU	0	0	0	0	0	21	0	21	0	0	0	0	0	13	0	13	34
% MU	0	0	0	0	0	1.8	0	1.7	0	0	0	0	0	0.9	0	0.7	1

	Michigan Ave From North				95th St From East				Michigan Ave From South				95th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	**1**	1	**1**	3	0	**164**	**24**	**188**	19	0	33	52	66	154	0	220	463
07:30 AM	1	3	1	5	0	137	18	155	**36**	0	**41**	**77**	**73**	**212**	0	**285**	**522**
07:45 AM	0	**5**	1	**6**	0	145	12	157	28	0	26	54	47	179	0	226	443
08:00 AM	1	0	0	1	0	140	17	157	23	0	21	44	33	207	0	240	442
Total Volume	3	9	3	15	0	586	71	657	106	0	121	227	219	752	0	971	1870
% App. Total	20	60	20		0	89.2	10.8		46.7	0	53.3		22.6	77.4	0		
PHF	.750	.450	.750	.625	.000	.893	.740	.874	.736	.000	.738	.737	.750	.887	.000	.852	.896

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95th St & Michigan Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM no ped
Site Code : 00000000
Start Date : 4/26/2012
Page No : 2

Groups Printed- SU

	Michigan Ave From North				95th St From East				Michigan Ave From South				95th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	6	2	8	0	0	6	6	9	20	0	29	43
07:15 AM	0	0	1	1	0	11	0	11	1	0	8	9	7	13	0	20	41
07:30 AM	0	0	0	0	0	13	0	13	1	0	9	10	6	11	0	17	40
07:45 AM	0	0	0	0	0	18	0	18	0	0	5	5	6	16	0	22	45
Total	0	0	1	1	0	48	2	50	2	0	28	30	28	60	0	88	169
08:00 AM	0	0	0	0	0	8	0	8	0	0	6	6	8	9	0	17	31
08:15 AM	0	0	0	0	0	12	0	12	1	0	6	7	8	8	0	16	35
08:30 AM	0	0	0	0	0	8	0	8	2	0	7	9	5	12	0	17	34
08:45 AM	0	0	0	0	0	5	0	5	0	0	5	5	6	8	0	14	24
Total	0	0	0	0	0	33	0	33	3	0	24	27	27	37	0	64	124
Grand Total	0	0	1	1	0	81	2	83	5	0	52	57	55	97	0	152	293
Apprch %	0	0	100		0	97.6	2.4		8.8	0	91.2		36.2	63.8	0		
Total %	0	0	0.3	0.3	0	27.6	0.7	28.3	1.7	0	17.7	19.5	18.8	33.1	0	51.9	

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95th St & Michigan Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM no ped
Site Code : 00000000
Start Date : 4/26/2012
Page No : 3

Groups Printed- MU

	Michigan Ave From North				95th St From East				Michigan Ave From South				95th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	1	0	1	4
07:15 AM	0	0	0	0	0	4	0	4	0	0	0	0	0	0	0	0	4
07:30 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	4
07:45 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
Total	0	0	0	0	0	11	0	11	0	0	0	0	0	4	0	4	15
08:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	4	0	4	5
08:15 AM	0	0	0	0	0	4	0	4	0	0	0	0	0	0	0	0	4
08:30 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	3	0	3	5
08:45 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	2	0	2	5
Total	0	0	0	0	0	10	0	10	0	0	0	0	0	9	0	9	19
Grand Total	0	0	0	0	0	21	0	21	0	0	0	0	0	13	0	13	34
Apprch %	0	0	0		0	100	0		0	0	0		0	100	0		
Total %	0	0	0	0	0	61.8	0	61.8	0	0	0	0	0	38.2	0	38.2	

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95th & Michigan
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM peds
Site Code : 00000000
Start Date : 4/26/2012
Page No : 4

Groups Printed- Bikes & Peds

	Michigan Ave Crossing North Leg			95th St Crossing East Leg			Michigan Ave Crossing South Leg			95th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	14	14	0	1	1	1	5	6	0	0	0	21
07:15 AM	0	17	17	0	5	5	0	4	4	0	0	0	26
07:30 AM	0	21	21	0	2	2	0	0	0	0	0	0	23
07:45 AM	0	8	8	0	5	5	0	2	2	0	0	0	15
Total	0	60	60	0	13	13	1	11	12	0	0	0	85
08:00 AM	0	12	12	0	3	3	0	13	13	0	0	0	28
08:15 AM	0	8	8	0	2	2	0	0	0	0	0	0	10
08:30 AM	0	11	11	0	7	7	0	1	1	0	0	0	19
08:45 AM	0	9	9	0	3	3	0	7	7	0	0	0	19
Total	0	40	40	0	15	15	0	21	21	0	0	0	76
Grand Total	0	100	100	0	28	28	1	32	33	0	0	0	161
Apprch %	0	100		0	100		3	97		0	0		
Total %	0	62.1	62.1	0	17.4	17.4	0.6	19.9	20.5	0	0	0	

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95th St & Michigan Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : PM no ped
Site Code : 00000000
Start Date : 4/26/2012
Page No : 5

Groups Printed- PC - SU - MU

	Michigan Ave From North				95th St From East				Michigan Ave From South				95th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	1	1	0	193	22	215	20	0	28	48	34	214	0	248	512
04:15 PM	1	5	2	8	0	153	18	171	20	0	24	44	30	199	0	229	452
04:30 PM	2	6	2	10	0	153	16	169	19	0	15	34	42	188	0	230	443
04:45 PM	0	5	3	8	0	193	19	212	12	0	16	28	32	214	0	246	494
Total	3	16	8	27	0	692	75	767	71	0	83	154	138	815	0	953	1901
05:00 PM	3	0	3	6	0	193	21	214	16	0	20	36	55	182	0	237	493
05:15 PM	0	7	1	8	0	196	23	219	23	0	13	36	35	197	0	232	495
05:30 PM	2	4	3	9	0	172	19	191	18	0	26	44	32	248	0	280	524
05:45 PM	2	3	2	7	0	163	27	190	22	0	15	37	38	232	0	270	504
Total	7	14	9	30	0	724	90	814	79	0	74	153	160	859	0	1019	2016
Grand Total	10	30	17	57	0	1416	165	1581	150	0	157	307	298	1674	0	1972	3917
Apprch %	17.5	52.6	29.8		0	89.6	10.4		48.9	0	51.1		15.1	84.9	0		
Total %	0.3	0.8	0.4	1.5	0	36.2	4.2	40.4	3.8	0	4	7.8	7.6	42.7	0	50.3	
PC	10	30	16	56	0	1339	165	1504	148	0	121	269	261	1627	0	1888	3717
% PC	100	100	94.1	98.2	0	94.6	100	95.1	98.7	0	77.1	87.6	87.6	97.2	0	95.7	94.9
SU	0	0	1	1	0	72	0	72	1	0	36	37	37	41	0	78	188
% SU	0	0	5.9	1.8	0	5.1	0	4.6	0.7	0	22.9	12.1	12.4	2.4	0	4	4.8
MU	0	0	0	0	0	5	0	5	1	0	0	1	0	6	0	6	12
% MU	0	0	0	0	0	0.4	0	0.3	0.7	0	0	0.3	0	0.4	0	0.3	0.3

	Michigan Ave From North				95th St From East				Michigan Ave From South				95th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**3**	0	**3**	6	0	193	21	214	16	0	20	36	**55**	182	0	237	493
05:15 PM	0	**7**	1	8	0	**196**	23	**219**	**23**	0	13	36	35	197	0	232	495
05:30 PM	2	4	3	**9**	0	172	19	191	18	0	**26**	**44**	32	**248**	0	**280**	**524**
05:45 PM	2	3	2	7	0	163	**27**	190	22	0	15	37	38	232	0	270	504
Total Volume	7	14	9	30	0	724	90	814	79	0	74	153	160	859	0	1019	2016
% App. Total	23.3	46.7	30		0	88.9	11.1		51.6	0	48.4		15.7	84.3	0		
PHF	.583	.500	.750	.833	.000	.923	.833	.929	.859	.000	.712	.869	.727	.866	.000	.910	.962

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95th St & Michigan Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : PM no ped
Site Code : 00000000
Start Date : 4/26/2012
Page No : 6

Groups Printed- SU

	Michigan Ave From North				95th St From East				Michigan Ave From South				95th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	13	0	13	0	0	5	5	5	7	0	12	30
04:15 PM	0	0	1	1	0	9	0	9	0	0	6	6	5	5	0	10	26
04:30 PM	0	0	0	0	0	7	0	7	0	0	5	5	4	6	0	10	22
04:45 PM	0	0	0	0	0	10	0	10	0	0	6	6	6	4	0	10	26
Total	0	0	1	1	0	39	0	39	0	0	22	22	20	22	0	42	104
05:00 PM	0	0	0	0	0	7	0	7	0	0	4	4	5	6	0	11	22
05:15 PM	0	0	0	0	0	7	0	7	1	0	2	3	4	3	0	7	17
05:30 PM	0	0	0	0	0	9	0	9	0	0	6	6	4	6	0	10	25
05:45 PM	0	0	0	0	0	10	0	10	0	0	2	2	4	4	0	8	20
Total	0	0	0	0	0	33	0	33	1	0	14	15	17	19	0	36	84
Grand Total	0	0	1	1	0	72	0	72	1	0	36	37	37	41	0	78	188
Apprch %	0	0	100		0	100	0		2.7	0	97.3		47.4	52.6	0		
Total %	0	0	0.5	0.5	0	38.3	0	38.3	0.5	0	19.1	19.7	19.7	21.8	0	41.5	

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95th St & Michigan Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : PM no ped
Site Code : 00000000
Start Date : 4/26/2012

Groups Printed- MU

	Michigan Ave From North				95th St From East				Michigan Ave From South				95th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	3
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
04:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	4	0	4	5
Total	0	0	0	0	0	4	0	4	0	0	0	0	0	6	0	6	10
05:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
Total	0	0	0	0	0	1	0	1	1	0	0	1	0	0	0	0	2
Grand Total	0	0	0	0	0	5	0	5	1	0	0	1	0	6	0	6	12
Apprch %	0	0	0		0	100	0		100	0	0		0	100	0		
Total %	0	0	0	0	0	41.7	0	41.7	8.3	0	0	8.3	0	50	0	50	

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Michigan Ave & 95th St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : PM Peds
Site Code : 00000000
Start Date : 4/26/2012
Page No : 8

Groups Printed- Bikes & Peds

	Michigan Ave Crossing North Leg			95th St Crossing East Leg			Michigan Ave Crossing South Leg			95th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	BIkes	Peds	App. Total	Int. Total
04:00 PM	0	9	9	0	3	3	0	8	8	0	5	5	25
04:15 PM	0	19	19	0	1	1	0	6	6	0	8	8	34
04:30 PM	0	16	16	0	1	1	0	4	4	0	9	9	30
04:45 PM	0	16	16	0	3	3	0	4	4	0	8	8	31
Total	0	60	60	0	8	8	0	22	22	0	30	30	120
05:00 PM	0	26	26	0	2	2	0	6	6	0	13	13	47
05:15 PM	0	16	16	0	3	3	1	3	4	0	1	1	24
05:30 PM	0	18	18	0	5	5	0	4	4	0	16	16	43
05:45 PM	0	7	7	0	2	2	0	6	6	0	8	8	23
Total	0	67	67	0	12	12	1	19	20	0	38	38	137
Grand Total	0	127	127	0	20	20	1	41	42	0	68	68	257
Apprch %	0	100		0	100		2.4	97.6		0	100		
Total %	0	49.4	49.4	0	7.8	7.8	0.4	16	16.3	0	26.5	26.5	

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95TH ST & WENTWORTH AVE
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM no peds
Site Code : 00000000
Start Date : 4/25/2012
Page No : 1

Groups Printed- PC - SU - MU

	WENTWORTH AVE From North				95TH ST From East				WENTWORTH AVE From South				95TH ST From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	8	2	2	12	2	127	7	136	13	10	6	29	0	149	4	153	330
07:15 AM	14	2	4	20	1	140	3	144	20	13	12	45	1	148	5	154	363
07:30 AM	22	6	9	37	11	174	4	189	23	17	12	52	1	175	16	192	470
07:45 AM	26	8	12	46	12	188	5	205	25	18	17	60	2	201	9	212	523
Total	70	18	27	115	26	629	19	674	81	58	47	186	4	673	34	711	1686
08:00 AM	27	6	10	43	11	193	6	210	14	15	8	37	5	221	5	231	521
08:15 AM	18	9	7	34	9	152	6	167	13	10	6	29	8	168	6	182	412
08:30 AM	23	3	5	31	9	163	3	175	23	7	11	41	4	194	14	212	459
08:45 AM	16	5	5	26	11	180	9	200	12	11	14	37	8	195	13	216	479
Total	84	23	27	134	40	688	24	752	62	43	39	144	25	778	38	841	1871
Grand Total	154	41	54	249	66	1317	43	1426	143	101	86	330	29	1451	72	1552	3557
Apprch %	61.8	16.5	21.7		4.6	92.4	3		43.3	30.6	26.1		1.9	93.5	4.6		
Total %	4.3	1.2	1.5	7	1.9	37	1.2	40.1	4	2.8	2.4	9.3	0.8	40.8	2	43.6	
PC	148	38	49	235	65	1205	43	1313	139	88	84	311	29	1340	66	1435	3294
% PC	96.1	92.7	90.7	94.4	98.5	91.5	100	92.1	97.2	87.1	97.7	94.2	100	92.4	91.7	92.5	92.6
SU	6	3	5	14	1	94	0	95	4	13	2	19	0	97	6	103	231
% SU	3.9	7.3	9.3	5.6	1.5	7.1	0	6.7	2.8	12.9	2.3	5.8	0	6.7	8.3	6.6	6.5
MU	0	0	0	0	0	18	0	18	0	0	0	0	0	14	0	14	32
% MU	0	0	0	0	0	1.4	0	1.3	0	0	0	0	0	1	0	0.9	0.9

	WENTWORTH AVE From North				95TH ST From East				WENTWORTH AVE From South				95TH ST From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	22	6	9	37	11	174	4	189	23	17	12	52	1	175	**16**	192	470
07:45 AM	26	8	**12**	**46**	**12**	188	5	205	**25**	**18**	**17**	**60**	2	201	9	212	**523**
08:00 AM	**27**	6	10	43	11	**193**	**6**	**210**	14	15	8	37	5	**221**	5	**231**	521
08:15 AM	18	**9**	7	34	9	152	6	167	13	10	6	29	**8**	168	6	182	412
Total Volume	93	29	38	160	43	707	21	771	75	60	43	178	16	765	36	817	1926
% App. Total	58.1	18.1	23.8		5.6	91.7	2.7		42.1	33.7	24.2		2	93.6	4.4		
PHF	.861	.806	.792	.870	.896	.916	.875	.918	.750	.833	.632	.742	.500	.865	.563	.884	.921

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95TH ST & WENTWORTH AVE
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM no peds
Site Code : 00000000
Start Date : 4/25/2012
Page No : 2

Groups Printed- SU

	WENTWORTH AVE From North				95TH ST From East				WENTWORTH AVE From South				95TH ST From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	9	0	9	1	3	0	4	0	10	0	10	23
07:15 AM	1	0	1	2	0	15	0	15	0	3	0	3	0	11	0	11	31
07:30 AM	0	0	0	0	0	14	0	14	1	0	0	1	0	18	2	20	35
07:45 AM	0	1	1	2	0	7	0	7	1	1	0	2	0	9	2	11	22
Total	1	1	2	4	0	45	0	45	3	7	0	10	0	48	4	52	111
08:00 AM	3	1	0	4	1	12	0	13	0	2	1	3	0	13	0	13	33
08:15 AM	0	0	1	1	0	8	0	8	1	1	0	2	0	7	0	7	18
08:30 AM	1	0	1	2	0	15	0	15	0	1	1	2	0	15	1	16	35
08:45 AM	1	1	1	3	0	14	0	14	0	2	0	2	0	14	1	15	34
Total	5	2	3	10	1	49	0	50	1	6	2	9	0	49	2	51	120
Grand Total	6	3	5	14	1	94	0	95	4	13	2	19	0	97	6	103	231
Apprch %	42.9	21.4	35.7		1.1	98.9	0		21.1	68.4	10.5		0	94.2	5.8		
Total %	2.6	1.3	2.2	6.1	0.4	40.7	0	41.1	1.7	5.6	0.9	8.2	0	42	2.6	44.6	

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95TH ST & WENTWORTH AVE
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM no peds
Site Code : 00000000
Start Date : 4/25/2012
Page No : 3

Groups Printed- MU

	WENTWORTH AVE From North				95TH ST From East				WENTWORTH AVE From South				95TH ST From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
07:30 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
Total	0	0	0	0	0	4	0	4	0	0	0	0	0	5	0	5	9
08:00 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	4	0	4	6
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
08:30 AM	0	0	0	0	0	7	0	7	0	0	0	0	0	2	0	2	9
08:45 AM	0	0	0	0	0	5	0	5	0	0	0	0	0	2	0	2	7
Total	0	0	0	0	0	14	0	14	0	0	0	0	0	9	0	9	23
Grand Total	0	0	0	0	0	18	0	18	0	0	0	0	0	14	0	14	32
Apprch %	0	0	0		0	100	0		0	0	0		0	100	0		
Total %	0	0	0	0	0	56.2	0	56.2	0	0	0	0	0	43.8	0	43.8	

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95TH AND WENTWORTH AVE
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM peds
Site Code : 00000000
Start Date : 4/25/2012
Page No : 4

Groups Printed- Peds & Bikes

	WENTWORTH AVE Crossing North Leg			95TH ST Crossing East Leg			WENTWORTH AVE Crossing South Leg			95TH ST Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	6	6	0	0	0	0	0	0	0	0	0	6
07:15 AM	0	10	10	0	0	0	0	1	1	0	0	0	11
07:30 AM	0	7	7	0	0	0	1	1	2	0	0	0	9
07:45 AM	0	13	13	0	0	0	0	4	4	0	1	1	18
Total	0	36	36	0	0	0	1	6	7	0	1	1	44
08:00 AM	0	23	23	0	3	3	0	4	4	0	2	2	32
08:15 AM	1	18	19	0	2	2	0	2	2	0	0	0	23
08:30 AM	0	16	16	0	4	4	0	1	1	0	1	1	22
08:45 AM	0	9	9	0	1	1	0	0	0	0	0	0	10
Total	1	66	67	0	10	10	0	7	7	0	3	3	87
Grand Total	1	102	103	0	10	10	1	13	14	0	4	4	131
Apprch %	1	99		0	100		7.1	92.9		0	100		
Total %	0.8	77.9	78.6	0	7.6	7.6	0.8	9.9	10.7	0	3.1	3.1	

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95TH ST AND WENTWORTH AVE
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : PM no peds
Site Code : 00000000
Start Date : 4/25/2012
Page No : 5

Groups Printed- PC - SU - MU

	WENTWORTH AVE From North				95TH ST From East				WENTWORTH AVE From South				95TH ST From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	17	10	8	35	7	207	9	223	15	9	10	34	9	190	3	202	494
04:15 PM	19	11	4	34	9	213	2	224	12	9	6	27	5	168	6	179	464
04:30 PM	17	10	2	29	7	187	7	201	14	8	8	30	10	169	12	191	451
04:45 PM	16	13	6	35	6	192	10	208	8	7	8	23	12	175	10	197	463
Total	69	44	20	133	29	799	28	856	49	33	32	114	36	702	31	769	1872
05:00 PM	21	5	7	33	13	218	10	241	17	6	11	34	9	168	12	189	497
05:15 PM	19	8	6	33	14	241	8	263	5	5	6	16	2	118	7	127	439
05:30 PM	21	5	4	30	21	215	9	245	14	4	10	28	9	177	11	197	500
05:45 PM	24	4	6	34	6	265	6	277	12	2	7	21	7	135	9	151	483
Total	85	22	23	130	54	939	33	1026	48	17	34	99	27	598	39	664	1919
06:00 PM	20	3	3	26	5	238	5	248	8	1	8	17	5	113	6	124	415
Grand Total	174	69	46	289	88	1976	66	2130	105	51	74	230	68	1413	76	1557	4206
Apprch %	60.2	23.9	15.9		4.1	92.8	3.1		45.7	22.2	32.2		4.4	90.8	4.9		
Total %	4.1	1.6	1.1	6.9	2.1	47	1.6	50.6	2.5	1.2	1.8	5.5	1.6	33.6	1.8	37	
PC	174	68	45	287	87	1875	64	2026	103	50	74	227	67	1342	75	1484	4024
% PC	100	98.6	97.8	99.3	98.9	94.9	97	95.1	98.1	98	100	98.7	98.5	95	98.7	95.3	95.7
SU	0	1	1	2	1	84	2	87	2	1	0	3	1	67	1	69	161
% SU	0	1.4	2.2	0.7	1.1	4.3	3	4.1	1.9	2	0	1.3	1.5	4.7	1.3	4.4	3.8
MU	0	0	0	0	0	17	0	17	0	0	0	0	0	4	0	4	21
% MU	0	0	0	0	0	0.9	0	0.8	0	0	0	0	0	0.3	0	0.3	0.5

	WENTWORTH AVE From North				95TH ST From East				WENTWORTH AVE From South				95TH ST From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	21	5	**7**	33	13	218	**10**	241	**17**	**6**	**11**	**34**	**9**	168	**12**	189	497
05:15 PM	19	**8**	6	33	14	241	8	263	5	5	6	16	2	118	7	127	439
05:30 PM	21	5	4	30	**21**	215	9	245	14	4	10	28	9	**177**	11	**197**	**500**
05:45 PM	**24**	4	6	**34**	6	**265**	6	**277**	12	2	7	21	7	135	9	151	483
Total Volume	85	22	23	130	54	939	33	1026	48	17	34	99	27	598	39	664	1919
% App. Total	65.4	16.9	17.7		5.3	91.5	3.2		48.5	17.2	34.3		4.1	90.1	5.9		
PHF	.885	.688	.821	.956	.643	.886	.825	.926	.706	.708	.773	.728	.750	.845	.813	.843	.960

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95TH ST AND WENTWORTH AVE
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : PM no peds
Site Code : 00000000
Start Date : 4/25/2012
Page No : 6

Groups Printed- SU

	WENTWORTH AVE From North				95TH ST From East				WENTWORTH AVE From South				95TH ST From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	1	0	1	0	12	1	13	1	0	0	1	0	8	0	8	23
04:15 PM	0	0	1	1	0	16	0	16	0	1	0	1	0	6	1	7	25
04:30 PM	0	0	0	0	0	10	1	11	1	0	0	1	1	12	0	13	25
04:45 PM	0	0	0	0	0	6	0	6	0	0	0	0	0	9	0	9	15
Total	0	1	1	2	0	44	2	46	2	1	0	3	1	35	1	37	88
05:00 PM	0	0	0	0	0	11	0	11	0	0	0	0	0	6	0	6	17
05:15 PM	0	0	0	0	0	9	0	9	0	0	0	0	0	6	0	6	15
05:30 PM	0	0	0	0	1	9	0	10	0	0	0	0	0	9	0	9	19
05:45 PM	0	0	0	0	0	6	0	6	0	0	0	0	0	7	0	7	13
Total	0	0	0	0	1	35	0	36	0	0	0	0	0	28	0	28	64
06:00 PM	0	0	0	0	0	5	0	5	0	0	0	0	0	4	0	4	9
Grand Total	0	1	1	2	1	84	2	87	2	1	0	3	1	67	1	69	161
Apprch %	0	50	50		1.1	96.6	2.3		66.7	33.3	0		1.4	97.1	1.4		
Total %	0	0.6	0.6	1.2	0.6	52.2	1.2	54	1.2	0.6	0	1.9	0.6	41.6	0.6	42.9	

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95TH ST AND WENTWORTH AVE
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : PM no peds
Site Code : 00000000
Start Date : 4/25/2012
Page No : 7

Groups Printed- MU

	WENTWORTH AVE From North				95TH ST From East				WENTWORTH AVE From South				95TH ST From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
04:15 PM	0	0	0	0	0	4	0	4	0	0	0	0	0	0	0	0	4
04:30 PM	0	0	0	0	0	4	0	4	0	0	0	0	0	0	0	0	4
04:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Total	0	0	0	0	0	11	0	11	0	0	0	0	0	1	0	1	12
05:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
05:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
Total	0	0	0	0	0	5	0	5	0	0	0	0	0	2	0	2	7
06:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Grand Total	0	0	0	0	0	17	0	17	0	0	0	0	0	4	0	4	21
Apprch %	0	0	0		0	100	0		0	0	0		0	100	0		
Total %	0	0	0	0	0	81	0	81	0	0	0	0	0	19	0	19	

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95TH ST AND WENTWORTH AVE
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : PM peds
Site Code : 00000000
Start Date : 4/25/2012
Page No : 8

Groups Printed- Peds & Bikes

	WENTWORTH AVE Crossing North Leg			95TH ST Crossing East Leg			WENTWORTH AVE Crossing South Leg			95TH ST Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	1	12	13	0	4	4	0	3	3	0	0	0	20
04:15 PM	0	12	12	0	8	8	0	13	13	0	0	0	33
04:30 PM	1	21	22	0	0	0	0	0	0	0	2	2	24
04:45 PM	0	28	28	0	0	0	0	1	1	0	2	2	31
Total	2	73	75	0	12	12	0	17	17	0	4	4	108
05:00 PM	2	31	33	1	6	7	0	7	7	0	3	3	50
05:15 PM	1	50	51	0	9	9	0	7	7	0	8	8	75
05:30 PM	1	28	29	0	1	1	0	1	1	0	3	3	34
05:45 PM	1	36	37	1	3	4	0	1	1	0	3	3	45
Total	5	145	150	2	19	21	0	16	16	0	17	17	204
06:00 PM	1	28	29	1	1	2	0	1	1	0	2	2	34
Grand Total	8	246	254	3	32	35	0	34	34	0	23	23	346
Apprch %	3.1	96.9		8.6	91.4		0	100		0	100		
Total %	2.3	71.1	73.4	0.9	9.2	10.1	0	9.8	9.8	0	6.6	6.6	

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98TH PL AND HALSTED ST
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : am no peds
Site Code : 00000000
Start Date : 4/26/2012
Page No : 1

Groups Printed- PC - SU - MU

	HALSTED ST From North				98TH PL From East				HALSTED ST From South				98TH PL From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	97	37	0	134	189	7	56	252	0	143	28	171	0	0	0	0	557
07:15 AM	133	56	0	189	206	7	42	255	0	183	43	226	0	0	0	0	670
07:30 AM	154	67	0	221	278	16	61	355	0	192	53	245	0	0	0	0	821
07:45 AM	196	89	0	285	252	9	45	306	0	203	46	249	0	0	0	0	840
Total	580	249	0	829	925	39	204	1168	0	721	170	891	0	0	0	0	2888
08:00 AM	145	78	0	223	277	8	81	366	0	216	36	252	0	0	0	0	841
08:15 AM	183	65	0	248	225	6	51	282	0	203	46	249	0	0	0	0	779
08:30 AM	160	52	0	212	212	6	53	271	0	221	28	249	0	0	0	0	732
08:45 AM	131	82	0	213	217	7	59	283	0	164	40	204	0	0	0	0	700
Total	619	277	0	896	931	27	244	1202	0	804	150	954	0	0	0	0	3052
Grand Total	1199	526	0	1725	1856	66	448	2370	0	1525	320	1845	0	0	0	0	5940
Apprch %	69.5	30.5	0		78.3	2.8	18.9		0	82.7	17.3		0	0	0		
Total %	20.2	8.9	0	29	31.2	1.1	7.5	39.9	0	25.7	5.4	31.1	0	0	0	0	
PC	1101	505	0	1606	1814	62	429	2305	0	1437	306	1743	0	0	0	0	5654
% PC	91.8	96	0	93.1	97.7	93.9	95.8	97.3	0	94.2	95.6	94.5	0	0	0	0	95.2
SU	78	14	0	92	26	3	19	48	0	76	13	89	0	0	0	0	229
% SU	6.5	2.7	0	5.3	1.4	4.5	4.2	2	0	5	4.1	4.8	0	0	0	0	3.9
MU	20	7	0	27	16	1	0	17	0	12	1	13	0	0	0	0	57
% MU	1.7	1.3	0	1.6	0.9	1.5	0	0.7	0	0.8	0.3	0.7	0	0	0	0	1

	HALSTED ST From North				98TH PL From East				HALSTED ST From South				98TH PL From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	154	67	0	221	**278**	**16**	61	355	0	192	**53**	245	0	0	0	0	821
07:45 AM	**196**	**89**	0	**285**	252	9	45	306	0	203	46	249	0	0	0	0	840
08:00 AM	145	78	0	223	277	8	**81**	**366**	0	**216**	36	**252**	0	0	0	0	**841**
08:15 AM	183	65	0	248	225	6	51	282	0	203	46	249	0	0	0	0	779
Total Volume	678	299	0	977	1032	39	238	1309	0	814	181	995	0	0	0	0	3281
% App. Total	69.4	30.6	0		78.8	3	18.2		0	81.8	18.2		0	0	0		
PHF	.865	.840	.000	.857	.928	.609	.735	.894	.000	.942	.854	.987	.000	.000	.000	.000	.975

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98TH PL AND HALSTED ST
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : am no peds
Site Code : 00000000
Start Date : 4/26/2012

Groups Printed- SU

	HALSTED ST From North				98TH PL From East				HALSTED ST From South				98TH PL From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	14	1	0	15	2	0	2	4	0	15	2	17	0	0	0	0	36
07:15 AM	6	0	0	6	3	1	2	6	0	11	3	14	0	0	0	0	26
07:30 AM	11	1	0	12	7	1	1	9	0	9	1	10	0	0	0	0	31
07:45 AM	11	3	0	14	2	0	2	4	0	7	0	7	0	0	0	0	25
Total	42	5	0	47	14	2	7	23	0	42	6	48	0	0	0	0	118
08:00 AM	8	0	0	8	2	0	5	7	0	9	1	10	0	0	0	0	25
08:15 AM	14	3	0	17	3	0	0	3	0	9	4	13	0	0	0	0	33
08:30 AM	8	2	0	10	5	0	3	8	0	11	0	11	0	0	0	0	29
08:45 AM	6	4	0	10	2	1	4	7	0	5	2	7	0	0	0	0	24
Total	36	9	0	45	12	1	12	25	0	34	7	41	0	0	0	0	111
Grand Total	78	14	0	92	26	3	19	48	0	76	13	89	0	0	0	0	229
Apprch %	84.8	15.2	0		54.2	6.2	39.6		0	85.4	14.6		0	0	0		
Total %	34.1	6.1	0	40.2	11.4	1.3	8.3	21	0	33.2	5.7	38.9	0	0	0	0	

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98TH PL AND HALSTED ST
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : am no peds
Site Code : 00000000
Start Date : 4/26/2012

Groups Printed- MU

	HALSTED ST From North				98TH PL From East				HALSTED ST From South				98TH PL From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	1	0	0	1	2	0	0	2	0	0	0	0	0	0	0	0	3
07:15 AM	3	0	0	3	3	0	0	3	0	3	1	4	0	0	0	0	10
07:30 AM	0	4	0	4	2	0	0	2	0	1	0	1	0	0	0	0	7
07:45 AM	3	1	0	4	3	1	0	4	0	2	0	2	0	0	0	0	10
Total	7	5	0	12	10	1	0	11	0	6	1	7	0	0	0	0	30
08:00 AM	3	1	0	4	2	0	0	2	0	2	0	2	0	0	0	0	8
08:15 AM	2	1	0	3	1	0	0	1	0	0	0	0	0	0	0	0	4
08:30 AM	3	0	0	3	2	0	0	2	0	3	0	3	0	0	0	0	8
08:45 AM	5	0	0	5	1	0	0	1	0	1	0	1	0	0	0	0	7
Total	13	2	0	15	6	0	0	6	0	6	0	6	0	0	0	0	27
Grand Total	20	7	0	27	16	1	0	17	0	12	1	13	0	0	0	0	57
Apprch %	74.1	25.9	0		94.1	5.9	0		0	92.3	7.7		0	0	0		
Total %	35.1	12.3	0	47.4	28.1	1.8	0	29.8	0	21.1	1.8	22.8	0	0	0	0	

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98TH PL AND HALSTED ST
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM Peds
Site Code : 00000000
Start Date : 4/26/2012
Page No : 4

Groups Printed- Peds & Bikes

	HALSTED ST Crossing North Leg			98TH PL Crossing East Leg			HALSTED ST Crossing South Leg			98TH PL Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	2	2	0	0	0	0	0	0	2
07:15 AM	0	0	0	0	3	3	0	0	0	0	3	3	6
07:30 AM	0	0	0	0	1	1	0	0	0	0	3	3	4
07:45 AM	0	1	1	0	3	3	0	0	0	0	4	4	8
Total	0	1	1	0	9	9	0	0	0	0	10	10	20
08:00 AM	0	1	1	0	3	3	0	0	0	0	0	0	4
08:15 AM	0	0	0	0	1	1	0	0	0	0	5	5	6
08:30 AM	0	5	5	0	0	0	0	0	0	1	0	1	6
08:45 AM	0	3	3	0	2	2	0	0	0	0	5	5	10
Total	0	9	9	0	6	6	0	0	0	1	10	11	26
Grand Total	0	10	10	0	15	15	0	0	0	1	20	21	46
Apprch %	0	100		0	100		0	0		4.8	95.2		
Total %	0	21.7	21.7	0	32.6	32.6	0	0	0	2.2	43.5	45.7	

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98TH PL AND HALSTED ST
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : PM no peds
Site Code : 00000000
Start Date : 4/26/2012
Page No : 5

Groups Printed- PC - SU - MU

	HALSTED ST From North				98TH PL From East				HALSTED ST From South				98TH PL From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	111	193	0	304	226	0	69	295	0	160	53	213	0	0	0	0	812
04:15 PM	83	162	0	245	307	0	98	405	0	125	55	180	0	0	0	0	830
04:30 PM	126	175	0	301	213	0	66	279	0	134	42	176	0	0	0	0	756
04:45 PM	86	213	0	299	289	0	80	369	0	134	33	167	0	0	0	0	835
Total	406	743	0	1149	1035	0	313	1348	0	553	183	736	0	0	0	0	3233
05:00 PM	106	205	0	311	278	0	70	348	0	145	34	179	0	0	0	0	838
05:15 PM	133	193	0	326	236	0	66	302	0	147	53	200	0	0	0	0	828
05:30 PM	128	229	0	357	264	0	73	337	0	145	45	190	0	0	0	0	884
05:45 PM	123	224	0	347	265	0	66	331	0	139	49	188	0	0	0	0	866
Total	490	851	0	1341	1043	0	275	1318	0	576	181	757	0	0	0	0	3416
Grand Total	896	1594	0	2490	2078	0	588	2666	0	1129	364	1493	0	0	0	0	6649
Apprch %	36	64	0		77.9	0	22.1		0	75.6	24.4		0	0	0		
Total %	13.5	24	0	37.4	31.3	0	8.8	40.1	0	17	5.5	22.5	0	0	0	0	
PC	874	1514	0	2388	2053	0	575	2628	0	1070	350	1420	0	0	0	0	6436
% PC	97.5	95	0	95.9	98.8	0	97.8	98.6	0	94.8	96.2	95.1	0	0	0	0	96.8
SU	16	63	0	79	10	0	11	21	0	53	9	62	0	0	0	0	162
% SU	1.8	4	0	3.2	0.5	0	1.9	0.8	0	4.7	2.5	4.2	0	0	0	0	2.4
MU	6	17	0	23	15	0	2	17	0	6	5	11	0	0	0	0	51
% MU	0.7	1.1	0	0.9	0.7	0	0.3	0.6	0	0.5	1.4	0.7	0	0	0	0	0.8

	HALSTED ST From North				98TH PL From East				HALSTED ST From South				98TH PL From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	106	205	0	311	**278**	0	70	**348**	0	145	34	179	0	0	0	0	838
05:15 PM	**133**	193	0	326	236	0	66	302	0	**147**	**53**	**200**	0	0	0	0	828
05:30 PM	128	**229**	0	**357**	264	0	**73**	337	0	145	45	190	0	0	0	0	**884**
05:45 PM	123	224	0	347	265	0	66	331	0	139	49	188	0	0	0	0	866
Total Volume	490	851	0	1341	1043	0	275	1318	0	576	181	757	0	0	0	0	3416
% App. Total	36.5	63.5	0		79.1	0	20.9		0	76.1	23.9		0	0	0		
PHF	.921	.929	.000	.939	.938	.000	.942	.947	.000	.980	.854	.946	.000	.000	.000	.000	.966

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98TH PL AND HALSTED ST
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : PM no peds
Site Code : 00000000
Start Date : 4/26/2012
Page No : 6

Groups Printed- SU

	HALSTED ST From North				98TH PL From East				HALSTED ST From South				98TH PL From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	3	9	0	12	3	0	2	5	0	7	2	9	0	0	0	0	26
04:15 PM	1	8	0	9	3	0	2	5	0	8	0	8	0	0	0	0	22
04:30 PM	3	9	0	12	1	0	0	1	0	3	2	5	0	0	0	0	18
04:45 PM	3	6	0	9	1	0	2	3	0	8	0	8	0	0	0	0	20
Total	10	32	0	42	8	0	6	14	0	26	4	30	0	0	0	0	86
05:00 PM	1	9	0	10	1	0	0	1	0	8	2	10	0	0	0	0	21
05:15 PM	3	6	0	9	1	0	1	2	0	9	1	10	0	0	0	0	21
05:30 PM	2	9	0	11	0	0	1	1	0	3	2	5	0	0	0	0	17
05:45 PM	0	7	0	7	0	0	3	3	0	7	0	7	0	0	0	0	17
Total	6	31	0	37	2	0	5	7	0	27	5	32	0	0	0	0	76
Grand Total	16	63	0	79	10	0	11	21	0	53	9	62	0	0	0	0	162
Apprch %	20.3	79.7	0		47.6	0	52.4		0	85.5	14.5		0	0	0		
Total %	9.9	38.9	0	48.8	6.2	0	6.8	13	0	32.7	5.6	38.3	0	0	0	0	

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98TH PL AND HALSTED ST
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : PM no peds
Site Code : 00000000
Start Date : 4/26/2012

Groups Printed- MU

	HALSTED ST From North				98TH PL From East				HALSTED ST From South				98TH PL From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	2	2	0	4	5	0	1	6	0	0	1	1	0	0	0	0	11
04:15 PM	1	1	0	2	1	0	0	1	0	1	0	1	0	0	0	0	4
04:30 PM	1	3	0	4	7	0	1	8	0	0	1	1	0	0	0	0	13
04:45 PM	1	4	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
Total	5	10	0	15	13	0	2	15	0	1	2	3	0	0	0	0	33
05:00 PM	1	2	0	3	2	0	0	2	0	2	0	2	0	0	0	0	7
05:15 PM	0	3	0	3	0	0	0	0	0	0	1	1	0	0	0	0	4
05:30 PM	0	1	0	1	0	0	0	0	0	2	1	3	0	0	0	0	4
05:45 PM	0	1	0	1	0	0	0	0	0	1	1	2	0	0	0	0	3
Total	1	7	0	8	2	0	0	2	0	5	3	8	0	0	0	0	18
Grand Total	6	17	0	23	15	0	2	17	0	6	5	11	0	0	0	0	51
Apprch %	26.1	73.9	0		88.2	0	11.8		0	54.5	45.5		0	0	0		
Total %	11.8	33.3	0	45.1	29.4	0	3.9	33.3	0	11.8	9.8	21.6	0	0	0	0	

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98TH PL AND HALSTED ST
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : PM Peds
Site Code : 00000000
Start Date : 4/26/2012
Page No : 8

Groups Printed- Peds & Bikes

	HALSTED ST Crossing North Leg			98TH PL Crossing East Leg			HALSTED ST Crossing South Leg			98TH PL Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	1	1	0	0	0	0	0	0	0	4	4	5
04:15 PM	0	0	0	0	1	1	0	0	0	0	4	4	5
04:30 PM	0	2	2	0	0	0	0	0	0	0	2	2	4
04:45 PM	0	1	1	0	3	3	0	0	0	1	5	6	10
Total	0	4	4	0	4	4	0	0	0	1	15	16	24
05:00 PM	0	0	0	0	0	0	0	0	0	0	3	3	3
05:15 PM	0	2	2	0	3	3	0	0	0	0	4	4	9
05:30 PM	0	0	0	0	0	0	0	0	0	0	7	7	7
05:45 PM	0	0	0	0	0	0	0	0	0	0	4	4	4
Total	0	2	2	0	3	3	0	0	0	0	18	18	23
Grand Total	0	6	6	0	7	7	0	0	0	1	33	34	47
Apprch %	0	100		0	100		0	0		2.9	97.1		
Total %	0	12.8	12.8	0	14.9	14.9	0	0	0	2.1	70.2	72.3	

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98th Pl and Wentworth Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/30/2012
Page No : 1

Groups Printed- PC - SU - MU

	Wentworth Ave From North				98th Pl From East				Wentworth Ave From South				98th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	10	0	10	3	2	36	41	0	29	0	29	0	0	0	0	80
07:15 AM	0	18	0	18	1	0	30	31	0	41	3	44	0	0	0	0	93
07:30 AM	0	22	0	22	2	1	49	52	0	38	0	38	0	0	0	0	112
07:45 AM	1	20	0	21	6	0	58	64	0	38	0	38	0	0	0	0	123
Total	1	70	0	71	12	3	173	188	0	146	3	149	0	0	0	0	408
08:00 AM	1	32	0	33	8	3	65	76	0	58	3	61	0	0	0	0	170
08:15 AM	1	29	0	30	5	0	55	60	0	31	0	31	0	0	0	0	121
08:30 AM	0	24	0	24	4	0	57	61	0	35	0	35	0	0	0	0	120
08:45 AM	0	15	0	15	5	4	69	78	0	17	2	19	0	0	0	0	112
Total	2	100	0	102	22	7	246	275	0	141	5	146	0	0	0	0	523
Grand Total	3	170	0	173	34	10	419	463	0	287	8	295	0	0	0	0	931
Apprch %	1.7	98.3	0		7.3	2.2	90.5		0	97.3	2.7		0	0	0		
Total %	0.3	18.3	0	18.6	3.7	1.1	45	49.7	0	30.8	0.9	31.7	0	0	0	0	
PC	2	166	0	168	31	9	391	431	0	275	7	282	0	0	0	0	881
% PC	66.7	97.6	0	97.1	91.2	90	93.3	93.1	0	95.8	87.5	95.6	0	0	0	0	94.6
SU	1	4	0	5	3	1	25	29	0	12	1	13	0	0	0	0	47
% SU	33.3	2.4	0	2.9	8.8	10	6	6.3	0	4.2	12.5	4.4	0	0	0	0	5
MU	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	3
% MU	0	0	0	0	0	0	0.7	0.6	0	0	0	0	0	0	0	0	0.3

	Wentworth Ave From North				98th Pl From East				Wentworth Ave From South				98th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	**1**	20	0	21	6	0	58	64	0	38	0	38	0	0	0	0	123
08:00 AM	1	**32**	0	**33**	**8**	**3**	**65**	**76**	0	**58**	**3**	**61**	0	0	0	0	**170**
08:15 AM	1	29	0	30	5	0	55	60	0	31	0	31	0	0	0	0	121
08:30 AM	0	24	0	24	4	0	57	61	0	35	0	35	0	0	0	0	120
Total Volume	3	105	0	108	23	3	235	261	0	162	3	165	0	0	0	0	534
% App. Total	2.8	97.2	0		8.8	1.1	90		0	98.2	1.8		0	0	0		
PHF	.750	.820	.000	.818	.719	.250	.904	.859	.000	.698	.250	.676	.000	.000	.000	.000	.785

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98th Pl and Wentworth Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/30/2012
Page No : 2

Groups Printed- SU

	Wentworth Ave From North				98th Pl From East				Wentworth Ave From South				98th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	1	0	4	5	0	3	0	3	0	0	0	0	8
07:15 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
07:30 AM	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	3
07:45 AM	0	1	0	1	0	0	5	5	0	0	0	0	0	0	0	0	6
Total	0	1	0	1	1	0	12	13	0	5	0	5	0	0	0	0	19
08:00 AM	1	2	0	3	1	1	4	6	0	3	1	4	0	0	0	0	13
08:15 AM	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	3
08:30 AM	0	0	0	0	0	0	1	1	0	4	0	4	0	0	0	0	5
08:45 AM	0	1	0	1	1	0	5	6	0	0	0	0	0	0	0	0	7
Total	1	3	0	4	2	1	13	16	0	7	1	8	0	0	0	0	28
Grand Total	1	4	0	5	3	1	25	29	0	12	1	13	0	0	0	0	47
Apprch %	20	80	0		10.3	3.4	86.2		0	92.3	7.7		0	0	0		
Total %	2.1	8.5	0	10.6	6.4	2.1	53.2	61.7	0	25.5	2.1	27.7	0	0	0	0	

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98th Pl and Wentworth Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/30/2012
Page No : 3

Groups Printed- MU

	Wentworth Ave From North				98th Pl From East				Wentworth Ave From South				98th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	2
Grand Total	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	3
Apprch %	0	0	0		0	0	100		0	0	0		0	0	0		
Total %	0	0	0	0	0	0	100	100	0	0	0	0	0	0	0	0	

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98th Pl and Wentworth Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/30/2012

Groups Printed- Peds & Bikes

	Wentworth Ave Crossing North Leg			98th Pl Crossing East Leg			Wentworth Ave Crossing South Leg			98th Pl Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	1	1	0	0	0	0	0	0	1
07:30 AM	0	2	2	0	0	0	0	0	0	0	2	2	4
07:45 AM	0	0	0	0	0	0	0	2	2	0	1	1	3
Total	0	2	2	0	1	1	0	2	2	0	3	3	8
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	1	1	0	0	0	0	1	1	0	0	0	2
08:45 AM	0	1	1	0	0	0	0	0	0	0	2	2	3
Total	0	2	2	0	0	0	0	1	1	0	2	2	5
Grand Total	0	4	4	0	1	1	0	3	3	0	5	5	13
Apprch %	0	100		0	100		0	100		0	100		
Total %	0	30.8	30.8	0	7.7	7.7	0	23.1	23.1	0	38.5	38.5	

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Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/30/2012
Page No : 5

Groups Printed- PC - SU - MU

	Wentworth Ave From North				98th Pl From East				Wentworth Ave From South				98th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	1	29	0	30	9	7	72	88	0	26	3	29	0	0	0	0	147
04:15 PM	1	38	0	39	6	11	68	85	0	29	1	30	0	0	0	0	154
04:30 PM	4	35	0	39	7	2	66	75	0	25	1	26	0	0	0	0	140
04:45 PM	1	26	0	27	7	4	74	85	0	16	1	17	0	0	0	0	129
Total	7	128	0	135	29	24	280	333	0	96	6	102	0	0	0	0	570
05:00 PM	0	30	0	30	11	2	72	85	0	17	2	19	0	0	0	0	134
05:15 PM	1	37	0	38	5	5	56	66	0	36	3	39	0	0	0	0	143
05:30 PM	2	37	0	39	3	7	71	81	0	24	0	24	0	0	0	0	144
05:45 PM	2	32	0	34	4	10	72	86	0	27	3	30	0	0	0	0	150
Total	5	136	0	141	23	24	271	318	0	104	8	112	0	0	0	0	571
Grand Total	12	264	0	276	52	48	551	651	0	200	14	214	0	0	0	0	1141
Apprch %	4.3	95.7	0		8	7.4	84.6		0	93.5	6.5		0	0	0		
Total %	1.1	23.1	0	24.2	4.6	4.2	48.3	57.1	0	17.5	1.2	18.8	0	0	0	0	
PC	12	257	0	269	52	47	541	640	0	195	14	209	0	0	0	0	1118
% PC	100	97.3	0	97.5	100	97.9	98.2	98.3	0	97.5	100	97.7	0	0	0	0	98
SU	0	7	0	7	0	1	9	10	0	5	0	5	0	0	0	0	22
% SU	0	2.7	0	2.5	0	2.1	1.6	1.5	0	2.5	0	2.3	0	0	0	0	1.9
MU	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
% MU	0	0	0	0	0	0	0.2	0.2	0	0	0	0	0	0	0	0	0.1

	Wentworth Ave From North				98th Pl From East				Wentworth Ave From South				98th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	30	0	30	**11**	2	**72**	85	0	17	2	19	0	0	0	0	134
05:15 PM	1	**37**	0	38	5	5	56	66	0	**36**	**3**	**39**	0	0	0	0	143
05:30 PM	**2**	37	0	**39**	3	7	71	81	0	24	0	24	0	0	0	0	144
05:45 PM	2	32	0	34	4	**10**	72	**86**	0	27	3	30	0	0	0	0	**150**
Total Volume	5	136	0	141	23	24	271	318	0	104	8	112	0	0	0	0	571
% App. Total	3.5	96.5	0		7.2	7.5	85.2		0	92.9	7.1		0	0	0		
PHF	.625	.919	.000	.904	.523	.600	.941	.924	.000	.722	.667	.718	.000	.000	.000	.000	.952

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Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/30/2012
Page No : 6

Groups Printed- SU

	Wentworth Ave From North				98th Pl From East				Wentworth Ave From South				98th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	1	3	4	0	0	0	0	0	0	0	0	4
04:15 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
04:30 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
04:45 PM	0	1	0	1	0	0	3	3	0	0	0	0	0	0	0	0	4
Total	0	2	0	2	0	1	7	8	0	1	0	1	0	0	0	0	11
05:00 PM	0	3	0	3	0	0	1	1	0	2	0	2	0	0	0	0	6
05:15 PM	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	1	1	0	1	0	1	0	0	0	0	2
Total	0	5	0	5	0	0	2	2	0	4	0	4	0	0	0	0	11
Grand Total	0	7	0	7	0	1	9	10	0	5	0	5	0	0	0	0	22
Apprch %	0	100	0		0	10	90		0	100	0		0	0	0		
Total %	0	31.8	0	31.8	0	4.5	40.9	45.5	0	22.7	0	22.7	0	0	0	0	

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File Name : AM + PM
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Start Date : 5/30/2012
Page No : 7

Groups Printed- MU

	Wentworth Ave From North				98th Pl From East				Wentworth Ave From South				98th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
Grand Total	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
Apprch %	0	0	0		0	0	100		0	0	0		0	0	0		
Total %	0	0	0	0	0	0	100	100	0	0	0	0	0	0	0	0	

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Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/30/2012

Groups Printed- Peds & Bikes

	Wentworth Ave Crossing North Leg			98th Pl Crossing East Leg			Wentworth Ave Crossing South Leg			98th Pl Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	1	1	0	3	3	4
04:30 PM	0	0	0	0	0	0	1	1	2	0	5	5	7
04:45 PM	0	1	1	0	1	1	0	0	0	0	0	0	2
Total	0	1	1	0	1	1	1	2	3	0	8	8	13
05:00 PM	0	0	0	0	0	0	0	1	1	0	0	0	1
05:15 PM	0	0	0	0	1	1	0	0	0	0	0	0	1
05:30 PM	0	1	1	0	2	2	0	0	0	0	0	0	3
05:45 PM	0	1	1	1	3	4	0	1	1	0	0	0	6
Total	0	2	2	1	6	7	0	2	2	0	0	0	11
Grand Total	0	3	3	1	7	8	1	4	5	0	8	8	24
Apprch %	0	100		12.5	87.5		20	80		0	100		
Total %	0	12.5	12.5	4.2	29.2	33.3	4.2	16.7	20.8	0	33.3	33.3	

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99th Pl and Martin Luther King Dr
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/30/2012
Page No : 1

Groups Printed- PC - SU - MU

	Martin Luther King Dr From North				99th Pl From East				Martin Luther King Dr From South				99th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	5	45	4	54	0	3	2	5	8	66	51	125	0	0	0	0	184
07:15 AM	4	57	3	64	0	1	2	3	6	78	64	148	0	0	0	0	215
07:30 AM	0	53	8	61	2	2	3	7	5	85	71	161	0	0	0	0	229
07:45 AM	4	92	15	111	1	3	3	7	23	121	65	209	0	0	0	0	327
Total	13	247	30	290	3	9	10	22	42	350	251	643	0	0	0	0	955
08:00 AM	4	69	12	85	1	1	1	3	15	104	69	188	0	0	0	0	276
08:15 AM	2	69	23	94	3	3	4	10	31	96	51	178	0	0	0	0	282
08:30 AM	7	58	20	85	0	0	8	8	22	90	59	171	0	0	0	0	264
08:45 AM	3	111	27	141	4	4	2	10	29	85	57	171	0	0	0	0	322
Total	16	307	82	405	8	8	15	31	97	375	236	708	0	0	0	0	1144
Grand Total	29	554	112	695	11	17	25	53	139	725	487	1351	0	0	0	0	2099
Apprch %	4.2	79.7	16.1		20.8	32.1	47.2		10.3	53.7	36		0	0	0		
Total %	1.4	26.4	5.3	33.1	0.5	0.8	1.2	2.5	6.6	34.5	23.2	64.4	0	0	0	0	
PC	27	526	112	665	11	16	25	52	138	700	476	1314	0	0	0	0	2031
% PC	93.1	94.9	100	95.7	100	94.1	100	98.1	99.3	96.6	97.7	97.3	0	0	0	0	96.8
SU	2	26	0	28	0	1	0	1	1	25	11	37	0	0	0	0	66
% SU	6.9	4.7	0	4	0	5.9	0	1.9	0.7	3.4	2.3	2.7	0	0	0	0	3.1
MU	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
% MU	0	0.4	0	0.3	0	0	0	0	0	0	0	0	0	0	0	0	0.1

	Martin Luther King Dr From North				99th Pl From East				Martin Luther King Dr From South				99th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	4	**92**	15	**111**	1	**3**	3	7	23	**121**	65	**209**	0	0	0	0	**327**
08:00 AM	4	69	12	85	1	1	1	3	15	104	**69**	188	0	0	0	0	276
08:15 AM	2	69	**23**	94	**3**	3	4	**10**	**31**	96	51	178	0	0	0	0	282
08:30 AM	**7**	58	20	85	0	0	**8**	8	22	90	59	171	0	0	0	0	264
Total Volume	17	288	70	375	5	7	16	28	91	411	244	746	0	0	0	0	1149
% App. Total	4.5	76.8	18.7		17.9	25	57.1		12.2	55.1	32.7		0	0	0		
PHF	.607	.783	.761	.845	.417	.583	.500	.700	.734	.849	.884	.892	.000	.000	.000	.000	.878

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Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/30/2012
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Groups Printed- SU

	Martin Luther King Dr From North				99th Pl From East				Martin Luther King Dr From South				99th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	2	2	0	4	0	0	0	0	0	6	0	6	0	0	0	0	10
07:15 AM	0	4	0	4	0	0	0	0	1	2	2	5	0	0	0	0	9
07:30 AM	0	1	0	1	0	1	0	1	0	3	2	5	0	0	0	0	7
07:45 AM	0	8	0	8	0	0	0	0	0	5	0	5	0	0	0	0	13
Total	2	15	0	17	0	1	0	1	1	16	4	21	0	0	0	0	39
08:00 AM	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0	4
08:15 AM	0	3	0	3	0	0	0	0	0	2	0	2	0	0	0	0	5
08:30 AM	0	3	0	3	0	0	0	0	0	3	3	6	0	0	0	0	9
08:45 AM	0	3	0	3	0	0	0	0	0	2	4	6	0	0	0	0	9
Total	0	11	0	11	0	0	0	0	0	9	7	16	0	0	0	0	27
Grand Total	2	26	0	28	0	1	0	1	1	25	11	37	0	0	0	0	66
Apprch %	7.1	92.9	0		0	100	0		2.7	67.6	29.7		0	0	0		
Total %	3	39.4	0	42.4	0	1.5	0	1.5	1.5	37.9	16.7	56.1	0	0	0	0	

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Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/30/2012
Page No : 3

Groups Printed- MU

	Martin Luther King Dr From North				99th Pl From East				Martin Luther King Dr From South				99th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Apprch %	0	100	0		0	0	0		0	0	0		0	0	0		
Total %	0	100	0	100	0	0	0	0	0	0	0	0	0	0	0	0	

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Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/30/2012

Groups Printed- Peds & Bikes

	Martin Luther King Dr Crossing North Leg			99th Pl Crossing East Leg			Martin Luther King Dr Crossing South Leg			99th Pl Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	1	1	0	0	0	0	1	1	2
07:30 AM	0	0	0	0	8	8	0	0	0	0	1	1	9
07:45 AM	0	0	0	0	1	1	0	0	0	0	1	1	2
Total	0	0	0	0	10	10	0	0	0	0	3	3	13
08:00 AM	0	2	2	1	9	10	0	0	0	0	0	0	12
08:15 AM	0	0	0	0	2	2	0	0	0	0	4	4	6
08:30 AM	0	0	0	0	2	2	0	0	0	0	3	3	5
08:45 AM	0	0	0	0	1	1	1	0	1	0	1	1	3
Total	0	2	2	1	14	15	1	0	1	0	8	8	26
Grand Total	0	2	2	1	24	25	1	0	1	0	11	11	39
Apprch %	0	100		4	96		100	0		0	100		
Total %	0	5.1	5.1	2.6	61.5	64.1	2.6	0	2.6	0	28.2	28.2	

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4:00 PM - 6:00 PM
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File Name : AM + PM
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Start Date : 5/30/2012
Page No : 5

Groups Printed- PC - SU - MU

	Martin Luther King Dr From North				99th Pl From East				Martin Luther King Dr From South				99th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	13	163	18	194	10	19	23	52	13	68	49	130	0	0	0	0	376
04:15 PM	16	206	6	228	10	19	21	50	17	61	23	101	0	0	0	0	379
04:30 PM	12	176	16	204	13	22	25	60	14	71	25	110	0	0	0	0	374
04:45 PM	9	272	33	314	9	20	12	41	19	67	33	119	0	0	0	0	474
Total	50	817	73	940	42	80	81	203	63	267	130	460	0	0	0	0	1603
05:00 PM	6	232	19	257	17	32	40	89	14	63	31	108	0	0	0	0	454
05:15 PM	21	192	19	232	7	31	37	75	8	43	44	95	0	0	0	0	402
05:30 PM	7	201	7	215	6	21	20	47	3	54	33	90	0	0	0	0	352
05:45 PM	10	187	14	211	8	10	13	31	6	50	30	86	0	0	0	0	328
Total	44	812	59	915	38	94	110	242	31	210	138	379	0	0	0	0	1536
Grand Total	94	1629	132	1855	80	174	191	445	94	477	268	839	0	0	0	0	3139
Apprch %	5.1	87.8	7.1		18	39.1	42.9		11.2	56.9	31.9		0	0	0		
Total %	3	51.9	4.2	59.1	2.5	5.5	6.1	14.2	3	15.2	8.5	26.7	0	0	0	0	
PC	94	1614	132	1840	80	174	191	445	93	467	268	828	0	0	0	0	3113
% PC	100	99.1	100	99.2	100	100	100	100	98.9	97.9	100	98.7	0	0	0	0	99.2
SU	0	14	0	14	0	0	0	0	1	10	0	11	0	0	0	0	25
% SU	0	0.9	0	0.8	0	0	0	0	1.1	2.1	0	1.3	0	0	0	0	0.8
MU	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
% MU	0	0.1	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0

	Martin Luther King Dr From North				99th Pl From East				Martin Luther King Dr From South				99th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	12	176	16	204	13	22	25	60	14	**71**	25	110	0	0	0	0	374
04:45 PM	9	**272**	**33**	**314**	9	20	12	41	**19**	67	33	**119**	0	0	0	0	**474**
05:00 PM	6	232	19	257	**17**	**32**	**40**	**89**	14	63	31	108	0	0	0	0	454
05:15 PM	**21**	192	19	232	7	31	37	75	8	43	**44**	95	0	0	0	0	402
Total Volume	48	872	87	1007	46	105	114	265	55	244	133	432	0	0	0	0	1704
% App. Total	4.8	86.6	8.6		17.4	39.6	43		12.7	56.5	30.8		0	0	0		
PHF	.571	.801	.659	.802	.676	.820	.713	.744	.724	.859	.756	.908	.000	.000	.000	.000	.899

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99th Pl and Martin Luther King Dr
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/30/2012
Page No : 6

Groups Printed- SU

	Martin Luther King Dr From North				99th Pl From East				Martin Luther King Dr From South				99th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0	4
04:15 PM	0	3	0	3	0	0	0	0	1	1	0	2	0	0	0	0	5
04:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	3	0	3	0	0	0	0	0	2	0	2	0	0	0	0	5
Total	0	9	0	9	0	0	0	0	1	5	0	6	0	0	0	0	15
05:00 PM	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
05:15 PM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
05:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:45 PM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
Total	0	5	0	5	0	0	0	0	0	5	0	5	0	0	0	0	10
Grand Total	0	14	0	14	0	0	0	0	1	10	0	11	0	0	0	0	25
Apprch %	0	100	0		0	0	0		9.1	90.9	0		0	0	0		
Total %	0	56	0	56	0	0	0	0	4	40	0	44	0	0	0	0	

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99th Pl and Martin Luther King Dr
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/30/2012
Page No : 7

Groups Printed- MU

	Martin Luther King Dr From North				99th Pl From East				Martin Luther King Dr From South				99th Pl From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Apprch %	0	100	0		0	0	0		0	0	0		0	0	0		
Total %	0	100	0	100	0	0	0	0	0	0	0	0	0	0	0	0	

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99th Pl and Martin Luther King Dr
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/30/2012

Groups Printed- Peds & Bikes

	Martin Luther King Dr Crossing North Leg			99th Pl Crossing East Leg			Martin Luther King Dr Crossing South Leg			99th Pl Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	1	1	0	0	0	3	1	4	5
04:15 PM	0	0	0	0	0	0	0	0	0	0	2	2	2
04:30 PM	0	0	0	0	1	1	0	0	0	0	1	1	2
04:45 PM	0	0	0	1	2	3	0	0	0	0	7	7	10
Total	0	0	0	1	4	5	0	0	0	3	11	14	19
05:00 PM	0	0	0	0	0	0	0	0	0	0	2	2	2
05:15 PM	0	0	0	0	1	1	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	3	3	0	0	0	0	1	1	4
05:45 PM	0	0	0	0	1	1	0	0	0	0	2	2	3
Total	0	0	0	0	5	5	0	0	0	0	5	5	10
Grand Total	0	0	0	1	9	10	0	0	0	3	16	19	29
Apprch %	0	0		10	90		0	0		15.8	84.2		
Total %	0	0	0	3.4	31	34.5	0	0	0	10.3	55.2	65.5	

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99th St and Michigan Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/8/2012
Page No : 1

Groups Printed- PC - SU - MU

	Michigan Ave From North				99th St From East				Michigan Ave From South				99th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	2	22	0	24	2	61	2	65	0	28	122	150	0	0	0	0	239
07:15 AM	6	28	0	34	5	74	0	79	0	42	144	186	0	0	0	0	299
07:30 AM	12	31	0	43	2	61	5	68	0	50	129	179	0	0	0	0	290
07:45 AM	9	47	0	56	4	61	2	67	0	73	137	210	0	0	0	0	333
Total	29	128	0	157	13	257	9	279	0	193	532	725	0	0	0	0	1161
08:00 AM	5	37	0	42	5	64	4	73	0	60	130	190	0	0	0	0	305
08:15 AM	5	47	0	52	2	53	8	63	0	36	98	134	0	0	0	0	249
08:30 AM	2	36	0	38	2	31	7	40	0	36	87	123	0	0	0	0	201
08:45 AM	1	47	0	48	3	50	13	66	0	42	94	136	0	0	0	0	250
Total	13	167	0	180	12	198	32	242	0	174	409	583	0	0	0	0	1005
Grand Total	42	295	0	337	25	455	41	521	0	367	941	1308	0	0	0	0	2166
Apprch %	12.5	87.5	0		4.8	87.3	7.9		0	28.1	71.9		0	0	0		
Total %	1.9	13.6	0	15.6	1.2	21	1.9	24.1	0	16.9	43.4	60.4	0	0	0	0	
PC	39	244	0	283	25	445	39	509	0	311	907	1218	0	0	0	0	2010
% PC	92.9	82.7	0	84	100	97.8	95.1	97.7	0	84.7	96.4	93.1	0	0	0	0	92.8
SU	3	51	0	54	0	10	2	12	0	55	31	86	0	0	0	0	152
% SU	7.1	17.3	0	16	0	2.2	4.9	2.3	0	15	3.3	6.6	0	0	0	0	7
MU	0	0	0	0	0	0	0	0	0	1	3	4	0	0	0	0	4
% MU	0	0	0	0	0	0	0	0	0	0.3	0.3	0.3	0	0	0	0	0.2

	Michigan Ave From North				99th St From East				Michigan Ave From South				99th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	6	28	0	34	**5**	**74**	0	**79**	0	42	**144**	186	0	0	0	0	299
07:30 AM	**12**	31	0	43	2	61	**5**	68	0	50	129	179	0	0	0	0	290
07:45 AM	9	**47**	0	**56**	4	61	2	67	0	**73**	137	**210**	0	0	0	0	**333**
08:00 AM	5	37	0	42	5	64	4	73	0	60	130	190	0	0	0	0	305
Total Volume	32	143	0	175	16	260	11	287	0	225	540	765	0	0	0	0	1227
% App. Total	18.3	81.7	0		5.6	90.6	3.8		0	29.4	70.6		0	0	0		
PHF	.667	.761	.000	.781	.800	.878	.550	.908	.000	.771	.938	.911	.000	.000	.000	.000	.921

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99th St and Michigan Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/8/2012
Page No : 2

Groups Printed- SU

	Michigan Ave From North				99th St From East				Michigan Ave From South				99th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	6	0	6	0	2	0	2	0	8	6	14	0	0	0	0	22
07:15 AM	0	6	0	6	0	1	0	1	0	8	4	12	0	0	0	0	19
07:30 AM	1	7	0	8	0	1	0	1	0	5	3	8	0	0	0	0	17
07:45 AM	0	8	0	8	0	1	1	2	0	9	4	13	0	0	0	0	23
Total	1	27	0	28	0	5	1	6	0	30	17	47	0	0	0	0	81
08:00 AM	1	7	0	8	0	1	0	1	0	5	3	8	0	0	0	0	17
08:15 AM	1	4	0	5	0	1	1	2	0	9	2	11	0	0	0	0	18
08:30 AM	0	6	0	6	0	0	0	0	0	5	1	6	0	0	0	0	12
08:45 AM	0	7	0	7	0	3	0	3	0	6	8	14	0	0	0	0	24
Total	2	24	0	26	0	5	1	6	0	25	14	39	0	0	0	0	71
Grand Total	3	51	0	54	0	10	2	12	0	55	31	86	0	0	0	0	152
Apprch %	5.6	94.4	0		0	83.3	16.7		0	64	36		0	0	0		
Total %	2	33.6	0	35.5	0	6.6	1.3	7.9	0	36.2	20.4	56.6	0	0	0	0	

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99th St and Michigan Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/8/2012
Page No : 3

Groups Printed- MU

	Michigan Ave From North				99th St From East				Michigan Ave From South				99th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	2
08:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	2
Grand Total	0	0	0	0	0	0	0	0	0	1	3	4	0	0	0	0	4
Apprch %	0	0	0		0	0	0		0	25	75		0	0	0		
Total %	0	0	0	0	0	0	0	0	0	25	75	100	0	0	0	0	

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99th St and Michigan Ave
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7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/8/2012
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Groups Printed- Peds & Bikes

	Michigan Ave Crossing North Leg			99th St Crossing East Leg			Michigan Ave Crossing South Leg			99th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	5	5	0	0	0	0	0	0	5
07:15 AM	0	0	0	0	3	3	0	0	0	0	0	0	3
07:30 AM	0	0	0	0	4	4	0	0	0	0	0	0	4
07:45 AM	0	0	0	0	13	13	0	0	0	0	0	0	13
Total	0	0	0	0	25	25	0	0	0	0	0	0	25
08:00 AM	0	0	0	0	11	11	0	0	0	0	0	0	11
08:15 AM	0	0	0	0	2	2	0	0	0	0	0	0	2
08:30 AM	0	0	0	0	4	4	0	0	0	0	0	0	4
08:45 AM	0	4	4	0	0	0	0	0	0	0	0	0	4
Total	0	4	4	0	17	17	0	0	0	0	0	0	21
Grand Total	0	4	4	0	42	42	0	0	0	0	0	0	46
Apprch %	0	100		0	100		0	0		0	0		
Total %	0	8.7	8.7	0	91.3	91.3	0	0	0	0	0	0	

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99th St and Michigan Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/8/2012
Page No : 5

Groups Printed- PC - SU - MU

	Michigan Ave From North				99th St From East				Michigan Ave From South				99th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	9	82	0	91	1	58	8	67	0	27	52	79	0	0	0	0	237
04:15 PM	2	72	0	74	1	41	12	54	0	33	78	111	0	0	0	0	239
04:30 PM	9	71	0	80	2	42	5	49	0	42	68	110	0	0	0	0	239
04:45 PM	1	71	0	72	1	38	6	45	0	33	70	103	0	0	0	0	220
Total	21	296	0	317	5	179	31	215	0	135	268	403	0	0	0	0	935
05:00 PM	4	66	0	70	2	60	6	68	0	33	69	102	0	0	0	0	240
05:15 PM	2	66	0	68	0	81	7	88	0	32	60	92	0	0	0	0	248
05:30 PM	5	57	0	62	4	64	8	76	0	23	58	81	0	0	0	0	219
05:45 PM	5	67	0	72	3	51	8	62	0	32	66	98	0	0	0	0	232
Total	16	256	0	272	9	256	29	294	0	120	253	373	0	0	0	0	939
Grand Total	37	552	0	589	14	435	60	509	0	255	521	776	0	0	0	0	1874
Apprch %	6.3	93.7	0		2.8	85.5	11.8		0	32.9	67.1		0	0	0		
Total %	2	29.5	0	31.4	0.7	23.2	3.2	27.2	0	13.6	27.8	41.4	0	0	0	0	
PC	37	513	0	550	14	427	60	501	0	210	514	724	0	0	0	0	1775
% PC	100	92.9	0	93.4	100	98.2	100	98.4	0	82.4	98.7	93.3	0	0	0	0	94.7
SU	0	39	0	39	0	8	0	8	0	45	7	52	0	0	0	0	99
% SU	0	7.1	0	6.6	0	1.8	0	1.6	0	17.6	1.3	6.7	0	0	0	0	5.3
MU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% MU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Michigan Ave From North				99th St From East				Michigan Ave From South				99th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	6	28	0	34	**5**	**74**	0	**79**	0	42	**144**	186	0	0	0	0	299
07:30 AM	**12**	31	0	43	2	61	**5**	68	0	50	129	179	0	0	0	0	290
07:45 AM	9	**47**	0	**56**	4	61	2	67	0	**73**	137	**210**	0	0	0	0	**333**
08:00 AM	5	37	0	42	5	64	4	73	0	60	130	190	0	0	0	0	305
Total Volume	32	143	0	175	16	260	11	287	0	225	540	765	0	0	0	0	1227
% App. Total	18.3	81.7	0		5.6	90.6	3.8		0	29.4	70.6		0	0	0		
PHF	.667	.761	.000	.781	.800	.878	.550	.908	.000	.771	.938	.911	.000	.000	.000	.000	.921

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99th St and Michigan Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/8/2012
Page No : 6

Groups Printed- SU

	Michigan Ave From North				99th St From East				Michigan Ave From South				99th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	4	0	4	0	1	0	1	0	5	0	5	0	0	0	0	10
04:15 PM	0	5	0	5	0	1	0	1	0	7	2	9	0	0	0	0	15
04:30 PM	0	6	0	6	0	0	0	0	0	6	1	7	0	0	0	0	13
04:45 PM	0	5	0	5	0	2	0	2	0	6	2	8	0	0	0	0	15
Total	0	20	0	20	0	4	0	4	0	24	5	29	0	0	0	0	53
05:00 PM	0	6	0	6	0	1	0	1	0	5	1	6	0	0	0	0	13
05:15 PM	0	4	0	4	0	1	0	1	0	6	1	7	0	0	0	0	12
05:30 PM	0	3	0	3	0	0	0	0	0	3	0	3	0	0	0	0	6
05:45 PM	0	6	0	6	0	2	0	2	0	7	0	7	0	0	0	0	15
Total	0	19	0	19	0	4	0	4	0	21	2	23	0	0	0	0	46
Grand Total	0	39	0	39	0	8	0	8	0	45	7	52	0	0	0	0	99
Apprch %	0	100	0		0	100	0		0	86.5	13.5		0	0	0		
Total %	0	39.4	0	39.4	0	8.1	0	8.1	0	45.5	7.1	52.5	0	0	0	0	

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4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/8/2012
Page No : 7

Groups Printed- MU

	Michigan Ave From North				99th St From East				Michigan Ave From South				99th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

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4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/8/2012
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Groups Printed- Peds & Bikes

	Michigan Ave Crossing North Leg			99th St Crossing East Leg			Michigan Ave Crossing South Leg			99th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	3	3	0	0	0	0	0	0	3
04:15 PM	0	1	1	0	5	5	0	0	0	0	0	0	6
04:30 PM	0	1	1	0	3	3	0	0	0	0	0	0	4
04:45 PM	0	0	0	0	1	1	0	0	0	0	0	0	1
Total	0	2	2	0	12	12	0	0	0	0	0	0	14
05:00 PM	0	0	0	0	4	4	0	0	0	0	0	0	4
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	1	1	0	1	1	0	0	0	0	0	0	2
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	1	0	5	5	0	0	0	0	0	0	6
Grand Total	0	3	3	0	17	17	0	0	0	0	0	0	20
Apprch %	0	100		0	100		0	0		0	0		
Total %	0	15	15	0	85	85	0	0	0	0	0	0	

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Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/30/2012
Page No : 1

Groups Printed- PC - SU - MU

	State St From North				99th St From East				State St From South				99th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	27	0	27	0	0	0	0	0	70	0	70	4	0	11	15	112
07:15 AM	0	27	0	27	0	0	0	0	0	71	0	71	5	0	11	16	114
07:30 AM	4	26	0	30	0	0	0	0	0	83	2	85	2	0	9	11	126
07:45 AM	0	56	0	56	0	0	0	0	0	92	3	95	0	0	15	15	166
Total	4	136	0	140	0	0	0	0	0	316	5	321	11	0	46	57	518
08:00 AM	3	34	0	37	0	0	0	0	0	72	3	75	7	0	18	25	137
08:15 AM	5	43	0	48	0	0	0	0	0	87	2	89	5	0	19	24	161
08:30 AM	2	39	0	41	0	0	0	0	0	66	1	67	8	0	5	13	121
08:45 AM	0	54	0	54	0	0	0	0	0	74	2	76	6	0	11	17	147
Total	10	170	0	180	0	0	0	0	0	299	8	307	26	0	53	79	566
Grand Total	14	306	0	320	0	0	0	0	0	615	13	628	37	0	99	136	1084
Apprch %	4.4	95.6	0		0	0	0		0	97.9	2.1		27.2	0	72.8		
Total %	1.3	28.2	0	29.5	0	0	0	0	0	56.7	1.2	57.9	3.4	0	9.1	12.5	
PC	14	296	0	310	0	0	0	0	0	601	13	614	35	0	98	133	1057
% PC	100	96.7	0	96.9	0	0	0	0	0	97.7	100	97.8	94.6	0	99	97.8	97.5
SU	0	9	0	9	0	0	0	0	0	12	0	12	2	0	1	3	24
% SU	0	2.9	0	2.8	0	0	0	0	0	2	0	1.9	5.4	0	1	2.2	2.2
MU	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
% MU	0	0.3	0	0.3	0	0	0	0	0	0.3	0	0.3	0	0	0	0	0.3

	State St From North				99th St From East				State St From South				99th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	4	26	0	30	0	0	0	0	0	83	2	85	2	0	9	11	126
07:45 AM	0	**56**	0	**56**	0	0	0	0	0	**92**	**3**	**95**	0	0	15	15	**166**
08:00 AM	3	34	0	37	0	0	0	0	0	72	3	75	**7**	0	18	**25**	137
08:15 AM	**5**	43	0	48	0	0	0	0	0	87	2	89	5	0	**19**	24	161
Total Volume	12	159	0	171	0	0	0	0	0	334	10	344	14	0	61	75	590
% App. Total	7	93	0		0	0	0		0	97.1	2.9		18.7	0	81.3		
PHF	.600	.710	.000	.763	.000	.000	.000	.000	.000	.908	.833	.905	.500	.000	.803	.750	.889

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99th St and State St
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/30/2012
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Groups Printed- SU

	State St From North				99th St From East				State St From South				99th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	5	0	5	0	0	0	0	0	3	0	3	1	0	0	1	9
07:15 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	1	1	3
07:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:45 AM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
Total	0	6	0	6	0	0	0	0	0	8	0	8	1	0	1	2	16
08:00 AM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
08:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:45 AM	0	1	0	1	0	0	0	0	0	1	0	1	1	0	0	1	3
Total	0	3	0	3	0	0	0	0	0	4	0	4	1	0	0	1	8
Grand Total	0	9	0	9	0	0	0	0	0	12	0	12	2	0	1	3	24
Apprch %	0	100	0		0	0	0		0	100	0		66.7	0	33.3		
Total %	0	37.5	0	37.5	0	0	0	0	0	50	0	50	8.3	0	4.2	12.5	

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7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
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Start Date : 5/30/2012
Page No : 3

Groups Printed- MU

	State St From North				99th St From East				State St From South				99th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Grand Total	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
Apprch %	0	100	0		0	0	0		0	100	0		0	0	0		
Total %	0	33.3	0	33.3	0	0	0	0	0	66.7	0	66.7	0	0	0	0	

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Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/30/2012

Groups Printed- Peds & Bikes

	State St Crossing North Leg			99th St Crossing East Leg			State St Crossing South Leg			99th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	1	1	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	1	1	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	1	1	0	0	0	1
Total	0	0	0	0	0	0	0	3	3	0	0	0	3
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	1	1	0	0	0	0	0	0	0	3	3	4
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	1	0	0	0	0	0	0	0	3	3	4
Grand Total	0	1	1	0	0	0	0	3	3	0	3	3	7
Apprch %	0	100		0	0		0	100		0	100		
Total %	0	14.3	14.3	0	0	0	0	42.9	42.9	0	42.9	42.9	

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Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/30/2012
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Groups Printed- PC - SU - MU

	State St From North				99th St From East				State St From South				99th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	2	47	0	49	0	0	0	0	0	43	5	48	6	0	16	22	119
04:15 PM	1	63	0	64	0	0	0	0	0	46	4	50	6	0	9	15	129
04:30 PM	2	44	0	46	0	0	0	0	0	44	2	46	6	0	6	12	104
04:45 PM	4	49	0	53	0	0	0	0	0	50	1	51	8	0	8	16	120
Total	9	203	0	212	0	0	0	0	0	183	12	195	26	0	39	65	472
05:00 PM	4	42	0	46	0	0	0	0	0	43	0	43	5	0	13	18	107
05:15 PM	3	57	0	60	0	0	0	0	0	28	3	31	5	0	5	10	101
05:30 PM	12	72	0	84	0	0	0	0	0	44	1	45	8	0	8	16	145
05:45 PM	3	51	0	54	0	0	0	0	0	34	4	38	14	0	11	25	117
Total	22	222	0	244	0	0	0	0	0	149	8	157	32	0	37	69	470
Grand Total	31	425	0	456	0	0	0	0	0	332	20	352	58	0	76	134	942
Apprch %	6.8	93.2	0		0	0	0		0	94.3	5.7		43.3	0	56.7		
Total %	3.3	45.1	0	48.4	0	0	0	0	0	35.2	2.1	37.4	6.2	0	8.1	14.2	
PC	31	423	0	454	0	0	0	0	0	327	20	347	57	0	76	133	934
% PC	100	99.5	0	99.6	0	0	0	0	0	98.5	100	98.6	98.3	0	100	99.3	99.2
SU	0	2	0	2	0	0	0	0	0	5	0	5	1	0	0	1	8
% SU	0	0.5	0	0.4	0	0	0	0	0	1.5	0	1.4	1.7	0	0	0.7	0.8
MU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% MU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	State St From North				99th St From East				State St From South				99th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	4	49	0	53	0	0	0	0	0	**50**	1	**51**	**8**	0	8	16	120
05:00 PM	4	42	0	46	0	0	0	0	0	43	0	43	5	0	**13**	**18**	107
05:15 PM	3	57	0	60	0	0	0	0	0	28	**3**	31	5	0	5	10	101
05:30 PM	**12**	**72**	0	**84**	0	0	0	0	0	44	1	45	8	0	8	16	**145**
Total Volume	23	220	0	243	0	0	0	0	0	165	5	170	26	0	34	60	473
% App. Total	9.5	90.5	0		0	0	0		0	97.1	2.9		43.3	0	56.7		
PHF	.479	.764	.000	.723	.000	.000	.000	.000	.000	.825	.417	.833	.813	.000	.654	.833	.816

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4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/30/2012
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Groups Printed- SU

	State St From North				99th St From East				State St From South				99th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0	4
04:15 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	0	2	0	2	0	0	0	0	0	4	0	4	1	0	0	1	7
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Grand Total	0	2	0	2	0	0	0	0	0	5	0	5	1	0	0	1	8
Apprch %	0	100	0		0	0	0		0	100	0		100	0	0		
Total %	0	25	0	25	0	0	0	0	0	62.5	0	62.5	12.5	0	0	12.5	

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99th St and State St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/30/2012
Page No : 7

Groups Printed- MU

	State St From North				99th St From East				State St From South				99th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

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99th St and State St
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/30/2012

Groups Printed- Peds & Bikes

	State St Crossing North Leg			99th St Crossing East Leg			State St Crossing South Leg			99th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	1	1	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	1	1	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	2	2	2
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	2	2	2
Grand Total	0	0	0	0	0	0	0	0	0	0	3	3	3
Apprch %	0	0		0	0		0	0		0	100		
Total %	0	0	0	0	0	0	0	0	0	0	100	100	

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99th St and Wentworth Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012
Page No : 1

Groups Printed- PC - SU - MU

	Wentworth Ave From North				99th St From East				Wentworth Ave From South				99th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	49	2	51	0	0	0	0	9	17	0	26	0	0	4	4	81
07:15 AM	0	57	3	60	2	0	0	2	6	41	0	47	3	3	2	8	117
07:30 AM	0	60	5	65	3	0	0	3	6	32	0	38	0	1	3	4	110
07:45 AM	0	71	6	77	4	0	2	6	12	32	0	44	3	2	2	7	134
Total	0	237	16	253	9	0	2	11	33	122	0	155	6	6	11	23	442
08:00 AM	0	67	13	80	5	0	1	6	5	29	0	34	2	1	2	5	125
08:15 AM	0	70	7	77	4	0	0	4	14	23	0	37	0	1	0	1	119
08:30 AM	0	64	8	72	1	0	0	1	12	32	0	44	3	3	3	9	126
08:45 AM	0	69	12	81	5	0	2	7	6	29	0	35	2	3	2	7	130
Total	0	270	40	310	15	0	3	18	37	113	0	150	7	8	7	22	500
Grand Total	0	507	56	563	24	0	5	29	70	235	0	305	13	14	18	45	942
Apprch %	0	90.1	9.9		82.8	0	17.2		23	77	0		28.9	31.1	40		
Total %	0	53.8	5.9	59.8	2.5	0	0.5	3.1	7.4	24.9	0	32.4	1.4	1.5	1.9	4.8	
PC	0	481	55	536	24	0	4	28	69	223	0	292	13	13	18	44	900
% PC	0	94.9	98.2	95.2	100	0	80	96.6	98.6	94.9	0	95.7	100	92.9	100	97.8	95.5
SU	0	25	1	26	0	0	1	1	1	12	0	13	0	1	0	1	41
% SU	0	4.9	1.8	4.6	0	0	20	3.4	1.4	5.1	0	4.3	0	7.1	0	2.2	4.4
MU	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
% MU	0	0.2	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0.1

	Wentworth Ave From North				99th St From East				Wentworth Ave From South				99th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	**71**	6	77	4	0	**2**	**6**	12	**32**	0	**44**	**3**	2	2	7	**134**
08:00 AM	0	67	**13**	**80**	**5**	0	1	6	5	29	0	34	2	1	2	5	125
08:15 AM	0	70	7	77	4	0	0	4	**14**	23	0	37	0	1	0	1	119
08:30 AM	0	64	8	72	1	0	0	1	12	32	0	44	3	**3**	**3**	**9**	126
Total Volume	0	272	34	306	14	0	3	17	43	116	0	159	8	7	7	22	504
% App. Total	0	88.9	11.1		82.4	0	17.6		27	73	0		36.4	31.8	31.8		
PHF	.000	.958	.654	.956	.700	.000	.375	.708	.768	.906	.000	.903	.667	.583	.583	.611	.940

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99th St and Wentworth Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012
Page No : 2

Groups Printed- SU

	Wentworth Ave From North				99th St From East				Wentworth Ave From South				99th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	3	0	3	0	0	0	0	0	4	0	4	0	0	0	0	7
07:15 AM	0	1	0	1	0	0	0	0	0	2	0	2	0	1	0	1	4
07:30 AM	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
07:45 AM	0	6	0	6	0	0	0	0	0	0	0	0	0	0	0	0	6
Total	0	13	0	13	0	0	0	0	0	6	0	6	0	1	0	1	20
08:00 AM	0	4	0	4	0	0	0	0	0	2	0	2	0	0	0	0	6
08:15 AM	0	3	0	3	0	0	0	0	1	1	0	2	0	0	0	0	5
08:30 AM	0	3	0	3	0	0	0	0	0	3	0	3	0	0	0	0	6
08:45 AM	0	2	1	3	0	0	1	1	0	0	0	0	0	0	0	0	4
Total	0	12	1	13	0	0	1	1	1	6	0	7	0	0	0	0	21
Grand Total	0	25	1	26	0	0	1	1	1	12	0	13	0	1	0	1	41
Apprch %	0	96.2	3.8		0	0	100		7.7	92.3	0		0	100	0		
Total %	0	61	2.4	63.4	0	0	2.4	2.4	2.4	29.3	0	31.7	0	2.4	0	2.4	

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Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012
Page No : 3

Groups Printed- MU

	Wentworth Ave From North				99th St From East				Wentworth Ave From South				99th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Apprch %	0	100	0		0	0	0		0	0	0		0	0	0		
Total %	0	100	0	100	0	0	0	0	0	0	0	0	0	0	0	0	

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99th St and Wentworth Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 6/5/2012

Groups Printed- Peds & Bikes

	Wentworth Ave Crossing North Leg			99th St Crossing East Leg			Wentworth Ave Crossing South Leg			99th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	6	6	0	0	0	6
07:30 AM	0	0	0	0	0	0	0	2	2	0	2	2	4
07:45 AM	0	0	0	0	0	0	0	0	0	0	1	1	1
Total	0	0	0	0	0	0	0	8	8	0	3	3	11
08:00 AM	0	0	0	0	1	1	0	1	1	0	1	1	3
08:15 AM	0	0	0	0	1	1	0	0	0	0	1	1	2
08:30 AM	0	0	0	0	0	0	0	1	1	0	1	1	2
08:45 AM	0	4	4	0	4	4	0	0	0	0	1	1	9
Total	0	4	4	0	6	6	0	2	2	0	4	4	16
Grand Total	0	4	4	0	6	6	0	10	10	0	7	7	27
Apprch %	0	100		0	100		0	100		0	100		
Total %	0	14.8	14.8	0	22.2	22.2	0	37	37	0	25.9	25.9	

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99th St and Wentworth Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012
Page No : 5

Groups Printed- PC - SU - MU

	Wentworth Ave From North				99th St From East				Wentworth Ave From South				99th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	83	15	98	2	0	0	2	4	16	0	20	3	2	1	6	126
04:15 PM	0	87	14	101	3	0	0	3	8	21	0	29	4	1	1	6	139
04:30 PM	0	87	6	93	1	0	1	2	8	20	0	28	7	0	5	12	135
04:45 PM	0	83	13	96	2	0	2	4	6	18	0	24	5	5	2	12	136
Total	0	340	48	388	8	0	3	11	26	75	0	101	19	8	9	36	536
05:00 PM	0	97	9	106	4	0	1	5	6	32	0	38	4	4	3	11	160
05:15 PM	0	84	9	93	3	0	0	3	6	24	0	30	5	2	4	11	137
05:30 PM	0	107	13	120	4	0	1	5	6	28	0	34	8	2	6	16	175
05:45 PM	0	82	13	95	4	0	1	5	8	22	0	30	5	3	0	8	138
Total	0	370	44	414	15	0	3	18	26	106	0	132	22	11	13	46	610
Grand Total	0	710	92	802	23	0	6	29	52	181	0	233	41	19	22	82	1146
Apprch %	0	88.5	11.5		79.3	0	20.7		22.3	77.7	0		50	23.2	26.8		
Total %	0	62	8	70	2	0	0.5	2.5	4.5	15.8	0	20.3	3.6	1.7	1.9	7.2	
PC	0	706	92	798	23	0	6	29	52	179	0	231	41	19	22	82	1140
% PC	0	99.4	100	99.5	100	0	100	100	100	98.9	0	99.1	100	100	100	100	99.5
SU	0	4	0	4	0	0	0	0	0	2	0	2	0	0	0	0	6
% SU	0	0.6	0	0.5	0	0	0	0	0	1.1	0	0.9	0	0	0	0	0.5
MU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% MU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Wentworth Ave From North				99th St From East				Wentworth Ave From South				99th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	97	9	106	**4**	0	**1**	**5**	6	**32**	0	**38**	4	**4**	3	11	160
05:15 PM	0	84	9	93	3	0	0	3	6	24	0	30	5	2	4	11	137
05:30 PM	0	**107**	**13**	**120**	4	0	1	5	6	28	0	34	**8**	2	**6**	**16**	**175**
05:45 PM	0	82	13	95	4	0	1	5	**8**	22	0	30	5	3	0	8	138
Total Volume	0	370	44	414	15	0	3	18	26	106	0	132	22	11	13	46	610
% App. Total	0	89.4	10.6		83.3	0	16.7		19.7	80.3	0		47.8	23.9	28.3		
PHF	.000	.864	.846	.863	.938	.000	.750	.900	.813	.828	.000	.868	.688	.688	.542	.719	.871

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99th St and Wentworth Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012
Page No : 6

Groups Printed- SU

	Wentworth Ave From North				99th St From East				Wentworth Ave From South				99th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
04:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	3	0	3	0	0	0	0	0	1	0	1	0	0	0	0	4
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
Grand Total	0	4	0	4	0	0	0	0	0	2	0	2	0	0	0	0	6
Apprch %	0	100	0		0	0	0		0	100	0		0	0	0		
Total %	0	66.7	0	66.7	0	0	0	0	0	33.3	0	33.3	0	0	0	0	

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99th St and Wentworth Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 6/5/2012
Page No : 7

Groups Printed- MU

	Wentworth Ave From North				99th St From East				Wentworth Ave From South				99th St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

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99th St and Wentworth Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 6/5/2012

Groups Printed- Peds & Bikes

	Wentworth Ave Crossing North Leg			99th St Crossing East Leg			Wentworth Ave Crossing South Leg			99th St Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	3	3	0	7	7	0	2	2	12
04:15 PM	0	0	0	1	2	3	0	4	4	0	3	3	10
04:30 PM	0	0	0	0	5	5	1	1	2	0	0	0	7
04:45 PM	0	0	0	1	1	2	0	1	1	0	0	0	3
Total	0	0	0	2	11	13	1	13	14	0	5	5	32
05:00 PM	0	1	1	2	2	4	0	5	5	0	0	0	10
05:15 PM	0	0	0	0	4	4	0	1	1	1	1	2	7
05:30 PM	0	0	0	0	1	1	2	4	6	0	0	0	7
05:45 PM	0	0	0	0	3	3	0	1	1	0	0	0	4
Total	0	1	1	2	10	12	2	11	13	1	1	2	28
Grand Total	0	1	1	4	21	25	3	24	27	1	6	7	60
Apprch %	0	100		16	84		11.1	88.9		14.3	85.7		
Total %	0	1.7	1.7	6.7	35	41.7	5	40	45	1.7	10	11.7	

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Ashland Ave and Vermont Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/22/2012
Page No : 1

Groups Printed- PC - SU - MU

	Ashland Ave From North				Vermont Ave From East				Ashland Ave From South				Vermont Ave From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	5	50	14	69	14	25	11	50	10	65	75	150	47	19	12	78	347
07:15 AM	8	56	22	86	10	24	6	40	12	81	93	186	41	16	4	61	373
07:30 AM	11	50	14	75	17	26	7	50	14	94	81	189	55	28	9	92	406
07:45 AM	21	62	26	109	29	48	14	91	16	101	78	195	59	20	11	90	485
Total	45	218	76	339	70	123	38	231	52	341	327	720	202	83	36	321	1611
08:00 AM	11	79	27	117	22	34	13	69	19	97	76	192	52	33	21	106	484
08:15 AM	11	67	24	102	17	31	13	61	13	83	88	184	63	25	9	97	444
08:30 AM	13	45	24	82	22	32	15	69	16	79	86	181	72	15	7	94	426
08:45 AM	11	87	24	122	18	27	17	62	14	82	75	171	47	16	9	72	427
Total	46	278	99	423	79	124	58	261	62	341	325	728	234	89	46	369	1781
Grand Total	91	496	175	762	149	247	96	492	114	682	652	1448	436	172	82	690	3392
Apprch %	11.9	65.1	23		30.3	50.2	19.5		7.9	47.1	45		63.2	24.9	11.9		
Total %	2.7	14.6	5.2	22.5	4.4	7.3	2.8	14.5	3.4	20.1	19.2	42.7	12.9	5.1	2.4	20.3	
PC	91	475	170	736	138	232	84	454	109	640	615	1364	414	165	77	656	3210
% PC	100	95.8	97.1	96.6	92.6	93.9	87.5	92.3	95.6	93.8	94.3	94.2	95	95.9	93.9	95.1	94.6
SU	0	17	4	21	8	13	8	29	5	30	34	69	20	7	5	32	151
% SU	0	3.4	2.3	2.8	5.4	5.3	8.3	5.9	4.4	4.4	5.2	4.8	4.6	4.1	6.1	4.6	4.5
MU	0	4	1	5	3	2	4	9	0	12	3	15	2	0	0	2	31
% MU	0	0.8	0.6	0.7	2	0.8	4.2	1.8	0	1.8	0.5	1	0.5	0	0	0.3	0.9

	Ashland Ave From North				Vermont Ave From East				Ashland Ave From South				Vermont Ave From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	**21**	62	26	109	**29**	**48**	14	**91**	16	**101**	78	**195**	59	20	11	90	**485**
08:00 AM	11	**79**	**27**	**117**	22	34	13	69	**19**	97	76	192	52	**33**	**21**	**106**	484
08:15 AM	11	67	24	102	17	31	13	61	13	83	**88**	184	63	25	9	97	444
08:30 AM	13	45	24	82	22	32	**15**	69	16	79	86	181	**72**	15	7	94	426
Total Volume	56	253	101	410	90	145	55	290	64	360	328	752	246	93	48	387	1839
% App. Total	13.7	61.7	24.6		31	50	19		8.5	47.9	43.6		63.6	24	12.4		
PHF	.667	.801	.935	.876	.776	.755	.917	.797	.842	.891	.932	.964	.854	.705	.571	.913	.948

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Ashland Ave and Vermont Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/22/2012
Page No : 2

Groups Printed- SU

	Ashland Ave From North				Vermont Ave From East				Ashland Ave From South				Vermont Ave From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	2	0	2	2	2	1	5	2	5	3	10	1	1	1	3	20
07:15 AM	0	0	1	1	2	0	0	2	0	5	12	17	4	0	1	5	25
07:30 AM	0	3	0	3	0	1	0	1	0	2	5	7	4	3	0	7	18
07:45 AM	0	2	0	2	1	3	4	8	2	5	2	9	2	0	0	2	21
Total	0	7	1	8	5	6	5	16	4	17	22	43	11	4	2	17	84
08:00 AM	0	3	1	4	0	1	0	1	1	6	3	10	1	2	2	5	20
08:15 AM	0	1	1	2	1	2	0	3	0	1	1	2	4	0	0	4	11
08:30 AM	0	0	0	0	1	0	2	3	0	4	3	7	3	0	1	4	14
08:45 AM	0	6	1	7	1	4	1	6	0	2	5	7	1	1	0	2	22
Total	0	10	3	13	3	7	3	13	1	13	12	26	9	3	3	15	67
Grand Total	0	17	4	21	8	13	8	29	5	30	34	69	20	7	5	32	151
Apprch %	0	81	19		27.6	44.8	27.6		7.2	43.5	49.3		62.5	21.9	15.6		
Total %	0	11.3	2.6	13.9	5.3	8.6	5.3	19.2	3.3	19.9	22.5	45.7	13.2	4.6	3.3	21.2	

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Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/22/2012
Page No : 3

Groups Printed- MU

	Ashland Ave From North				Vermont Ave From East				Ashland Ave From South				Vermont Ave From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	1	0	1	0	0	1	1	0	1	0	1	0	0	0	0	3
07:15 AM	0	2	0	2	1	0	0	1	0	0	0	0	0	0	0	0	3
07:30 AM	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	2
07:45 AM	0	0	0	0	2	0	1	3	0	3	0	3	0	0	0	0	6
Total	0	3	0	3	3	0	2	5	0	5	1	6	0	0	0	0	14
08:00 AM	0	0	0	0	0	1	1	2	0	1	1	2	1	0	0	1	5
08:15 AM	0	0	1	1	0	0	0	0	0	3	0	3	1	0	0	1	5
08:30 AM	0	0	0	0	0	0	0	0	0	2	1	3	0	0	0	0	3
08:45 AM	0	1	0	1	0	1	1	2	0	1	0	1	0	0	0	0	4
Total	0	1	1	2	0	2	2	4	0	7	2	9	2	0	0	2	17
Grand Total	0	4	1	5	3	2	4	9	0	12	3	15	2	0	0	2	31
Apprch %	0	80	20		33.3	22.2	44.4		0	80	20		100	0	0		
Total %	0	12.9	3.2	16.1	9.7	6.5	12.9	29	0	38.7	9.7	48.4	6.5	0	0	6.5	

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Ashland Ave and Vermont Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/22/2012

Groups Printed- Peds & Bikes

	Ashland Ave Crossing North Leg			Vermont Ave Crossing East Leg			Ashland Ave Crossing South Leg			Vermont Ave Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	1	1	0	0	0	0	0	0	0	1	1	2
07:15 AM	0	4	4	0	0	0	0	0	0	0	0	0	4
07:30 AM	0	5	5	0	1	1	0	0	0	0	1	1	7
07:45 AM	0	5	5	0	1	1	0	0	0	0	0	0	6
Total	0	15	15	0	2	2	0	0	0	0	2	2	19
08:00 AM	0	6	6	0	0	0	0	0	0	0	0	0	6
08:15 AM	0	4	4	0	0	0	0	0	0	0	0	0	4
08:30 AM	0	2	2	0	0	0	0	1	1	0	0	0	3
08:45 AM	0	1	1	0	0	0	0	0	0	0	0	0	1
Total	0	13	13	0	0	0	0	1	1	0	0	0	14
Grand Total	0	28	28	0	2	2	0	1	1	0	2	2	33
Apprch %	0	100		0	100		0	100		0	100		
Total %	0	84.8	84.8	0	6.1	6.1	0	3	3	0	6.1	6.1	

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Ashland Ave and Vermont Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/22/2012
Page No : 5

Groups Printed- PC - SU - MU

	Ashland Ave From North				Vermont Ave From East				Ashland Ave From South				Vermont Ave From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	16	110	42	168	28	38	17	83	16	84	99	199	70	23	9	102	552
04:15 PM	18	107	50	175	18	40	15	73	15	84	80	179	84	47	14	145	572
04:30 PM	14	94	53	161	24	35	8	67	16	105	92	213	85	32	10	127	568
04:45 PM	17	101	31	149	18	34	17	69	11	86	83	180	63	35	14	112	510
Total	65	412	176	653	88	147	57	292	58	359	354	771	302	137	47	486	2202
05:00 PM	14	99	52	165	32	41	20	93	23	86	83	192	127	53	18	198	648
05:15 PM	21	115	53	189	9	43	8	60	16	84	102	202	86	48	10	144	595
05:30 PM	12	97	47	156	25	39	5	69	22	70	90	182	88	52	8	148	555
05:45 PM	9	97	54	160	21	41	23	85	17	100	87	204	66	40	10	116	565
Total	56	408	206	670	87	164	56	307	78	340	362	780	367	193	46	606	2363
Grand Total	121	820	382	1323	175	311	113	599	136	699	716	1551	669	330	93	1092	4565
Apprch %	9.1	62	28.9		29.2	51.9	18.9		8.8	45.1	46.2		61.3	30.2	8.5		
Total %	2.7	18	8.4	29	3.8	6.8	2.5	13.1	3	15.3	15.7	34	14.7	7.2	2	23.9	
PC	120	801	379	1300	172	309	112	593	135	683	702	1520	657	324	91	1072	4485
% PC	99.2	97.7	99.2	98.3	98.3	99.4	99.1	99	99.3	97.7	98	98	98.2	98.2	97.8	98.2	98.2
SU	1	12	2	15	1	2	1	4	1	12	10	23	8	6	2	16	58
% SU	0.8	1.5	0.5	1.1	0.6	0.6	0.9	0.7	0.7	1.7	1.4	1.5	1.2	1.8	2.2	1.5	1.3
MU	0	7	1	8	2	0	0	2	0	4	4	8	4	0	0	4	22
% MU	0	0.9	0.3	0.6	1.1	0	0	0.3	0	0.6	0.6	0.5	0.6	0	0	0.4	0.5

	Ashland Ave From North				Vermont Ave From East				Ashland Ave From South				Vermont Ave From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	14	99	52	165	**32**	41	20	**93**	**23**	86	83	192	**127**	**53**	**18**	**198**	**648**
05:15 PM	**21**	**115**	53	**189**	9	**43**	8	60	16	84	**102**	202	86	48	10	144	595
05:30 PM	12	97	47	156	25	39	5	69	22	70	90	182	88	52	8	148	555
05:45 PM	9	97	**54**	160	21	41	**23**	85	17	**100**	87	**204**	66	40	10	116	565
Total Volume	56	408	206	670	87	164	56	307	78	340	362	780	367	193	46	606	2363
% App. Total	8.4	60.9	30.7		28.3	53.4	18.2		10	43.6	46.4		60.6	31.8	7.6		
PHF	.667	.887	.954	.886	.680	.953	.609	.825	.848	.850	.887	.956	.722	.910	.639	.765	.912

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Ashland Ave and Vermont Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/22/2012
Page No : 6

Groups Printed- SU

	Ashland Ave From North				Vermont Ave From East				Ashland Ave From South				Vermont Ave From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	2	0	2	0	0	0	0	0	3	3	6	1	0	1	2	10
04:15 PM	0	0	0	0	0	1	0	1	0	2	2	4	1	1	1	3	8
04:30 PM	0	2	0	2	0	0	1	1	1	2	1	4	1	2	0	3	10
04:45 PM	1	3	0	4	0	0	0	0	0	2	0	2	0	0	0	0	6
Total	1	7	0	8	0	1	1	2	1	9	6	16	3	3	2	8	34
05:00 PM	0	3	2	5	0	0	0	0	0	0	0	0	4	1	0	5	10
05:15 PM	0	0	0	0	0	1	0	1	0	2	2	4	1	0	0	1	6
05:30 PM	0	2	0	2	1	0	0	1	0	0	2	2	0	1	0	1	6
05:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2
Total	0	5	2	7	1	1	0	2	0	3	4	7	5	3	0	8	24
Grand Total	1	12	2	15	1	2	1	4	1	12	10	23	8	6	2	16	58
Apprch %	6.7	80	13.3		25	50	25		4.3	52.2	43.5		50	37.5	12.5		
Total %	1.7	20.7	3.4	25.9	1.7	3.4	1.7	6.9	1.7	20.7	17.2	39.7	13.8	10.3	3.4	27.6	

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Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/22/2012
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Groups Printed- MU

	Ashland Ave From North				Vermont Ave From East				Ashland Ave From South				Vermont Ave From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	2	0	2	1	0	0	1	0	0	0	0	1	0	0	1	4
04:15 PM	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
04:30 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
04:45 PM	0	1	0	1	1	0	0	1	0	2	1	3	0	0	0	0	5
Total	0	5	0	5	2	0	0	2	0	3	2	5	1	0	0	1	13
05:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	1	2
05:15 PM	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	1	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
05:45 PM	0	1	0	1	0	0	0	0	0	1	2	3	0	0	0	0	4
Total	0	2	1	3	0	0	0	0	0	1	2	3	3	0	0	3	9
Grand Total	0	7	1	8	2	0	0	2	0	4	4	8	4	0	0	4	22
Apprch %	0	87.5	12.5		100	0	0		0	50	50		100	0	0		
Total %	0	31.8	4.5	36.4	9.1	0	0	9.1	0	18.2	18.2	36.4	18.2	0	0	18.2	

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Ashland Ave and Vermont Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/22/2012

Groups Printed- Peds & Bikes

	Ashland Ave Crossing North Leg			Vermont Ave Crossing East Leg			Ashland Ave Crossing South Leg			Vermont Ave Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	7	7	0	4	4	0	5	5	0	3	3	19
04:15 PM	0	8	8	0	0	0	0	4	4	0	3	3	15
04:30 PM	0	3	3	0	0	0	0	3	3	0	1	1	7
04:45 PM	0	0	0	0	0	0	0	3	3	0	2	2	5
Total	0	18	18	0	4	4	0	15	15	0	9	9	46
05:00 PM	0	4	4	0	0	0	0	0	0	0	1	1	5
05:15 PM	0	0	0	0	0	0	0	2	2	0	2	2	4
05:30 PM	0	3	3	0	0	0	0	1	1	0	2	2	6
05:45 PM	0	5	5	0	0	0	0	0	0	0	0	0	5
Total	0	12	12	0	0	0	0	3	3	0	5	5	20
Grand Total	0	30	30	0	4	4	0	18	18	0	14	14	66
Apprch %	0	100		0	100		0	100		0	100		
Total %	0	45.5	45.5	0	6.1	6.1	0	27.3	27.3	0	21.2	21.2	

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Halsted St and Vermont Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/17/2012
Page No : 1

Groups Printed- PC - SU - MU

	Halsted St From North				Vermont Ave From East				Halsted St From South				Vermont Ave From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	4	53	3	60	1	16	11	28	17	146	6	169	11	26	9	46	303
07:15 AM	4	53	5	62	2	18	18	38	20	157	3	180	6	19	4	29	309
07:30 AM	7	74	1	82	4	26	11	41	20	146	5	171	9	19	15	43	337
07:45 AM	9	66	3	78	4	33	15	52	24	130	7	161	6	20	9	35	326
Total	24	246	12	282	11	93	55	159	81	579	21	681	32	84	37	153	1275
08:00 AM	10	71	2	83	0	32	21	53	13	126	11	150	11	19	4	34	320
08:15 AM	9	80	2	91	3	20	12	35	8	127	8	143	11	32	12	55	324
08:30 AM	8	71	0	79	4	22	13	39	29	118	13	160	6	31	9	46	324
08:45 AM	9	87	5	101	2	31	9	42	11	111	12	134	7	19	7	33	310
Total	36	309	9	354	9	105	55	169	61	482	44	587	35	101	32	168	1278
Grand Total	60	555	21	636	20	198	110	328	142	1061	65	1268	67	185	69	321	2553
Apprch %	9.4	87.3	3.3		6.1	60.4	33.5		11.2	83.7	5.1		20.9	57.6	21.5		
Total %	2.4	21.7	0.8	24.9	0.8	7.8	4.3	12.8	5.6	41.6	2.5	49.7	2.6	7.2	2.7	12.6	
PC	58	516	12	586	20	191	103	314	129	1015	61	1205	63	176	68	307	2412
% PC	96.7	93	57.1	92.1	100	96.5	93.6	95.7	90.8	95.7	93.8	95	94	95.1	98.6	95.6	94.5
SU	2	26	9	37	0	5	3	8	3	36	4	43	4	6	1	11	99
% SU	3.3	4.7	42.9	5.8	0	2.5	2.7	2.4	2.1	3.4	6.2	3.4	6	3.2	1.4	3.4	3.9
MU	0	13	0	13	0	2	4	6	10	10	0	20	0	3	0	3	42
% MU	0	2.3	0	2	0	1	3.6	1.8	7	0.9	0	1.6	0	1.6	0	0.9	1.6

	Halsted St From North				Vermont Ave From East				Halsted St From South				Vermont Ave From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	7	74	1	82	**4**	26	11	41	20	**146**	5	**171**	9	19	**15**	43	**337**
07:45 AM	9	66	**3**	78	4	**33**	15	52	**24**	130	7	161	6	20	9	35	326
08:00 AM	**10**	71	2	83	0	32	**21**	**53**	13	126	**11**	150	**11**	19	4	34	320
08:15 AM	9	**80**	2	**91**	3	20	12	35	8	127	8	143	11	**32**	12	**55**	324
Total Volume	35	291	8	334	11	111	59	181	65	529	31	625	37	90	40	167	1307
% App. Total	10.5	87.1	2.4		6.1	61.3	32.6		10.4	84.6	5		22.2	53.9	24		
PHF	.875	.909	.667	.918	.688	.841	.702	.854	.677	.906	.705	.914	.841	.703	.667	.759	.970

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Halsted St and Vermont Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/17/2012
Page No : 2

Groups Printed- SU

	Halsted St From North				Vermont Ave From East				Halsted St From South				Vermont Ave From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	4	1	5	0	0	0	0	1	7	1	9	0	0	0	0	14
07:15 AM	0	5	2	7	0	0	0	0	2	6	0	8	0	1	0	1	16
07:30 AM	1	2	1	4	0	1	0	1	0	8	0	8	1	0	1	2	15
07:45 AM	0	2	1	3	0	1	0	1	0	3	0	3	0	1	0	1	8
Total	1	13	5	19	0	2	0	2	3	24	1	28	1	2	1	4	53
08:00 AM	1	3	1	5	0	0	0	0	0	1	1	2	0	0	0	0	7
08:15 AM	0	5	1	6	0	0	0	0	0	3	0	3	1	2	0	3	12
08:30 AM	0	2	0	2	0	1	3	4	0	7	1	8	1	1	0	2	16
08:45 AM	0	3	2	5	0	2	0	2	0	1	1	2	1	1	0	2	11
Total	1	13	4	18	0	3	3	6	0	12	3	15	3	4	0	7	46
Grand Total	2	26	9	37	0	5	3	8	3	36	4	43	4	6	1	11	99
Apprch %	5.4	70.3	24.3		0	62.5	37.5		7	83.7	9.3		36.4	54.5	9.1		
Total %	2	26.3	9.1	37.4	0	5.1	3	8.1	3	36.4	4	43.4	4	6.1	1	11.1	

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Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM
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Groups Printed- MU

	Halsted St From North				Vermont Ave From East				Halsted St From South				Vermont Ave From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	1	0	1	0	0	0	0	2	0	0	2	0	2	0	2	5
07:15 AM	0	4	0	4	0	0	1	1	0	2	0	2	0	0	0	0	7
07:30 AM	0	1	0	1	0	0	1	1	1	2	0	3	0	0	0	0	5
07:45 AM	0	0	0	0	0	1	0	1	0	1	0	1	0	0	0	0	2
Total	0	6	0	6	0	1	2	3	3	5	0	8	0	2	0	2	19
08:00 AM	0	1	0	1	0	1	1	2	4	1	0	5	0	0	0	0	8
08:15 AM	0	2	0	2	0	0	1	1	0	1	0	1	0	1	0	1	5
08:30 AM	0	2	0	2	0	0	0	0	2	0	0	2	0	0	0	0	4
08:45 AM	0	2	0	2	0	0	0	0	1	3	0	4	0	0	0	0	6
Total	0	7	0	7	0	1	2	3	7	5	0	12	0	1	0	1	23
Grand Total	0	13	0	13	0	2	4	6	10	10	0	20	0	3	0	3	42
Apprch %	0	100	0		0	33.3	66.7		50	50	0		0	100	0		
Total %	0	31	0	31	0	4.8	9.5	14.3	23.8	23.8	0	47.6	0	7.1	0	7.1	

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Halsted St and Vermont Ave
Chicago, IL
7:00 AM - 9:00 AM
Sunny, Dry

File Name : AM + PM Peds
Site Code : 00000000
Start Date : 5/17/2012

Groups Printed- Peds & Bikes

	Halsted St Crossing North Leg			Vermont Ave Crossing East Leg			Halsted St Crossing South Leg			Vermont Ave Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
07:00 AM	0	1	1	0	0	0	0	1	1	0	2	2	4
07:15 AM	0	4	4	0	1	1	0	2	2	0	0	0	7
07:30 AM	0	1	1	0	1	1	0	0	0	0	0	0	2
07:45 AM	0	1	1	0	2	2	0	3	3	0	0	0	6
Total	0	7	7	0	4	4	0	6	6	0	2	2	19
08:00 AM	0	5	5	0	3	3	3	7	10	0	3	3	21
08:15 AM	0	3	3	0	0	0	1	6	7	0	1	1	11
08:30 AM	0	3	3	0	7	7	1	11	12	0	5	5	27
08:45 AM	0	0	0	0	5	5	0	7	7	0	0	0	12
Total	0	11	11	0	15	15	5	31	36	0	9	9	71
Grand Total	0	18	18	0	19	19	5	37	42	0	11	11	90
Apprch %	0	100		0	100		11.9	88.1		0	100		
Total %	0	20	20	0	21.1	21.1	5.6	41.1	46.7	0	12.2	12.2	

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Halsted St and Vermont Ave
Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
Site Code : 00000000
Start Date : 5/17/2012
Page No : 5

Groups Printed- PC - SU - MU

	Halsted St From North				Vermont Ave From East				Halsted St From South				Vermont Ave From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	14	125	7	146	4	23	16	43	22	117	16	155	11	34	8	53	397
04:15 PM	14	128	6	148	6	31	19	56	19	119	19	157	15	51	15	81	442
04:30 PM	13	138	5	156	3	27	20	50	18	122	9	149	14	48	17	79	434
04:45 PM	21	130	7	158	3	44	24	71	13	95	12	120	14	43	19	76	425
Total	62	521	25	608	16	125	79	220	72	453	56	581	54	176	59	289	1698
05:00 PM	21	116	10	147	6	25	18	49	15	99	11	125	24	46	17	87	408
05:15 PM	13	130	4	147	8	37	24	69	20	104	21	145	68	44	13	125	486
05:30 PM	11	157	8	176	4	31	18	53	22	100	16	138	21	53	17	91	458
05:45 PM	9	134	5	148	4	36	24	64	14	106	16	136	23	55	20	98	446
Total	54	537	27	618	22	129	84	235	71	409	64	544	136	198	67	401	1798
Grand Total	116	1058	52	1226	38	254	163	455	143	862	120	1125	190	374	126	690	3496
Apprch %	9.5	86.3	4.2		8.4	55.8	35.8		12.7	76.6	10.7		27.5	54.2	18.3		
Total %	3.3	30.3	1.5	35.1	1.1	7.3	4.7	13	4.1	24.7	3.4	32.2	5.4	10.7	3.6	19.7	
PC	115	1027	42	1184	38	252	157	447	137	833	117	1087	188	371	125	684	3402
% PC	99.1	97.1	80.8	96.6	100	99.2	96.3	98.2	95.8	96.6	97.5	96.6	98.9	99.2	99.2	99.1	97.3
SU	1	25	10	36	0	2	4	6	3	24	2	29	2	3	1	6	77
% SU	0.9	2.4	19.2	2.9	0	0.8	2.5	1.3	2.1	2.8	1.7	2.6	1.1	0.8	0.8	0.9	2.2
MU	0	6	0	6	0	0	2	2	3	5	1	9	0	0	0	0	17
% MU	0	0.6	0	0.5	0	0	1.2	0.4	2.1	0.6	0.8	0.8	0	0	0	0	0.5

	Halsted St From North				Vermont Ave From East				Halsted St From South				Vermont Ave From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**21**	116	**10**	147	6	25	18	49	15	99	11	125	24	46	17	87	408
05:15 PM	13	130	4	147	**8**	**37**	**24**	**69**	20	104	**21**	**145**	**68**	44	13	**125**	**486**
05:30 PM	11	**157**	8	**176**	4	31	18	53	**22**	100	16	138	21	53	17	91	458
05:45 PM	9	134	5	148	4	36	24	64	14	**106**	16	136	23	**55**	**20**	98	446
Total Volume	54	537	27	618	22	129	84	235	71	409	64	544	136	198	67	401	1798
% App. Total	8.7	86.9	4.4		9.4	54.9	35.7		13.1	75.2	11.8		33.9	49.4	16.7		
PHF	.643	.855	.675	.878	.688	.872	.875	.851	.807	.965	.762	.938	.500	.900	.838	.802	.925

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Chicago, IL
4:00 PM - 6:00 PM
Sunny, Dry

File Name : AM + PM
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Groups Printed- SU

	Halsted St From North				Vermont Ave From East				Halsted St From South				Vermont Ave From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	6	1	7	0	0	0	0	0	8	0	8	0	0	0	0	15
04:15 PM	0	3	2	5	0	1	0	1	0	3	1	4	0	1	0	1	11
04:30 PM	0	1	1	2	0	1	1	2	0	2	0	2	0	1	1	2	8
04:45 PM	0	3	1	4	0	0	0	0	0	1	0	1	1	1	0	2	7
Total	0	13	5	18	0	2	1	3	0	14	1	15	1	3	1	5	41
05:00 PM	0	2	1	3	0	0	2	2	0	2	0	2	0	0	0	0	7
05:15 PM	1	0	2	3	0	0	1	1	0	4	1	5	0	0	0	0	9
05:30 PM	0	7	0	7	0	0	0	0	3	2	0	5	0	0	0	0	12
05:45 PM	0	3	2	5	0	0	0	0	0	2	0	2	1	0	0	1	8
Total	1	12	5	18	0	0	3	3	3	10	1	14	1	0	0	1	36
Grand Total	1	25	10	36	0	2	4	6	3	24	2	29	2	3	1	6	77
Apprch %	2.8	69.4	27.8		0	33.3	66.7		10.3	82.8	6.9		33.3	50	16.7		
Total %	1.3	32.5	13	46.8	0	2.6	5.2	7.8	3.9	31.2	2.6	37.7	2.6	3.9	1.3	7.8	

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4:00 PM - 6:00 PM
Sunny, Dry

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Groups Printed- MU

	Halsted St From North				Vermont Ave From East				Halsted St From South				Vermont Ave From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	2	0	2	0	0	0	0	2	2	0	4	0	0	0	0	6
04:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
04:30 PM	0	1	0	1	0	0	0	0	0	0	1	1	0	0	0	0	2
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	3	0	3	0	0	0	0	2	3	1	6	0	0	0	0	9
05:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	2	2	1	2	0	3	0	0	0	0	5
05:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	3	0	3	0	0	2	2	1	2	0	3	0	0	0	0	8
Grand Total	0	6	0	6	0	0	2	2	3	5	1	9	0	0	0	0	17
Apprch %	0	100	0		0	0	100		33.3	55.6	11.1		0	0	0		
Total %	0	35.3	0	35.3	0	0	11.8	11.8	17.6	29.4	5.9	52.9	0	0	0	0	

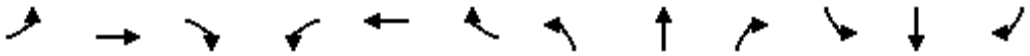
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4:00 PM - 6:00 PM
Sunny, Dry

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Groups Printed- Peds & Bikes

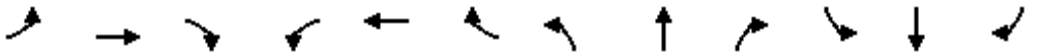
	Halsted St Crossing North Leg			Vermont Ave Crossing East Leg			Halsted St Crossing South Leg			Vermont Ave Crossing West Leg			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
04:00 PM	0	3	3	1	2	3	0	2	2	0	6	6	14
04:15 PM	0	3	3	0	0	0	0	3	3	0	7	7	13
04:30 PM	0	2	2	1	11	12	0	8	8	0	2	2	24
04:45 PM	0	0	0	0	1	1	0	11	11	0	0	0	12
Total	0	8	8	2	14	16	0	24	24	0	15	15	63
05:00 PM	0	3	3	0	0	0	0	3	3	1	1	2	8
05:15 PM	0	0	0	1	0	1	1	8	9	1	0	1	11
05:30 PM	0	0	0	1	2	3	0	9	9	0	1	1	13
05:45 PM	0	0	0	0	1	1	0	0	0	0	0	0	1
Total	0	3	3	2	3	5	1	20	21	2	2	4	33
Grand Total	0	11	11	4	17	21	1	44	45	2	17	19	96
Apprch %	0	100		19	81		2.2	97.8		10.5	89.5		
Total %	0	11.5	11.5	4.2	17.7	21.9	1	45.8	46.9	2.1	17.7	19.8	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	36	765	16	21	707	43	43	60	75	38	29	93
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	16	10	10	16	8	15	8	8	14	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			0.99			0.99	
Flpb, ped/bikes	0.98	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	0.99			0.94			0.92	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1412	2976		1591	2978			1752			1663	
Flt Permitted	0.30	1.00		0.29	1.00			0.90			0.90	
Satd. Flow (perm)	448	2976		481	2978			1600			1520	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	38	797	17	22	736	45	45	62	78	40	30	97
RTOR Reduction (vph)	0	2	0	0	7	0	0	40	0	0	63	0
Lane Group Flow (vph)	38	812	0	22	774	0	0	145	0	0	104	0
Confl. Peds. (#/hr)	61		11	11		61	3		5	5		3
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	11%	7%	0%	0%	6%	2%	2%	7%	4%	5%	7%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			22.0			22.0	
Effective Green, g (s)	34.0	34.0		34.0	34.0			23.0			23.0	
Actuated g/C Ratio	0.52	0.52		0.52	0.52			0.35			0.35	
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0			5.0	
Lane Grp Cap (vph)	234	1557		252	1558			566			538	
v/s Ratio Prot		c0.27			0.26							
v/s Ratio Perm	0.08			0.05				c0.09			0.07	
v/c Ratio	0.16	0.52		0.09	0.50			0.26			0.19	
Uniform Delay, d1	8.1	10.2		7.7	10.0			14.9			14.6	
Progression Factor	1.00	1.00		0.75	1.01			1.00			1.00	
Incremental Delay, d2	1.5	1.3		0.6	1.0			1.1			0.8	
Delay (s)	9.6	11.4		6.5	11.1			16.0			15.4	
Level of Service	A	B		A	B			B			B	
Approach Delay (s)		11.3			11.0			16.0			15.4	
Approach LOS		B			B			B			B	

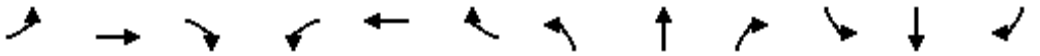
Intersection Summary			
HCM Average Control Delay	12.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	882	7	23	508	50	0	0	0	461	8	319
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00				0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.67				1.00	1.00	0.96
Flpb, ped/bikes	0.90	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	770	3284		1710	3138	512				3100	1440	1399
Flt Permitted	0.45	1.00		0.14	1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	363	3284		248	3138	512				3100	1440	1399
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	27	948	8	25	546	54	0	0	0	496	9	343
RTOR Reduction (vph)	0	1	0	0	0	24	0	0	0	0	0	175
Lane Group Flow (vph)	27	955	0	25	546	30	0	0	0	496	9	168
Confl. Peds. (#/hr)	354		13	13		354	22		22	22		22
Confl. Bikes (#/hr)	4					4			1	1		
Heavy Vehicles (%)	100%	4%	0%	0%	9%	100%	0%	0%	0%	7%	25%	5%
Turn Type	pm+pt			pm+pt		Perm				Split		Perm
Protected Phases	7	4		3	8					6	6	
Permitted Phases	4			8		8						6
Actuated Green, G (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Effective Green, g (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Actuated g/C Ratio	0.33	0.33		0.56	0.56	0.56				0.23	0.23	0.23
Clearance Time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Grp Cap (vph)	164	1086		634	1762	288				715	332	323
v/s Ratio Prot	0.02	c0.29		0.01	c0.17					c0.16	0.01	
v/s Ratio Perm	0.04			0.01		0.06						0.12
v/c Ratio	0.16	0.88		0.04	0.31	0.11				0.69	0.03	0.52
Uniform Delay, d1	31.4	41.1		15.1	15.1	13.3				45.8	38.7	43.7
Progression Factor	0.81	0.84		0.33	0.64	1.54				1.00	1.00	1.00
Incremental Delay, d2	1.9	9.3		0.1	0.3	0.5				5.5	0.2	5.9
Delay (s)	27.6	43.6		5.0	10.0	21.0				51.3	38.9	49.5
Level of Service	C	D		A	B	C				D	D	D
Approach Delay (s)		43.2			10.8			0.0			50.4	
Approach LOS		D			B			A			D	

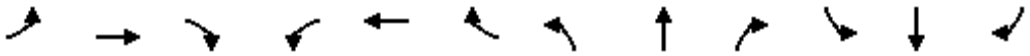
Intersection Summary			
HCM Average Control Delay	37.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	48.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	438	786	119	21	428	253	124	489	59	41	0	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.65		1.00	0.94	1.00		0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.98		1.00	1.00	0.85		1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (prot)	3190	3106		1555	2923	944		3300	1417	855		734
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (perm)	3190	3106		1555	2923	944		3300	1417	855		734
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	466	836	127	22	455	269	132	520	63	44	0	31
RTOR Reduction (vph)	0	9	0	0	0	170	0	0	25	0	0	29
Lane Group Flow (vph)	466	954	0	22	455	99	0	652	38	44	0	2
Confl. Peds. (#/hr)	425		21	21		425	6		34	34		6
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	4%	8%	3%	10%	17%	5%	1%	3%	2%	100%	0%	100%
Turn Type	Prot			Prot		Perm	Split		Perm	Prot		custom
Protected Phases	7	4		3	8		2	2		6		
Permitted Phases						8			2			6
Actuated Green, G (s)	43.0	65.0		9.0	31.0	31.0		30.0	30.0	8.0		8.0
Effective Green, g (s)	43.0	65.0		9.0	31.0	31.0		30.0	30.0	8.0		8.0
Actuated g/C Ratio	0.33	0.50		0.07	0.24	0.24		0.23	0.23	0.06		0.06
Clearance Time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	1055	1553		108	697	225		762	327	53		45
v/s Ratio Prot	0.15	c0.31		0.01	c0.16			c0.20		c0.05		
v/s Ratio Perm						0.11			0.03			0.00
v/c Ratio	0.44	0.61		0.20	0.65	0.44		0.86	0.12	0.83		0.04
Uniform Delay, d1	34.1	23.5		57.1	44.6	42.1		47.9	39.5	60.3		57.4
Progression Factor	0.73	0.17		1.00	1.00	1.00		0.94	0.88	1.00		1.00
Incremental Delay, d2	0.7	1.0		4.2	4.7	6.2		11.6	0.7	65.2		0.4
Delay (s)	25.5	5.0		61.3	49.4	48.3		56.6	35.7	125.5		57.8
Level of Service	C	A		E	D	D		E	D	F		E
Approach Delay (s)		11.7			49.3			54.8			97.5	
Approach LOS		B			D			D			F	

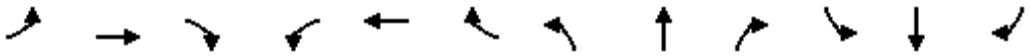
Intersection Summary			
HCM Average Control Delay	33.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	68.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	794	197	54	575	0	111	0	106	3	10	2
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	11	11	8	12	12	12	14	15	12
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes		0.99		1.00	1.00		1.00		0.98	1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00		1.00		1.00	0.99	1.00	
Frt		0.97		1.00	1.00		1.00		0.85	1.00	0.97	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		2860		1649	3005		1390		1465	1803	1930	
Flt Permitted		1.00		0.22	1.00		0.75		1.00	0.95	1.00	
Satd. Flow (perm)		2860		375	3005		1097		1465	1803	1930	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	827	205	56	599	0	116	0	110	3	10	2
RTOR Reduction (vph)	0	22	0	0	0	0	0	0	75	0	1	0
Lane Group Flow (vph)	0	1010	0	56	599	0	116	0	35	3	11	0
Confl. Peds. (#/hr)	49		15	15		49			12	12		
Heavy Vehicles (%)	0%	6%	14%	0%	10%	0%	23%	0%	2%	0%	0%	0%
Turn Type				Perm			custom		custom	Perm		
Protected Phases		4			8						6	
Permitted Phases				8			2		2	6		
Actuated Green, G (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Effective Green, g (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Actuated g/C Ratio		0.60		0.60	0.60		0.32		0.32	0.32	0.32	
Clearance Time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)		1716		225	1803		351		469	577	618	
v/s Ratio Prot		c0.35			0.20						0.01	
v/s Ratio Perm				0.15			c0.11		0.02	0.00		
v/c Ratio		0.59		0.25	0.33		0.33		0.08	0.01	0.02	
Uniform Delay, d1		12.4		9.4	10.0		25.9		23.7	23.2	23.2	
Progression Factor		1.00		1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		1.5		2.6	0.5		2.5		0.3	0.0	0.1	
Delay (s)		13.9		12.0	10.5		28.4		24.0	23.2	23.3	
Level of Service		B		B	B		C		C	C	C	
Approach Delay (s)		13.9			10.6			26.2			23.3	
Approach LOS		B			B			C			C	

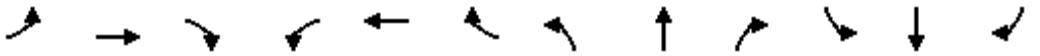
Intersection Summary			
HCM Average Control Delay	14.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	316	39	1032	190	855	0	0	396	678
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	12	10	10	12	12	11	12
Total Lost time (s)				4.0	4.0	5.0	3.0	4.0			4.0	
Lane Util. Factor				0.95	0.95	1.00	1.00	0.91			0.91	
Frpb, ped/bikes				1.00	1.00	0.99	1.00	1.00			0.97	
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00			1.00	
Frt				1.00	1.00	0.85	1.00	1.00			0.91	
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (prot)				1525	1629	1479	1550	4368			3922	
Flt Permitted				0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (perm)				1525	1629	1479	1550	4368			3922	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	0	0	326	40	1064	196	881	0	0	408	699
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	326	40	1064	196	881	0	0	1107	0
Confl. Peds. (#/hr)	2					2	12		8	8		12
Heavy Vehicles (%)	0%	0%	0%	3%	5%	2%	3%	5%	0%	0%	5%	8%
Turn Type				Perm		Perm	Prot					
Protected Phases					8		5	2			6	
Permitted Phases				8		8						
Actuated Green, G (s)				30.0	30.0	30.0	32.0	66.0			31.0	
Effective Green, g (s)				31.0	31.0	30.0	32.0	66.0			31.0	
Actuated g/C Ratio				0.30	0.30	0.29	0.30	0.63			0.30	
Clearance Time (s)				5.0	5.0	5.0	3.0	4.0			4.0	
Lane Grp Cap (vph)				450	481	423	472	2746			1158	
v/s Ratio Prot							c0.13	0.20			c0.28	
v/s Ratio Perm				0.21	0.02	c0.72						
v/c Ratio				0.72	0.08	2.52	0.42	0.32			1.74dr	
Uniform Delay, d1				33.2	26.7	37.5	29.1	9.1			36.3	
Progression Factor				1.00	1.00	1.00	0.64	2.30			1.00	
Incremental Delay, d2				9.7	0.3	688.9	2.0	0.2			17.8	
Delay (s)				42.9	27.1	726.4	20.6	21.1			54.1	
Level of Service				D	C	F	C	C			D	
Approach Delay (s)		0.0			551.0			21.0			54.1	
Approach LOS		A			F			C			D	

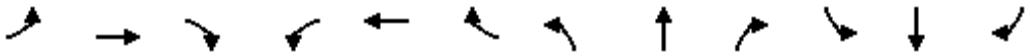
Intersection Summary			
HCM Average Control Delay	240.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.27		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.6%	ICU Level of Service	F
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group



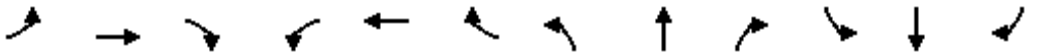
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	277	867	87	0	0	0	0	768	570	257	455	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	13	12	12	12	12	12	10	10	8	12	12	12
Total Lost time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Util. Factor	0.91	0.91						0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00						1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00						1.00	1.00	1.00	1.00	
Frt	1.00	0.99						1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1497	3186						4368	2187	1583	4636	
Flt Permitted	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1497	3186						4368	2187	1583	4636	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	292	913	92	0	0	0	0	808	600	271	479	0
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	263	1027	0	0	0	0	0	808	600	271	479	0
Confl. Peds. (#/hr)	4		14	14		4	4		3	3		4
Heavy Vehicles (%)	7%	1%	0%	0%	0%	0%	0%	5%	4%	8%	6%	0%
Turn Type	Perm								Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Actuated Green, G (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Effective Green, g (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Actuated g/C Ratio	0.32	0.32						0.27	0.27	0.30	0.59	
Clearance Time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Grp Cap (vph)	485	1032						1165	583	467	2737	
v/s Ratio Prot								0.18		c0.17	0.10	
v/s Ratio Perm	0.18	0.32							c0.27			
v/c Ratio	0.54	1.00						0.69	1.03	0.58	0.18	
Uniform Delay, d1	29.1	35.4						34.6	38.5	31.5	9.8	
Progression Factor	1.00	1.00						0.45	0.47	1.06	0.44	
Incremental Delay, d2	4.3	26.9						0.3	19.7	2.7	0.1	
Delay (s)	33.4	62.4						15.8	37.9	36.2	4.4	
Level of Service	C	E						B	D	D	A	
Approach Delay (s)		56.5			0.0			25.2			15.9	
Approach LOS		E			A			C			B	

Intersection Summary			
HCM Average Control Delay	34.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



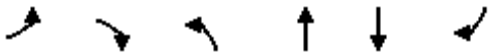
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	216	4	21	3	152	0	0	99	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	14	12	12	16	12
Total Lost time (s)				4.0	4.0		4.0	4.0			-3.0	
Lane Util. Factor				1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes				1.00	0.98		1.00	1.00			1.00	
Flpb, ped/bikes				1.00	1.00		1.00	1.00			1.00	
Frt				1.00	0.87		1.00	1.00			1.00	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1578	2709		1285	1882			1956	
Flt Permitted				0.95	1.00		0.60	1.00			1.00	
Satd. Flow (perm)				1578	2709		812	1882			1956	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	227	4	22	3	160	0	0	104	3
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	227	8	0	3	160	0	0	106	0
Confl. Peds. (#/hr)	2		2	2		2	3					3
Heavy Vehicles (%)	0%	0%	0%	8%	25%	5%	33%	2%	0%	0%	3%	33%
Turn Type				Perm			pm+pt					
Protected Phases					8		7	2			6	
Permitted Phases				8			2					
Actuated Green, G (s)				27.0	27.0		50.0	50.0			40.0	
Effective Green, g (s)				27.0	27.0		50.0	50.0			46.0	
Actuated g/C Ratio				0.32	0.32		0.59	0.59			0.54	
Clearance Time (s)				4.0	4.0		4.0	4.0			3.0	
Lane Grp Cap (vph)				501	861		517	1107			1059	
v/s Ratio Prot					0.00		0.00	c0.09			0.05	
v/s Ratio Perm				c0.14			0.00					
v/c Ratio				0.45	0.01		0.01	0.14			0.10	
Uniform Delay, d1				23.1	19.8		9.7	7.9			9.5	
Progression Factor				1.00	1.00		1.01	1.18			1.00	
Incremental Delay, d2				2.9	0.0		0.0	0.3			0.2	
Delay (s)				26.1	19.9		9.8	9.5			9.6	
Level of Service				C	B		A	A			A	
Approach Delay (s)		0.0			25.4			9.5			9.6	
Approach LOS		A			C			A			A	

Intersection Summary			
HCM Average Control Delay	17.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



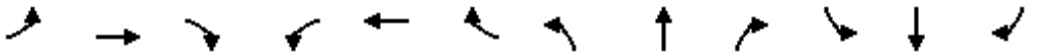
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	8	5	5	3	0	18	0	129	37	33	282	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	16	15	12	8	12	8	12	12	12	10	13	12
Total Lost time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99			1.00			1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00			1.00		1.00	1.00	
Frt	1.00	0.93			0.88			0.97		1.00	1.00	
Flt Protected	0.95	1.00			0.99			1.00		0.95	1.00	
Satd. Flow (prot)	1938	1809			1577			1686		1595	1755	
Flt Permitted	0.74	1.00			0.99			1.00		0.60	1.00	
Satd. Flow (perm)	1513	1809			1564			1686		1012	1755	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	9	6	6	3	0	21	0	148	43	38	324	0
RTOR Reduction (vph)	0	4	0	0	14	0	0	12	0	0	0	0
Lane Group Flow (vph)	9	8	0	0	10	0	0	179	0	38	324	0
Confl. Peds. (#/hr)			3	3			5		2	2		5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	3%	0%	6%	0%
Turn Type	Perm			Perm						pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Effective Green, g (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Actuated g/C Ratio	0.32	0.32			0.32			0.47		0.59	0.59	
Clearance Time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Grp Cap (vph)	481	575			497			793		643	1032	
v/s Ratio Prot		0.00						0.11		0.00	c0.18	
v/s Ratio Perm	0.01				c0.01					0.03		
v/c Ratio	0.02	0.01			0.02			0.23		0.06	0.31	
Uniform Delay, d1	19.9	19.9			19.9			13.3		8.5	8.8	
Progression Factor	1.00	1.00			1.00			1.00		0.92	0.83	
Incremental Delay, d2	0.1	0.0			0.1			0.7		0.2	0.8	
Delay (s)	20.0	19.9			20.0			14.0		8.0	8.1	
Level of Service	B	B			B			B		A	A	
Approach Delay (s)		19.9			20.0			14.0			8.1	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	10.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.21		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	61	14	10	334	159	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	14	12	13	12	10	12
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.98		1.00	1.00	0.99	
Flt Protected	0.96		0.95	1.00	1.00	
Satd. Flow (prot)	1791		1767	1765	1634	
Flt Permitted	0.96		0.63	1.00	1.00	
Satd. Flow (perm)	1791		1164	1765	1634	
Peak-hour factor, PHF	0.81	0.81	0.81	0.81	0.81	0.81
Adj. Flow (vph)	75	17	12	412	196	15
RTOR Reduction (vph)	12	0	0	0	4	0
Lane Group Flow (vph)	80	0	12	412	207	0
Confl. Peds. (#/hr)		2				
Heavy Vehicles (%)	0%	0%	0%	2%	2%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.0		36.0	36.0	36.0	
Effective Green, g (s)	21.0		36.0	36.0	36.0	
Actuated g/C Ratio	0.32		0.55	0.55	0.55	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	579		645	978	905	
v/s Ratio Prot	c0.04			c0.23	0.13	
v/s Ratio Perm			0.01			
v/c Ratio	0.14		0.02	0.42	0.23	
Uniform Delay, d1	15.6		6.5	8.4	7.4	
Progression Factor	1.00		0.31	0.55	1.17	
Incremental Delay, d2	0.5		0.0	1.2	0.6	
Delay (s)	16.1		2.1	5.9	9.2	
Level of Service	B		A	A	A	
Approach Delay (s)	16.1			5.8	9.2	
Approach LOS	B			A	A	

Intersection Summary			
HCM Average Control Delay	8.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	38.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



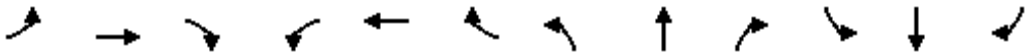
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	19	239	13	494	219	0	0	162	31
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	14	16	12	12	15	12	12	13	10
Total Lost time (s)					4.0		4.0	4.0			3.0	3.0
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Frt					0.99		1.00	1.00			1.00	0.85
Flt Protected					1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3739		1660	1752			1603	1298
Flt Permitted					1.00		0.62	1.00			1.00	1.00
Satd. Flow (perm)					3739		1081	1752			1603	1298
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	20	252	14	520	231	0	0	171	33
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	0	0	0	18
Lane Group Flow (vph)	0	0	0	0	282	0	520	231	0	0	171	15
Confl. Peds. (#/hr)									30	30		
Heavy Vehicles (%)	0%	0%	0%	11%	2%	0%	3%	13%	0%	0%	16%	10%
Turn Type				Split			pm+pt					Perm
Protected Phases				8	8		7	2			6	
Permitted Phases							2					6
Actuated Green, G (s)					26.0		51.0	51.0			38.0	38.0
Effective Green, g (s)					26.0		51.0	51.0			38.0	38.0
Actuated g/C Ratio					0.31		0.60	0.60			0.45	0.45
Clearance Time (s)					4.0		4.0	4.0			3.0	3.0
Lane Grp Cap (vph)					1144		717	1051			717	580
v/s Ratio Prot					c0.08		c0.09	0.13			0.11	
v/s Ratio Perm							c0.35					0.01
v/c Ratio					0.25		0.73	0.22			0.24	0.03
Uniform Delay, d1					22.1		14.0	7.8			14.5	13.1
Progression Factor					1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2					0.5		6.3	0.5			0.8	0.1
Delay (s)					22.7		20.3	8.3			15.3	13.2
Level of Service					C		C	A			B	B
Approach Delay (s)		0.0			22.7			16.6			15.0	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM Average Control Delay	17.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	10	9	7	255	405	74	58	264	10
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	15	12	12	12	12	12	13	12
Total Lost time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.97		1.00	0.98		1.00	0.99	
Flt Protected					0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1798		1691	3237		1705	3351	
Flt Permitted					0.98		0.55	1.00		0.39	1.00	
Satd. Flow (perm)					1798		982	3237		696	3351	
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	0	0	0	12	11	8	300	476	87	68	311	12
RTOR Reduction (vph)	0	0	0	0	6	0	0	20	0	0	4	0
Lane Group Flow (vph)	0	0	0	0	25	0	300	543	0	68	319	0
Confl. Peds. (#/hr)	2					2	6		20	20		6
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	0%	0%	0%	11%	0%	1%	3%	0%	0%	5%	0%
Turn Type				Split			pm+pt			pm+pt		
Protected Phases				8	8		5	2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)					23.0		41.0	34.0		41.0	34.0	
Effective Green, g (s)					23.0		41.0	34.0		41.0	34.0	
Actuated g/C Ratio					0.31		0.55	0.45		0.55	0.45	
Clearance Time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Grp Cap (vph)					551		603	1467		475	1519	
v/s Ratio Prot					c0.01		c0.05	0.17		0.01	0.10	
v/s Ratio Perm							c0.23			0.06		
v/c Ratio					0.05		0.50	0.37		0.14	0.21	
Uniform Delay, d1					18.3		11.2	13.5		10.6	12.4	
Progression Factor					1.00		0.74	0.74		1.00	1.00	
Incremental Delay, d2					0.2		2.8	0.7		0.6	0.3	
Delay (s)					18.4		11.1	10.6		11.2	12.7	
Level of Service					B		B	B		B	B	
Approach Delay (s)		0.0			18.4			10.8			12.4	
Approach LOS		A			B			B			B	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	51.6%	ICU Level of Service	A
Analysis Period (min)	15		

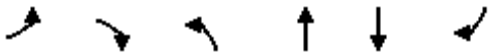
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	44	42	17	8	130	171	16	519	9	54	208	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	16	12	12	10	11	12	12	11	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.93		1.00	1.00		1.00	0.99	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1948			1626		1596	3233		1641	3131	
Flt Permitted		0.77			0.99		0.60	1.00		0.39	1.00	
Satd. Flow (perm)		1527			1619		1000	3233		675	3131	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	51	48	20	9	149	197	18	597	10	62	239	14
RTOR Reduction (vph)	0	10	0	0	60	0	0	2	0	0	6	0
Lane Group Flow (vph)	0	109	0	0	295	0	18	605	0	62	247	0
Confl. Peds. (#/hr)									6	6		
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	0%	0%	12%	2%	2%	0%	2%	0%	4%	5%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Effective Green, g (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Actuated g/C Ratio		0.33			0.33		0.56	0.56		0.56	0.56	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		509			540		560	1810		378	1753	
v/s Ratio Prot								c0.19			0.08	
v/s Ratio Perm		0.07			c0.18		0.02			0.09		
v/c Ratio		0.21			0.55		0.03	0.33		0.16	0.14	
Uniform Delay, d1		17.9			20.4		7.4	8.9		8.0	7.9	
Progression Factor		1.00			1.00		1.00	1.00		0.14	0.06	
Incremental Delay, d2		1.0			3.9		0.1	0.5		0.9	0.2	
Delay (s)		18.9			24.3		7.5	9.4		2.0	0.6	
Level of Service		B			C		A	A		A	A	
Approach Delay (s)		18.9			24.3			9.4			0.9	
Approach LOS		B			C			A			A	

Intersection Summary			
HCM Average Control Delay	12.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.9%	ICU Level of Service	B
Analysis Period (min)	15		

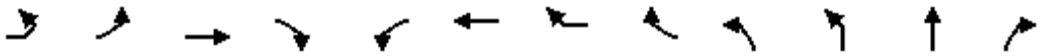
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	35	44	81	250	173	18
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	38	47	87	269	186	19

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	85	177	179	124	81
Volume Left (vph)	38	87	0	0	0
Volume Right (vph)	47	0	0	0	19
Hadj (s)	-0.16	0.33	0.09	0.08	-0.08
Departure Headway (s)	5.0	5.2	5.0	5.1	5.0
Degree Utilization, x	0.12	0.26	0.25	0.18	0.11
Capacity (veh/h)	665	671	703	676	700
Control Delay (s)	8.6	8.9	8.4	8.1	7.4
Approach Delay (s)	8.6	8.6		7.8	
Approach LOS	A	A		A	

Intersection Summary			
Delay	8.4		
HCM Level of Service	A		
Intersection Capacity Utilization	30.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	40	46	277	12	5	477	37	39	37	47	632	37
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	0.95	
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.97			1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Frt		1.00	1.00	0.85	1.00	1.00	0.85			1.00	0.99	
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	
Satd. Flow (prot)		1575	1731	1530	1710	1731	1487			1710	3292	
Flt Permitted		0.11	1.00	1.00	0.57	1.00	1.00			0.47	1.00	
Satd. Flow (perm)		187	1731	1530	1022	1731	1487			851	3292	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	46	53	318	14	6	548	43	45	43	54	726	43
RTOR Reduction (vph)	0	0	0	7	0	0	31	0	0	0	4	0
Lane Group Flow (vph)	0	99	318	7	6	548	57	0	0	97	765	0
Confl. Peds. (#/hr)		5					5					6
Heavy Vehicles (%)	8%	9%	4%	0%	0%	4%	0%	0%	0%	0%	3%	0%
Turn Type	Perm	pm+pt		Perm	Perm		Perm		Perm	Perm		
Protected Phases		7	4			8					2	
Permitted Phases	4	4		4	8		8		2	2		
Actuated Green, G (s)		50.0	50.0	50.0	32.0	32.0	32.0			25.0	25.0	
Effective Green, g (s)		50.0	50.0	50.0	32.0	32.0	32.0			25.0	25.0	
Actuated g/C Ratio		0.48	0.48	0.48	0.30	0.30	0.30			0.24	0.24	
Clearance Time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Grp Cap (vph)		281	824	729	311	528	453			203	784	
v/s Ratio Prot		0.05	c0.18			c0.32					c0.23	
v/s Ratio Perm		0.12		0.00	0.01		0.04			0.11		
v/c Ratio		0.35	0.39	0.01	0.02	1.04	0.13			0.48	0.98	
Uniform Delay, d1		20.4	17.6	14.5	25.5	36.5	26.4			34.4	39.7	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Incremental Delay, d2		3.4	1.4	0.0	0.1	49.3	0.6			7.9	26.8	
Delay (s)		23.8	19.0	14.5	25.6	85.8	27.0			42.2	66.5	
Level of Service		C	B	B	C	F	C			D	E	
Approach Delay (s)			20.0			77.2					63.8	
Approach LOS			B			E					E	

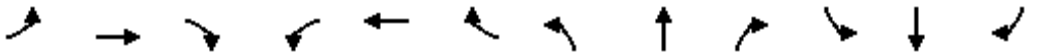
Intersection Summary			
HCM Average Control Delay	54.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	75.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations								
Volume (vph)	33	231	21	26	4	47	97	11
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5				4.5	4.5	
Lane Util. Factor	1.00	0.95				1.00	0.88	
Frpb, ped/bikes	1.00	1.00				1.00	1.00	
Flpb, ped/bikes	1.00	1.00				1.00	1.00	
Frt	1.00	0.97				1.00	0.85	
Flt Protected	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1705	3279				1710	2622	
Flt Permitted	0.16	1.00				0.95	1.00	
Satd. Flow (perm)	293	3279				1710	2622	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	38	266	24	30	5	54	111	13
RTOR Reduction (vph)	0	8	0	0	0	0	8	0
Lane Group Flow (vph)	38	312	0	0	0	59	117	0
Confl. Peds. (#/hr)	6							
Heavy Vehicles (%)	0%	2%	0%	0%	0%	0%	3%	0%
Turn Type	Perm				Split		Perm	
Protected Phases		6			9	9		
Permitted Phases	6						9	
Actuated Green, G (s)	24.5	24.5				17.5	17.5	
Effective Green, g (s)	24.5	24.5				17.5	17.5	
Actuated g/C Ratio	0.23	0.23				0.17	0.17	
Clearance Time (s)	4.5	4.5				4.5	4.5	
Lane Grp Cap (vph)	68	765				285	437	
v/s Ratio Prot		0.10				0.03		
v/s Ratio Perm	0.13						c0.04	
v/c Ratio	0.56	0.41				0.21	0.27	
Uniform Delay, d1	35.5	34.1				37.8	38.2	
Progression Factor	1.00	1.00				1.00	1.00	
Incremental Delay, d2	29.2	1.6				1.6	1.5	
Delay (s)	64.7	35.7				39.4	39.6	
Level of Service	E	D				D	D	
Approach Delay (s)		38.8				39.6		
Approach LOS		D				D		

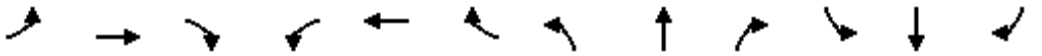
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	374	0	0	452	24	106	104	102	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	11	11	16	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.99			0.96				
Flt Protected		1.00			1.00			0.98				
Satd. Flow (prot)		1653			1930			1772				
Flt Permitted		0.97			1.00			0.98				
Satd. Flow (perm)		1603			1930			1772				
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	22	402	0	0	486	26	114	112	110	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	424	0	0	512	0	0	336	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		31.0			31.0			26.0				
Effective Green, g (s)		31.0			31.0			26.0				
Actuated g/C Ratio		0.48			0.48			0.40				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		765			920			709				
v/s Ratio Prot					c0.27							
v/s Ratio Perm		0.26						0.19				
v/c Ratio		0.55			0.56			0.47				
Uniform Delay, d1		12.1			12.1			14.4				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		2.9			2.4			2.3				
Delay (s)		15.0			14.5			16.7				
Level of Service		B			B			B				
Approach Delay (s)		15.0			14.5			16.7			0.0	
Approach LOS		B			B			B			A	

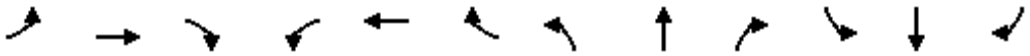
Intersection Summary			
HCM Average Control Delay	15.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	96	285	95	63	258	106	125	1435	108	65	445	93
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	9	9	10	9
Total Lost time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.96	1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1920	1426		1922	1396	1501	3099	1284	1425	2956	1265
Flt Permitted		0.69	1.00		0.72	1.00	0.39	1.00	1.00	0.09	1.00	1.00
Satd. Flow (perm)		1342	1426		1404	1396	617	3099	1284	142	2956	1265
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	103	306	102	68	277	114	134	1543	116	70	478	100
RTOR Reduction (vph)	0	0	60	0	0	67	0	0	29	0	0	60
Lane Group Flow (vph)	0	409	42	0	345	47	134	1543	87	70	478	40
Confl. Peds. (#/hr)	42		39	39		42	20		8	8		20
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	6%	4%	3%	0%	6%	5%	6%	3%	4%	8%	8%	4%
Turn Type	pm+pt		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		43.0	43.0		43.0	43.0	53.0	44.4	44.4	49.0	42.4	42.4
Effective Green, g (s)		43.0	43.0		43.0	43.0	53.0	44.4	44.4	49.0	42.4	42.4
Actuated g/C Ratio		0.41	0.41		0.41	0.41	0.50	0.42	0.42	0.47	0.40	0.40
Clearance Time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		550	584		575	572	384	1310	543	147	1194	511
v/s Ratio Prot							c0.03	c0.50		c0.03	0.16	
v/s Ratio Perm		c0.30	0.03		0.25	0.03	0.15		0.07	0.19		0.03
v/c Ratio		0.74	0.07		0.60	0.08	0.35	1.18	0.16	0.48	0.40	0.08
Uniform Delay, d1		26.3	18.9		24.3	18.9	14.5	30.3	18.8	23.1	22.3	19.3
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.07	0.82	0.55
Incremental Delay, d2		5.4	0.2		4.6	0.3	0.6	88.3	0.6	2.4	1.0	0.3
Delay (s)		31.7	19.1		28.8	19.2	15.1	118.6	19.4	27.0	19.3	10.8
Level of Service		C	B		C	B	B	F	B	C	B	B
Approach Delay (s)		29.2			26.5			104.4			18.8	
Approach LOS		C			C			F			B	

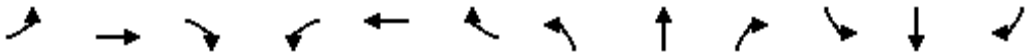
Intersection Summary			
HCM Average Control Delay	66.4	HCM Level of Service	E
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	98.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	46	366	46	41	323	41	52	48	43	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		0.99			0.99			0.96				
Flt Protected		1.00			0.99			0.98				
Satd. Flow (prot)		1627			1626			1777				
Flt Permitted		0.93			0.93			0.98				
Satd. Flow (perm)		1524			1516			1777				
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	49	394	49	44	347	44	56	52	46	0	0	0
RTOR Reduction (vph)	0	6	0	0	6	0	0	23	0	0	0	0
Lane Group Flow (vph)	0	486	0	0	429	0	0	131	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		38.0			38.0			19.0				
Effective Green, g (s)		38.0			38.0			19.0				
Actuated g/C Ratio		0.58			0.58			0.29				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		891			886			519				
v/s Ratio Prot												
v/s Ratio Perm		c0.32			0.28			0.07				
v/c Ratio		0.55			0.48			0.25				
Uniform Delay, d1		8.2			7.8			17.6				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		2.4			1.9			1.2				
Delay (s)		10.6			9.7			18.7				
Level of Service		B			A			B				
Approach Delay (s)		10.6			9.7			18.7			0.0	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM Average Control Delay	11.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	49.4%	ICU Level of Service	A
Analysis Period (min)	15		

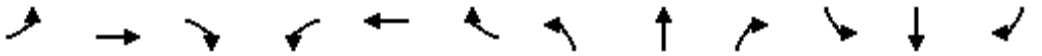
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	18	383	50	27	338	33	41	133	79	49	192	26
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	11	12	12	15	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.97		1.00	0.95		1.00	0.98		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		0.99	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.99	
Flt Protected		1.00	1.00		1.00	1.00		0.99	1.00		0.99	
Satd. Flow (prot)		1656	1255		1634	1288		1663	1490		1776	
Flt Permitted		0.98	1.00		0.96	1.00		0.89	1.00		0.92	
Satd. Flow (perm)		1624	1255		1572	1288		1505	1490		1642	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	19	403	53	28	356	35	43	140	83	52	202	27
RTOR Reduction (vph)	0	0	23	0	0	15	0	0	56	0	5	0
Lane Group Flow (vph)	0	422	30	0	384	20	0	183	27	0	276	0
Confl. Peds. (#/hr)	33		15	15		33	68		5	5		68
Confl. Bikes (#/hr)	4					4						
Heavy Vehicles (%)	0%	5%	14%	19%	5%	9%	2%	2%	1%	10%	7%	8%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Effective Green, g (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.32	0.32		0.32	
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Grp Cap (vph)		931	720		901	738		482	477		525	
v/s Ratio Prot												
v/s Ratio Perm		c0.26	0.02		0.24	0.02		0.12	0.02		c0.17	
v/c Ratio		0.45	0.04		0.43	0.03		0.38	0.06		0.52	
Uniform Delay, d1		9.2	7.0		9.0	6.9		19.7	17.7		20.8	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		1.6	0.1		1.5	0.1		2.3	0.2		3.7	
Delay (s)		10.8	7.1		10.5	7.0		22.0	17.9		24.6	
Level of Service		B	A		B	A		C	B		C	
Approach Delay (s)		10.4			10.2			20.7			24.6	
Approach LOS		B			B			C			C	

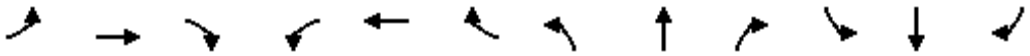
Intersection Summary			
HCM Average Control Delay	15.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	81.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	72	364	25	15	244	34	51	298	38	38	92	9
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	11	16	8	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.98	1.00	1.00	0.99
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1461	2989		1458	3528		1534	1647	1301	1517	1541	1156
Flt Permitted	0.57	1.00		0.50	1.00		0.69	1.00	1.00	0.47	1.00	1.00
Satd. Flow (perm)	878	2989		765	3528		1120	1647	1301	756	1541	1156
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	77	387	27	16	260	36	54	317	40	40	98	10
RTOR Reduction (vph)	0	8	0	0	17	0	0	0	22	0	0	6
Lane Group Flow (vph)	77	406	0	16	279	0	54	317	18	40	98	4
Confl. Peds. (#/hr)	16		9	9		16	1		5	5		1
Heavy Vehicles (%)	8%	6%	0%	13%	8%	3%	4%	2%	8%	5%	9%	22%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Effective Green, g (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	419	1426		365	1683		448	659	520	302	616	462
v/s Ratio Prot		c0.14			0.08			c0.19			0.06	
v/s Ratio Perm	0.09			0.02			0.05		0.01	0.05		0.00
v/c Ratio	0.18	0.28		0.04	0.17		0.12	0.48	0.03	0.13	0.16	0.01
Uniform Delay, d1	9.7	10.3		9.1	9.7		12.3	14.5	11.9	12.4	12.5	11.7
Progression Factor	1.00	1.00		1.00	1.00		0.77	0.87	0.57	0.51	0.50	0.26
Incremental Delay, d2	1.0	0.5		0.2	0.2		0.5	2.5	0.1	0.9	0.5	0.0
Delay (s)	10.7	10.8		9.3	9.9		10.0	15.1	6.9	7.1	6.9	3.1
Level of Service	B	B		A	A		B	B	A	A	A	A
Approach Delay (s)		10.8			9.8			13.6			6.7	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM Average Control Delay	11.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

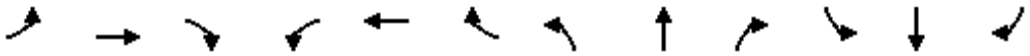


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	78	330	67	40	239	59	56	320	38	50	124	41
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	11	10	11	11	10	11	11	10	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.96	1.00		0.99	1.00		0.98	1.00		0.96	1.00	
Frt	1.00	0.97		1.00	0.97		1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1459	3058		1587	3000		1540	3022		1397	2790	
Flt Permitted	0.56	1.00		0.49	1.00		0.64	1.00		0.51	1.00	
Satd. Flow (perm)	868	3058		824	3000		1044	3022		749	2790	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	80	340	69	41	246	61	58	330	39	52	128	42
RTOR Reduction (vph)	0	0	0	0	0	0	0	12	0	0	25	0
Lane Group Flow (vph)	80	409	0	41	307	0	58	357	0	52	145	0
Confl. Peds. (#/hr)	98		10	10		98	28		52	52		28
Heavy Vehicles (%)	5%	5%	4%	0%	5%	7%	2%	6%	13%	10%	11%	20%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.41	0.41		0.41	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	417	1468		396	1440		432	1249		310	1153	
v/s Ratio Prot		c0.13			0.10			c0.12			0.05	
v/s Ratio Perm	0.09			0.05			0.06			0.07		
v/c Ratio	0.19	0.28		0.10	0.21		0.13	0.29		0.17	0.13	
Uniform Delay, d1	11.2	11.7		10.7	11.3		13.7	14.6		13.9	13.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.0	0.5		0.5	0.3		0.6	0.6		1.2	0.2	
Delay (s)	12.2	12.2		11.2	11.6		14.3	15.2		15.0	13.8	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		12.2			11.6			15.1			14.1	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	47.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	84	252	29	21	292	43	54	344	22	34	161	36
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	8	16	12	9	10	10	9	10	10
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1533	1575		1470	1840		1532	3072		1371	2892	
Flt Permitted	0.49	1.00		0.55	1.00		0.62	1.00		0.49	1.00	
Satd. Flow (perm)	787	1575		852	1840		1003	3072		711	2892	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	88	265	31	22	307	45	57	362	23	36	169	38
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	88	296	0	22	352	0	57	385	0	36	207	0
Confl. Peds. (#/hr)	7		23	23		7	10		8	8		10
Confl. Bikes (#/hr)	1		2	2		1	1		1	1		1
Heavy Vehicles (%)	4%	8%	10%	0%	9%	5%	0%	3%	0%	12%	7%	6%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	47.0	41.8		40.6	38.6		26.8	22.2		23.6	20.6	
Effective Green, g (s)	47.0	39.8		40.6	36.6		26.8	20.2		23.6	18.6	
Actuated g/C Ratio	0.55	0.47		0.48	0.43		0.32	0.24		0.28	0.22	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	481	737		421	792		345	730		221	633	
v/s Ratio Prot	c0.01	0.19		0.00	c0.19		c0.01	c0.13		0.01	0.07	
v/s Ratio Perm	0.09			0.02			0.04			0.04		
v/c Ratio	0.18	0.40		0.05	0.44		0.17	0.53		0.16	0.33	
Uniform Delay, d1	11.9	14.8		12.9	17.0		21.1	28.2		24.2	27.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	1.6		0.1	1.8		0.2	2.7		0.3	1.4	
Delay (s)	12.1	16.4		13.0	18.8		21.4	31.0		24.6	29.3	
Level of Service	B	B		B	B		C	C		C	C	
Approach Delay (s)		15.4			18.5			29.7			28.6	
Approach LOS		B			B			C			C	

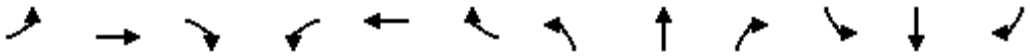
Intersection Summary			
HCM Average Control Delay	22.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	59.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	53	247	34	54	312	95	44	300	97	51	146	32
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	11	11	11	11	12	12	10	10	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		0.99	1.00	
Frt		0.98			0.97		1.00	0.96		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3492			2910		1614	3156		1577	2926	
Flt Permitted		0.82			0.87		0.63	1.00		0.47	1.00	
Satd. Flow (perm)		2902			2546		1073	3156		785	2926	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	57	266	37	58	335	102	47	323	104	55	157	34
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	360	0	0	495	0	47	427	0	55	191	0
Confl. Peds. (#/hr)	20		16	16		20	5		33	33		5
Confl. Bikes (#/hr)	2					2			2	2		
Heavy Vehicles (%)	9%	9%	0%	24%	7%	6%	2%	4%	2%	0%	5%	9%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.0			33.0		32.0	32.0		32.0	32.0	
Effective Green, g (s)		34.0			34.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio		0.45			0.45		0.44	0.44		0.44	0.44	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		1316			1154		472	1389		345	1287	
v/s Ratio Prot								c0.14			0.07	
v/s Ratio Perm		0.12			c0.19		0.04			0.07		
v/c Ratio		0.27			0.43		0.10	0.31		0.16	0.15	
Uniform Delay, d1		12.8			13.9		12.3	13.6		12.6	12.6	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.5			1.2		0.4	0.6		1.0	0.2	
Delay (s)		13.3			15.1		12.7	14.2		13.6	12.8	
Level of Service		B			B		B	B		B	B	
Approach Delay (s)		13.3			15.1			14.0			13.0	
Approach LOS		B			B			B			B	

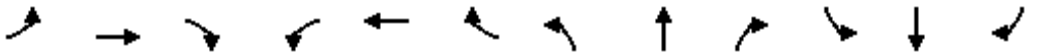
Intersection Summary			
HCM Average Control Delay	14.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	112	401	4	12	536	317	56	7	16	91	1	40
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	12	12	12	12	12	13	13	13
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	1.00		1.00	1.00	0.85		0.97			0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97			0.97	
Satd. Flow (prot)	1574	3144		1629	3257	1457		1611			3106	
Flt Permitted	0.43	1.00		0.50	1.00	1.00		0.72			0.78	
Satd. Flow (perm)	721	3144		856	3257	1457		1197			2522	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	120	431	4	13	576	341	60	8	17	98	1	43
RTOR Reduction (vph)	0	1	0	0	0	102	0	14	0	0	35	0
Lane Group Flow (vph)	120	434	0	13	576	239	0	71	0	0	107	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	46.9	46.9		46.9	46.9	46.9		11.9			11.9	
Effective Green, g (s)	46.9	46.9		46.9	46.9	46.9		11.9			11.9	
Actuated g/C Ratio	0.70	0.70		0.70	0.70	0.70		0.18			0.18	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		8.0			8.0	
Lane Grp Cap (vph)	506	2207		601	2287	1023		213			449	
v/s Ratio Prot		0.14			c0.18							
v/s Ratio Perm	0.17			0.02		0.16		c0.06			0.04	
v/c Ratio	0.24	0.20		0.02	0.25	0.23		0.33			0.24	
Uniform Delay, d1	3.6	3.4		3.0	3.6	3.5		24.0			23.6	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	1.1	0.2		0.1	0.3	0.5		3.9			1.2	
Delay (s)	4.7	3.6		3.1	3.9	4.1		27.9			24.7	
Level of Service	A	A		A	A	A		C			C	
Approach Delay (s)		3.9			3.9			27.9			24.7	
Approach LOS		A			A			C			C	

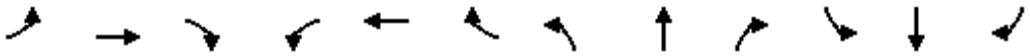
Intersection Summary			
HCM Average Control Delay	6.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	66.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	49.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	111	214	67	63	190	66	106	1591	71	67	476	39
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	9	12	10	10	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.96	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.96		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1548	1505		1547	1589		1493	3069	1271	1452	2983	1301
Flt Permitted	0.38	1.00		0.34	1.00		0.41	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	625	1505		547	1589		636	3069	1271	180	2983	1301
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	117	225	71	66	200	69	112	1675	75	71	501	41
RTOR Reduction (vph)	0	13	0	0	15	0	0	0	18	0	0	24
Lane Group Flow (vph)	117	283	0	66	254	0	112	1675	57	71	501	17
Confl. Peds. (#/hr)	4		9	9		4	6		16	16		6
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	3%	3%	4%	3%	1%	2%	3%	4%	4%	6%	7%	3%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	28.0	21.0		28.0	21.0		42.0	35.0	35.0	42.0	35.0	35.0
Effective Green, g (s)	26.0	22.0		26.0	22.0		40.0	35.0	35.0	40.0	35.0	35.0
Actuated g/C Ratio	0.31	0.26		0.31	0.26		0.47	0.41	0.41	0.47	0.41	0.41
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	256	390		238	411		360	1264	523	174	1228	536
v/s Ratio Prot	c0.03	c0.19		0.02	0.16		0.02	c0.55		c0.03	0.17	
v/s Ratio Perm	0.11			0.07			0.12		0.04	0.16		0.01
v/c Ratio	0.46	0.72		0.28	0.62		0.31	1.33	0.11	0.41	0.41	0.03
Uniform Delay, d1	22.5	28.7		21.8	27.8		13.0	25.0	15.4	18.1	17.7	14.9
Progression Factor	1.00	1.00		1.00	1.00		0.62	0.69	0.46	1.00	1.00	1.00
Incremental Delay, d2	5.8	11.1		2.9	6.8		2.0	151.4	0.4	6.9	1.0	0.1
Delay (s)	28.3	39.9		24.7	34.6		10.1	168.6	7.4	25.0	18.7	15.0
Level of Service	C	D		C	C		B	F	A	C	B	B
Approach Delay (s)		36.6			32.7			152.6			19.2	
Approach LOS		D			C			F			B	

Intersection Summary			
HCM Average Control Delay	99.9	HCM Level of Service	F
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	85.1%	ICU Level of Service	E
Analysis Period (min)	15		

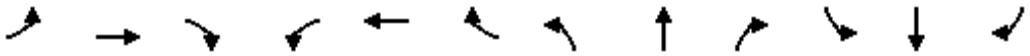
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	26	212	15	15	149	9	16	146	24	28	130	19
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	14	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.99			0.98			0.99	
Flt Protected		0.99			1.00			1.00			0.99	
Satd. Flow (prot)		1851			1846			1901			1931	
Flt Permitted		0.96			0.97			0.97			0.94	
Satd. Flow (perm)		1791			1795			1860			1835	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	28	226	16	16	159	10	17	155	26	30	138	20
RTOR Reduction (vph)	0	4	0	0	3	0	0	9	0	0	6	0
Lane Group Flow (vph)	0	266	0	0	182	0	0	189	0	0	182	0
Confl. Peds. (#/hr)	5		11	11		5	7		34	34		7
Confl. Bikes (#/hr)			3	3								
Heavy Vehicles (%)	4%	2%	0%	20%	1%	0%	12%	3%	8%	0%	3%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.42			0.42			0.46			0.46	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		744			746			858			847	
v/s Ratio Prot												
v/s Ratio Perm		c0.15			0.10			c0.10			0.10	
v/c Ratio		0.36			0.24			0.22			0.21	
Uniform Delay, d1		13.0			12.4			10.5			10.5	
Progression Factor		1.00			0.55			1.07			1.00	
Incremental Delay, d2		1.3			0.8			0.6			0.6	
Delay (s)		14.4			7.6			11.8			11.0	
Level of Service		B			A			B			B	
Approach Delay (s)		14.4			7.6			11.8			11.0	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	42.9%	ICU Level of Service	A
Analysis Period (min)	15		

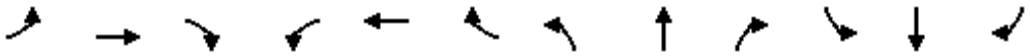
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	181	25	9	162	16	33	296	26	15	86	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.95	1.00		1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1465	3013		1302	3048		1529	3092		1492	2867	
Flt Permitted	0.63	1.00		0.61	1.00		0.68	1.00		0.54	1.00	
Satd. Flow (perm)	969	3013		837	3048		1094	3092		848	2867	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	26	199	27	10	178	18	36	325	29	16	95	19
RTOR Reduction (vph)	0	16	0	0	12	0	0	10	0	0	8	0
Lane Group Flow (vph)	26	210	0	10	184	0	36	344	0	16	106	0
Confl. Peds. (#/hr)	35		6	6		35	18					18
Confl. Bikes (#/hr)	14		32	32		14	23		7	7		23
Heavy Vehicles (%)	4%	4%	0%	22%	2%	6%	3%	2%	0%	7%	8%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0		39.0	39.0		39.0	39.0	
Effective Green, g (s)	19.0	19.0		19.0	19.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.58	0.58		0.58	0.58	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	283	881		245	891		640	1808		496	1676	
v/s Ratio Prot		c0.07			0.06			c0.11			0.04	
v/s Ratio Perm	0.03			0.01			0.03			0.02		
v/c Ratio	0.09	0.24		0.04	0.21		0.06	0.19		0.03	0.06	
Uniform Delay, d1	16.7	17.5		16.5	17.3		5.8	6.3		5.7	5.8	
Progression Factor	0.69	0.70		0.77	0.76		0.92	0.93		0.47	0.43	
Incremental Delay, d2	0.6	0.6		0.3	0.5		0.2	0.2		0.1	0.1	
Delay (s)	12.2	12.9		13.1	13.7		5.5	6.1		2.8	2.6	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		12.8			13.7			6.1			2.6	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	9.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.21		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.0%	ICU Level of Service	A
Analysis Period (min)	15		

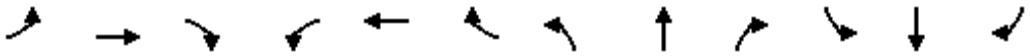
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	46	178	31	16	122	29	27	414	24	11	163	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	9	9	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.98		1.00	0.97			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1555	2960		1514	2884			1878			1806	
Flt Permitted	0.65	1.00		0.62	1.00			0.98			0.97	
Satd. Flow (perm)	1071	2960		985	2884			1843			1763	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	47	182	32	16	124	30	28	422	24	11	166	15
RTOR Reduction (vph)	0	19	0	0	18	0	0	3	0	0	5	0
Lane Group Flow (vph)	47	195	0	16	136	0	0	471	0	0	187	0
Confl. Peds. (#/hr)	10		29	29		10	17		10	10		17
Confl. Bikes (#/hr)									2	2		
Heavy Vehicles (%)	2%	4%	10%	0%	4%	0%	0%	8%	4%	0%	13%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Effective Green, g (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40			0.48			0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	428	1184		394	1154			879			841	
v/s Ratio Prot		c0.07			0.05							
v/s Ratio Perm	0.04			0.02				c0.26			0.11	
v/c Ratio	0.11	0.16		0.04	0.12			0.54			0.22	
Uniform Delay, d1	12.2	12.5		11.9	12.3			11.9			9.9	
Progression Factor	1.00	0.90		0.87	0.88			1.06			1.00	
Incremental Delay, d2	0.5	0.3		0.2	0.2			2.3			0.6	
Delay (s)	12.8	11.6		10.6	11.0			14.9			10.6	
Level of Service	B	B		B	B			B			B	
Approach Delay (s)		11.8			11.0			14.9			10.6	
Approach LOS		B			B			B			B	

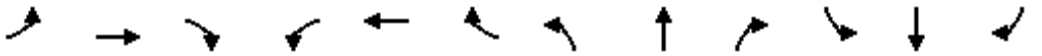
Intersection Summary			
HCM Average Control Delay	12.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



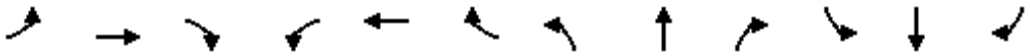
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	70	99	40	2	65	26	19	262	9	5	142	23
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	16	12	10	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.96		1.00	0.96			1.00			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1605	1889		1586	1873			1971			1931	
Flt Permitted	0.69	1.00		0.64	1.00			0.98			0.99	
Satd. Flow (perm)	1163	1889		1068	1873			1935			1918	
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	81	115	47	2	76	30	22	305	10	6	165	27
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	81	162	0	2	106	0	0	337	0	0	198	0
Confl. Peds. (#/hr)			8	8			1		8	8		1
Heavy Vehicles (%)	3%	3%	2%	0%	6%	0%	0%	3%	0%	0%	4%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Effective Green, g (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Actuated g/C Ratio	0.31	0.31		0.31	0.31			0.57			0.57	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	358	581		329	576			1101			1092	
v/s Ratio Prot		c0.09			0.06							
v/s Ratio Perm	0.07			0.00				c0.17			0.10	
v/c Ratio	0.23	0.28		0.01	0.18			0.31			0.18	
Uniform Delay, d1	16.7	17.0		15.6	16.5			7.3			6.7	
Progression Factor	0.85	0.83		0.92	0.90			0.91			1.00	
Incremental Delay, d2	1.4	1.2		0.0	0.7			0.7			0.4	
Delay (s)	15.6	15.3		14.4	15.6			7.3			7.1	
Level of Service	B	B		B	B			A			A	
Approach Delay (s)		15.4			15.6			7.3			7.1	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	10.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	44.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	94	7	40	1	3	8	30	379	5	2	155	39
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	10	11	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.97		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	0.98	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.87		1.00	0.89		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1603	1674		1710	1401		1491	1631	1392	1649	1907	1427
Flt Permitted	0.75	1.00		0.72	1.00		0.65	1.00	1.00	0.46	1.00	1.00
Satd. Flow (perm)	1265	1674		1300	1401		1014	1631	1392	793	1907	1427
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	107	8	45	1	3	9	34	431	6	2	176	44
RTOR Reduction (vph)	0	33	0	0	7	0	0	0	2	0	0	18
Lane Group Flow (vph)	107	20	0	1	5	0	34	431	4	2	176	26
Confl. Peds. (#/hr)	9					9	1		6	6		1
Heavy Vehicles (%)	5%	14%	5%	0%	67%	12%	7%	3%	0%	0%	7%	5%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	17.0	17.0		17.0	17.0		39.0	39.0	39.0	39.0	39.0	39.0
Effective Green, g (s)	18.0	18.0		18.0	18.0		39.0	39.0	39.0	39.0	39.0	39.0
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.60	0.60	0.60	0.60	0.60	0.60
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	350	464		360	388		608	979	835	476	1144	856
v/s Ratio Prot		0.01			0.00			c0.26			0.09	
v/s Ratio Perm	c0.08			0.00			0.03		0.00	0.00		0.02
v/c Ratio	0.31	0.04		0.00	0.01		0.06	0.44	0.00	0.00	0.15	0.03
Uniform Delay, d1	18.6	17.2		17.0	17.1		5.4	7.1	5.2	5.2	5.7	5.3
Progression Factor	1.52	2.41		1.00	1.00		0.90	0.91	0.89	1.00	1.00	1.00
Incremental Delay, d2	2.2	0.2		0.0	0.1		0.2	1.3	0.0	0.0	0.3	0.1
Delay (s)	30.5	41.6		17.0	17.1		5.0	7.7	4.6	5.2	6.0	5.4
Level of Service	C	D		B	B		A	A	A	A	A	A
Approach Delay (s)		34.1			17.1			7.5			5.9	
Approach LOS		C			B			A			A	

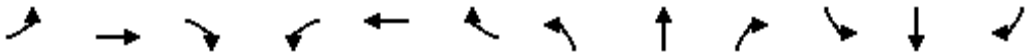
Intersection Summary			
HCM Average Control Delay	12.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	232	76	101	313	0	0	0	0	71	305	361
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)		4.0		3.0	3.0					5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	
Frpb, ped/bikes		0.99		1.00	1.00					1.00	0.99	
Flpb, ped/bikes		1.00		0.99	1.00					1.00	1.00	
Frt		0.96		1.00	1.00					1.00	0.92	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		2823		1620	3288					1574	2906	
Flt Permitted		1.00		0.50	1.00					0.95	1.00	
Satd. Flow (perm)		2823		855	3288					1574	2906	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	247	81	107	333	0	0	0	0	76	324	384
RTOR Reduction (vph)	0	31	0	0	0	0	0	0	0	0	216	0
Lane Group Flow (vph)	0	297	0	107	333	0	0	0	0	76	492	0
Confl. Peds. (#/hr)	14		32	32		14	14					14
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	9%	4%	5%	4%	0%	0%	0%	0%	5%	2%	4%
Turn Type				D.P+P						custom		
Protected Phases		8		7	7 8					6	6	
Permitted Phases				8						6		
Actuated Green, G (s)		33.0		56.0	59.0					32.0	32.0	
Effective Green, g (s)		33.0		56.0	59.0					32.0	32.0	
Actuated g/C Ratio		0.33		0.56	0.59					0.32	0.32	
Clearance Time (s)		4.0		3.0						5.0	5.0	
Lane Grp Cap (vph)		932		655	1940					504	930	
v/s Ratio Prot		c0.11		0.04	c0.10					0.05	c0.17	
v/s Ratio Perm				0.05								
v/c Ratio		0.32		0.16	0.17					0.15	0.53	
Uniform Delay, d1		25.1		10.4	9.4					24.3	27.8	
Progression Factor		1.00		1.88	1.97					1.00	1.00	
Incremental Delay, d2		0.9		0.5	0.2					0.6	2.2	
Delay (s)		26.0		20.0	18.6					24.9	30.0	
Level of Service		C		C	B					C	C	
Approach Delay (s)		26.0			18.9			0.0			29.5	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM Average Control Delay	25.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	60.0%	ICU Level of Service	B
Analysis Period (min)	15		

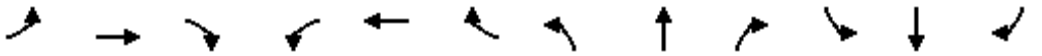
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	129	174	0	0	253	54	161	509	289	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	9	12	13	12	13	12	12	12
Total Lost time (s)	4.0	4.0			4.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.97		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1671	3054			2832		1750	1782	1514			
Flt Permitted	0.42	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	744	3054			2832		1750	1782	1514			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	143	193	0	0	281	60	179	566	321	0	0	0
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	215	0	0	0
Lane Group Flow (vph)	143	193	0	0	323	0	179	566	106	0	0	0
Confl. Peds. (#/hr)	14		16	16		14			1	1		
Confl. Bikes (#/hr)	1					1			1	1		
Heavy Vehicles (%)	2%	12%	0%	0%	5%	4%	1%	1%	3%	0%	0%	0%
Turn Type	pm+pt						custom		Perm			
Protected Phases	4	1 4			1		2	2				
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	54.0	58.0			21.0		33.0	33.0	33.0			
Effective Green, g (s)	54.0	58.0			21.0		33.0	33.0	33.0			
Actuated g/C Ratio	0.54	0.58			0.21		0.33	0.33	0.33			
Clearance Time (s)	4.0				4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	708	1771			595		578	588	500			
v/s Ratio Prot	c0.07	0.06			c0.11		0.10	c0.32				
v/s Ratio Perm	0.04								0.07			
v/c Ratio	0.20	0.11			0.54		0.31	0.96	0.21			
Uniform Delay, d1	11.7	9.4			35.2		25.0	32.9	24.1			
Progression Factor	0.28	0.28			1.00		0.75	0.79	1.87			
Incremental Delay, d2	0.6	0.1			3.5		1.0	23.4	0.7			
Delay (s)	3.9	2.8			38.7		19.7	49.3	45.8			
Level of Service	A	A			D		B	D	D			
Approach Delay (s)		3.2			38.7			43.3			0.0	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM Average Control Delay	34.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	60.0%	ICU Level of Service	B
Analysis Period (min)	15		

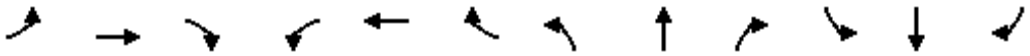
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	420	327	33	571	0	0	0	0	4	215	193
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	11	12	12	12	12	10	10	12
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	1.00
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.93		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3113		1613	3273					1596	3160	1443
Flt Permitted		1.00		0.18	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3113		312	3273					1596	3160	1443
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	467	363	37	634	0	0	0	0	4	239	214
RTOR Reduction (vph)	0	141	0	0	0	0	0	0	0	0	0	141
Lane Group Flow (vph)	0	689	0	37	634	0	0	0	0	4	239	73
Confl. Peds. (#/hr)	22		3	3		22						
Confl. Bikes (#/hr)	4					4			32	32		
Heavy Vehicles (%)	0%	2%	2%	6%	1%	0%	0%	0%	0%	0%	1%	6%
Turn Type				pm+pt						Split		Prot
Protected Phases		8		7	7 8					6	6	6
Permitted Phases				7 8								
Actuated Green, G (s)		36.0		54.0	58.0					34.0	34.0	34.0
Effective Green, g (s)		36.0		54.0	58.0					34.0	34.0	34.0
Actuated g/C Ratio		0.36		0.54	0.58					0.34	0.34	0.34
Clearance Time (s)		4.0		4.0						4.0	4.0	4.0
Lane Grp Cap (vph)		1121		403	1898					543	1074	491
v/s Ratio Prot		c0.22		0.02	c0.19					0.00	c0.08	0.05
v/s Ratio Perm				0.03								
v/c Ratio		0.61		0.09	0.33					0.01	0.22	0.15
Uniform Delay, d1		26.3		12.3	10.9					21.8	23.6	22.9
Progression Factor		1.00		0.57	0.73					0.78	0.82	1.04
Incremental Delay, d2		2.5		0.2	0.2					0.0	0.4	0.6
Delay (s)		28.8		7.3	8.2					17.0	19.8	24.4
Level of Service		C		A	A					B	B	C
Approach Delay (s)		28.8			8.1			0.0			21.9	
Approach LOS		C			A			A			C	

Intersection Summary			
HCM Average Control Delay	20.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	83.6%	ICU Level of Service	E
Analysis Period (min)	15		

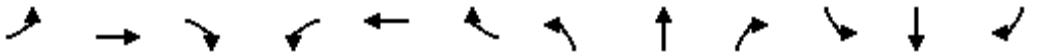
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	368	56	0	0	58	3	546	597	58	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	10	12	11	11	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	0.91	0.91			0.95		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Flpb, ped/bikes	0.99	0.99			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.99		1.00	1.00	0.85			
Flt Protected	0.95	0.96			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1444	3042			3099		1555	1637	1500			
Flt Permitted	0.71	0.74			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	1084	2341			3099		1555	1637	1500			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	387	59	0	0	61	3	575	628	61	0	0	0
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	38	0	0	0
Lane Group Flow (vph)	193	253	0	0	61	0	575	628	23	0	0	0
Confl. Peds. (#/hr)	30		2	2		30			4	4		
Confl. Bikes (#/hr)	3					3			2	2		
Heavy Vehicles (%)	3%	2%	0%	0%	2%	0%	1%	1%	2%	0%	0%	0%
Turn Type	pm+pt						custom		custom			
Protected Phases	4	1 4			1		2	2	2			
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Effective Green, g (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Actuated g/C Ratio	0.51	0.51			0.15		0.37	0.37	0.37			
Clearance Time (s)	4.0				4.0		4.0	4.0	4.0			
Lane Grp Cap (vph)	682	1446			465		575	606	555			
v/s Ratio Prot	c0.10	0.06			0.02		0.37	c0.38	0.02			
v/s Ratio Perm	c0.04	0.03										
v/c Ratio	0.28	0.17			0.13		1.00	1.04	0.04			
Uniform Delay, d1	13.9	13.2			36.9		31.5	31.5	20.1			
Progression Factor	0.24	0.25			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.8	0.2			0.6		37.5	46.3	0.1			
Delay (s)	4.1	3.5			37.4		69.0	77.8	20.3			
Level of Service	A	A			D		E	E	C			
Approach Delay (s)		3.7			37.4			71.0			0.0	
Approach LOS		A			D			E			A	

Intersection Summary			
HCM Average Control Delay	52.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	83.6%	ICU Level of Service	E
Analysis Period (min)	15		

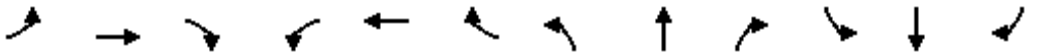
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	126	202	54	45	142	88	35	921	50	88	476	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	9	10	9	9	10	9
Total Lost time (s)		4.0			4.0		4.0	3.5	4.0	4.0	3.5	4.0
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00			0.98		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes		0.99			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.98			0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.98			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		2832			2768		1447	3069	1336	1494	2956	1270
Flt Permitted		0.73			0.84		0.40	1.00	1.00	0.15	1.00	1.00
Satd. Flow (perm)		2093			2348		605	3069	1336	233	2956	1270
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	130	208	56	46	146	91	36	949	52	91	491	43
RTOR Reduction (vph)	0	16	0	0	61	0	0	0	24	0	0	26
Lane Group Flow (vph)	0	378	0	0	222	0	36	949	28	91	491	17
Confl. Peds. (#/hr)	49		20	20		49	26		8	8		26
Confl. Bikes (#/hr)	2					2						
Heavy Vehicles (%)	10%	7%	4%	9%	7%	5%	6%	4%	0%	3%	8%	5%
Turn Type	pm+pt			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		35.0			27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)		36.0			28.0		36.0	33.5	33.0	36.0	33.5	33.0
Actuated g/C Ratio		0.42			0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)		5.0			5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)		939			773		296	1210	519	158	1165	493
v/s Ratio Prot		c0.03					0.01	c0.31		c0.03	0.17	
v/s Ratio Perm		0.14			0.09		0.05		0.02	0.22		0.01
v/c Ratio		0.40			0.29		0.12	0.78	0.05	0.58	0.42	0.03
Uniform Delay, d1		17.0			21.1		14.6	22.6	16.2	17.0	18.7	16.1
Progression Factor		1.00			1.00		1.16	0.77	1.21	1.81	1.66	3.17
Incremental Delay, d2		1.3			0.9		0.6	3.9	0.1	13.3	1.0	0.1
Delay (s)		18.3			22.0		17.6	21.2	19.8	44.0	32.0	51.3
Level of Service		B			C		B	C	B	D	C	D
Approach Delay (s)		18.3			22.0			21.0			35.1	
Approach LOS		B			C			C			D	

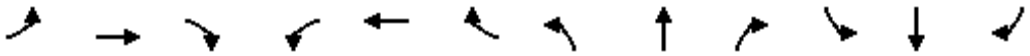
Intersection Summary			
HCM Average Control Delay	24.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	72.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	34	306	0	0	253	63	22	49	76	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.97			0.93				
Flt Protected		0.99			1.00			0.99				
Satd. Flow (prot)		1706			1668			1583				
Flt Permitted		0.95			1.00			0.99				
Satd. Flow (perm)		1623			1668			1583				
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	37	329	0	0	272	68	24	53	82	0	0	0
RTOR Reduction (vph)	0	0	0	0	14	0	0	53	0	0	0	0
Lane Group Flow (vph)	0	366	0	0	326	0	0	106	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		34.0			34.0			23.0				
Effective Green, g (s)		34.0			34.0			23.0				
Actuated g/C Ratio		0.52			0.52			0.35				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		849			872			560				
v/s Ratio Prot					0.20							
v/s Ratio Perm		c0.23						0.07				
v/c Ratio		0.43			0.37			0.19				
Uniform Delay, d1		9.5			9.2			14.5				
Progression Factor		1.00			0.45			1.00				
Incremental Delay, d2		1.6			1.2			0.7				
Delay (s)		11.1			5.3			15.3				
Level of Service		B			A			B				
Approach Delay (s)		11.1			5.3			15.3			0.0	
Approach LOS		B			A			B			A	

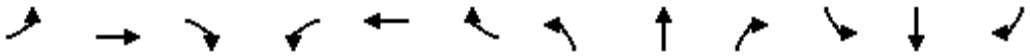
Intersection Summary			
HCM Average Control Delay	9.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	35	306	24	16	262	38	13	140	28	48	100	18
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.98			0.98			0.98	
Flt Protected		1.00			1.00			1.00			0.99	
Satd. Flow (prot)		1886			1833			3185			3152	
Flt Permitted		0.95			0.98			0.94			0.85	
Satd. Flow (perm)		1797			1794			2991			2705	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	37	326	26	17	279	40	14	149	30	51	106	19
RTOR Reduction (vph)	0	4	0	0	8	0	0	18	0	0	11	0
Lane Group Flow (vph)	0	385	0	0	328	0	0	175	0	0	165	0
Confl. Peds. (#/hr)	29		16	16		29	28		14	14		28
Confl. Bikes (#/hr)	1					1	1					1
Heavy Vehicles (%)	3%	7%	4%	12%	8%	13%	0%	4%	4%	4%	4%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0			27.0			27.0	
Effective Green, g (s)		30.0			30.0			27.0			27.0	
Actuated g/C Ratio		0.46			0.46			0.42			0.42	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		829			828			1242			1124	
v/s Ratio Prot												
v/s Ratio Perm		c0.21			0.18			0.06			c0.06	
v/c Ratio		0.46			0.40			0.14			0.15	
Uniform Delay, d1		12.0			11.5			11.8			11.8	
Progression Factor		0.61			0.45			0.85			0.57	
Incremental Delay, d2		1.7			1.4			0.2			0.3	
Delay (s)		9.1			6.6			10.2			7.0	
Level of Service		A			A			B			A	
Approach Delay (s)		9.1			6.6			10.2			7.0	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM Average Control Delay	8.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.4%	ICU Level of Service	C
Analysis Period (min)	15		

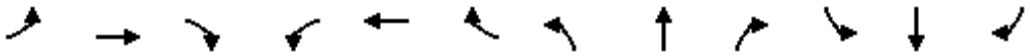
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	204	16	28	280	61	36	246	69	37	74	16
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	9	10	10	9	10	10	12	10	10	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.97		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1500	2936		1582	2932		1497	3034		1594	2938	
Flt Permitted	0.51	1.00		0.61	1.00		0.69	1.00		0.55	1.00	
Satd. Flow (perm)	803	2936		1009	2932		1090	3034		923	2938	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	41	217	17	30	298	65	38	262	73	39	79	17
RTOR Reduction (vph)	0	9	0	0	28	0	0	34	0	0	8	0
Lane Group Flow (vph)	41	225	0	30	335	0	38	301	0	39	88	0
Confl. Peds. (#/hr)	25		14	14		25	12		4	4		12
Confl. Bikes (#/hr)	1					1			1	1		
Heavy Vehicles (%)	5%	7%	12%	0%	6%	2%	6%	1%	3%	0%	4%	12%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	272	994		342	992		587	1634		497	1582	
v/s Ratio Prot		0.08			c0.11			c0.10			0.03	
v/s Ratio Perm	0.05			0.03			0.03			0.04		
v/c Ratio	0.15	0.23		0.09	0.34		0.06	0.18		0.08	0.06	
Uniform Delay, d1	15.0	15.4		14.7	16.1		7.2	7.7		7.2	7.1	
Progression Factor	0.66	0.64		0.74	0.73		0.68	0.71		1.27	1.28	
Incremental Delay, d2	1.1	0.5		0.5	0.9		0.2	0.2		0.3	0.1	
Delay (s)	11.0	10.4		11.4	12.6		5.1	5.7		9.5	9.2	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		10.5			12.5			5.7			9.3	
Approach LOS		B			B			A			A	

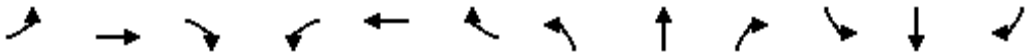
Intersection Summary			
HCM Average Control Delay	9.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	64	293	20	37	313	82	11	302	44	41	118	38
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	9	10	9	9	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.98			1.00			0.99	
Flpb, ped/bikes	0.97	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.97			0.98			0.97	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1381	3014		1332	3523			3432			3309	
Flt Permitted	0.49	1.00		0.55	1.00			0.95			0.84	
Satd. Flow (perm)	718	3014		772	3523			3252			2811	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	68	312	21	39	333	87	12	321	47	44	126	40
RTOR Reduction (vph)	0	7	0	0	36	0	0	17	0	0	24	0
Lane Group Flow (vph)	68	326	0	39	384	0	0	363	0	0	186	0
Confl. Peds. (#/hr)	53		34	34		53	67		28	28		67
Heavy Vehicles (%)	8%	5%	0%	14%	6%	1%	0%	9%	20%	5%	15%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Effective Green, g (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48			0.40			0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	342	1437		368	1680			1301			1124	
v/s Ratio Prot		0.11			c0.11							
v/s Ratio Perm	0.09			0.05				c0.11			0.07	
v/c Ratio	0.20	0.23		0.11	0.23			0.28			0.17	
Uniform Delay, d1	9.8	10.0		9.4	10.0			13.2			12.5	
Progression Factor	1.59	1.63		0.74	0.68			0.53			0.64	
Incremental Delay, d2	1.3	0.4		0.5	0.3			0.5			0.3	
Delay (s)	16.9	16.6		7.5	7.1			7.5			8.3	
Level of Service	B	B		A	A			A			A	
Approach Delay (s)		16.7			7.1			7.5			8.3	
Approach LOS		B			A			A			A	

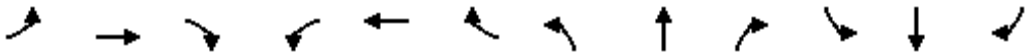
Intersection Summary			
HCM Average Control Delay	10.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	76	226	76	103	311	103	61	65	68	68	65	61
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	16	12	12	16	12
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		0.95			1.00			1.00	
Frt		1.00	0.85		0.97			0.95			0.96	
Flt Protected		0.99	1.00		0.99			0.98			0.98	
Satd. Flow (prot)		1636	1409		3024			1822			1828	
Flt Permitted		0.78	1.00		0.81			0.86			0.84	
Satd. Flow (perm)		1286	1409		2480			1590			1571	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	82	243	82	111	334	111	66	70	73	73	70	66
RTOR Reduction (vph)	0	0	39	0	34	0	0	30	0	0	26	0
Lane Group Flow (vph)	0	325	43	0	522	0	0	179	0	0	183	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		34.0	34.0		34.0			21.0			21.0	
Effective Green, g (s)		34.0	34.0		34.0			21.0			21.0	
Actuated g/C Ratio		0.52	0.52		0.52			0.32			0.32	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Grp Cap (vph)		673	737		1297			514			508	
v/s Ratio Prot												
v/s Ratio Perm		c0.25	0.03		0.21			0.11			c0.12	
v/c Ratio		0.48	0.06		0.40			0.35			0.36	
Uniform Delay, d1		9.9	7.6		9.4			16.8			16.9	
Progression Factor		2.13	5.31		0.34			1.00			1.00	
Incremental Delay, d2		2.4	0.1		0.9			1.9			2.0	
Delay (s)		23.5	40.6		4.0			18.6			18.8	
Level of Service		C	D		A			B			B	
Approach Delay (s)		26.9			4.0			18.6			18.8	
Approach LOS		C			A			B			B	

Intersection Summary			
HCM Average Control Delay	15.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	61.0%	ICU Level of Service	B
Analysis Period (min)	15		

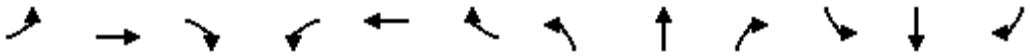
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	56	291	15	15	417	63	28	102	41	35	73	72
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	15	8	16	8	8	16	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00			0.99	
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.98			0.96			0.94	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1474	3019		1568	2999			3444			3420	
Flt Permitted	0.42	1.00		0.55	1.00			0.90			0.89	
Satd. Flow (perm)	655	3019		915	2999			3123			3063	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	60	310	16	16	444	67	30	109	44	37	78	77
RTOR Reduction (vph)	0	6	0	0	18	0	0	24	0	0	43	0
Lane Group Flow (vph)	60	320	0	16	493	0	0	159	0	0	149	0
Confl. Peds. (#/hr)	22		40	40		22	18		3	3		18
Confl. Bikes (#/hr)			2	2			1					1
Heavy Vehicles (%)	7%	5%	0%	0%	4%	2%	0%	3%	22%	0%	3%	8%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	28.0	28.0		28.0	28.0			29.0			29.0	
Effective Green, g (s)	28.0	28.0		28.0	28.0			29.0			29.0	
Actuated g/C Ratio	0.43	0.43		0.43	0.43			0.45			0.45	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	282	1300		394	1292			1393			1367	
v/s Ratio Prot		0.11			c0.16							
v/s Ratio Perm	0.09			0.02				c0.05			0.05	
v/c Ratio	0.21	0.25		0.04	0.38			0.11			0.11	
Uniform Delay, d1	11.6	11.8		10.7	12.6			10.5			10.5	
Progression Factor	1.09	1.09		0.83	0.73			1.01			0.75	
Incremental Delay, d2	1.6	0.4		0.2	0.8			0.2			0.2	
Delay (s)	14.2	13.2		9.1	10.0			10.7			8.0	
Level of Service	B	B		A	B			B			A	
Approach Delay (s)		13.4			10.0			10.7			8.0	
Approach LOS		B			A			B			A	

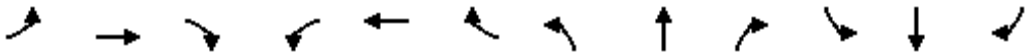
Intersection Summary			
HCM Average Control Delay	10.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	66	349	55	73	346	219	32	256	71	171	123	38
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.98			0.95			0.97			0.98	
Flt Protected		0.99			0.99			1.00			0.97	
Satd. Flow (prot)		3178			3072			3147			3121	
Flt Permitted		0.77			0.83			0.91			0.67	
Satd. Flow (perm)		2479			2572			2881			2129	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	71	375	59	78	372	235	34	275	76	184	132	41
RTOR Reduction (vph)	0	16	0	0	103	0	0	33	0	0	15	0
Lane Group Flow (vph)	0	489	0	0	582	0	0	352	0	0	342	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		26.0			26.0			29.0			20.0	
Effective Green, g (s)		26.0			26.0			29.0			20.0	
Actuated g/C Ratio		0.40			0.40			0.45			0.31	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		992			1029			1310			655	
v/s Ratio Prot								c0.02				
v/s Ratio Perm		0.20			c0.23			0.10			c0.16	
v/c Ratio		0.49			0.57			0.27			0.52	
Uniform Delay, d1		14.6			15.1			11.3			18.6	
Progression Factor		1.85			1.00			1.00			0.87	
Incremental Delay, d2		1.7			2.2			0.5			3.0	
Delay (s)		28.7			17.4			11.8			19.2	
Level of Service		C			B			B			B	
Approach Delay (s)		28.7			17.4			11.8			19.2	
Approach LOS		C			B			B			B	

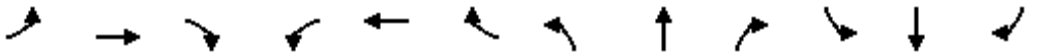
Intersection Summary			
HCM Average Control Delay	19.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	71.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	556	91	35	578	0	102	0	54	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	10	10	12	12	12	12	10	10	10
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			1.00				
Frt		0.98			1.00			0.95				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		2976			3031			1583				
Flt Permitted		1.00			0.88			0.80				
Satd. Flow (perm)		2976			2666			1311				
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	598	98	38	622	0	110	0	58	0	0	0
RTOR Reduction (vph)	0	18	0	0	0	0	0	21	0	0	0	0
Lane Group Flow (vph)	0	678	0	0	660	0	0	147	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	custom			Perm			Perm			Perm		
Protected Phases		4 5 6 11			8			2			2	
Permitted Phases	4 6 11			8			2			2		
Actuated Green, G (s)		65.0			33.0			16.0				
Effective Green, g (s)		58.0			33.0			16.0				
Actuated g/C Ratio		0.64			0.37			0.18				
Clearance Time (s)					5.0			5.0				
Lane Grp Cap (vph)		1918			978			233				
v/s Ratio Prot		c0.23										
v/s Ratio Perm					c0.25			c0.11				
v/c Ratio		0.35			0.67			0.63				
Uniform Delay, d1		7.4			24.0			34.3				
Progression Factor		0.00			1.47			1.00				
Incremental Delay, d2		0.4			3.6			12.2				
Delay (s)		0.4			38.9			46.5				
Level of Service		A			D			D				
Approach Delay (s)		0.4			38.9			46.5			0.0	
Approach LOS		A			D			D			A	

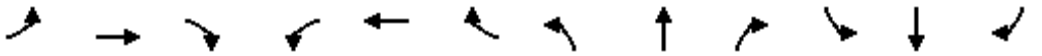
Intersection Summary			
HCM Average Control Delay	22.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	59.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	95	385	144	211	494	141	78	16	143	60	6	58
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	10	12	12	12	12	16	12	12	12	12
Total Lost time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	1.00
Frt	1.00	0.96		1.00	1.00	0.85		0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (prot)	1520	3020		1629	3257	1457		1756		1629	1714	1457
Flt Permitted	0.45	1.00		0.35	1.00	1.00		0.89		0.42	1.00	1.00
Satd. Flow (perm)	723	3020		599	3257	1457		1584		715	1714	1457
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	102	414	155	227	531	152	84	17	154	65	6	62
RTOR Reduction (vph)	0	37	0	0	0	68	0	78	0	0	0	38
Lane Group Flow (vph)	102	532	0	227	531	84	0	177	0	65	6	24
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	45.7	38.2		52.3	41.8	49.9		16.6		27.7	27.7	35.2
Effective Green, g (s)	45.7	38.2		52.3	41.8	49.9		16.6		27.7	27.7	35.2
Actuated g/C Ratio	0.51	0.42		0.58	0.46	0.55		0.18		0.31	0.31	0.39
Clearance Time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Vehicle Extension (s)	4.0	3.0		4.0	3.0	3.0		4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	434	1282		475	1513	808		292		302	528	570
v/s Ratio Prot	0.02	0.18		c0.06	0.16	0.01				c0.02	0.00	0.00
v/s Ratio Perm	0.10			c0.22		0.05		c0.11		0.05		0.01
v/c Ratio	0.24	0.42		0.48	0.35	0.10		0.61		0.22	0.01	0.04
Uniform Delay, d1	11.7	18.1		9.7	15.4	9.5		33.7		23.6	21.6	17.0
Progression Factor	1.94	1.70		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	0.4	0.9		1.0	0.6	0.1		4.1		0.4	0.0	0.0
Delay (s)	23.0	31.7		10.8	16.1	9.5		37.8		24.0	21.7	17.0
Level of Service	C	C		B	B	A		D		C	C	B
Approach Delay (s)		30.4			13.7			37.8			20.6	
Approach LOS		C			B			D			C	

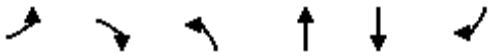
Intersection Summary			
HCM Average Control Delay	23.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	61.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	398	190	5	407	0	0	0	0	25	0	439
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	0	428	204	5	438	0	0	0	0	27	0	472
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		498										
pX, platoon unblocked												
vC, conflicting volume	438			428			658	876	214	662	876	219
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	438			428			658	876	214	662	876	219
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	92	100	39
cM capacity (veh/h)	1098			1107			134	279	782	340	279	776

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	214	214	204	151	292	27	472
Volume Left	0	0	0	5	0	27	0
Volume Right	0	0	204	0	0	0	472
cSH	1700	1700	1700	1107	1700	340	776
Volume to Capacity	0.13	0.13	0.12	0.00	0.17	0.08	0.61
Queue Length 95th (ft)	0	0	0	0	0	6	105
Control Delay (s)	0.0	0.0	0.0	0.3	0.0	16.5	16.6
Lane LOS				A		C	C
Approach Delay (s)	0.0			0.1		16.6	
Approach LOS						C	

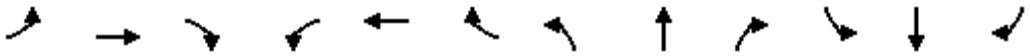
Intersection Summary				
Average Delay	5.3			
Intersection Capacity Utilization	47.4%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	423	0	412	0	0	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	455	0	443	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	227	227	443
Volume Left (vph)	227	227	443
Volume Right (vph)	0	0	0
Hadj (s)	0.58	0.58	0.29
Departure Headway (s)	6.4	6.4	5.4
Degree Utilization, x	0.40	0.40	0.66
Capacity (veh/h)	545	546	646
Control Delay (s)	12.4	12.4	18.4
Approach Delay (s)	12.4		18.4
Approach LOS	B		C

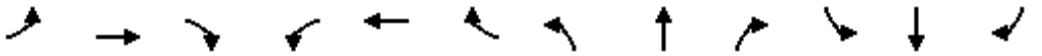
Intersection Summary			
Delay	15.4		
HCM Level of Service	C		
Intersection Capacity Utilization	43.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	339	46	126	323	0	0	0	0	72	15	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)		3.0		4.0	4.0						5.0	
Lane Util. Factor		0.95		1.00	0.95						0.95	
Frt		0.98		1.00	1.00						0.95	
Flt Protected		1.00		0.95	1.00						0.97	
Satd. Flow (prot)		3093		1574	3149						3014	
Flt Permitted		1.00		0.46	1.00						0.97	
Satd. Flow (perm)		3093		763	3149						3014	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	365	49	135	347	0	0	0	0	77	16	45
RTOR Reduction (vph)	0	12	0	0	0	0	0	0	0	0	31	0
Lane Group Flow (vph)	0	402	0	135	347	0	0	0	0	0	107	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type				pm+pt						Split		
Protected Phases		4		3	8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		36.0		49.0	49.0						27.0	
Effective Green, g (s)		36.0		49.0	49.0						27.0	
Actuated g/C Ratio		0.42		0.58	0.58						0.32	
Clearance Time (s)		3.0		4.0	4.0						5.0	
Lane Grp Cap (vph)		1310		535	1815						957	
v/s Ratio Prot		c0.13		c0.03	0.11						c0.04	
v/s Ratio Perm				0.12								
v/c Ratio		0.31		0.25	0.19						0.11	
Uniform Delay, d1		16.2		11.1	8.6						20.5	
Progression Factor		1.00		0.27	0.25						1.00	
Incremental Delay, d2		0.6		1.1	0.2						0.2	
Delay (s)		16.8		4.1	2.4						20.8	
Level of Service		B		A	A						C	
Approach Delay (s)		16.8			2.9			0.0			20.8	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	10.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.22		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.7%	ICU Level of Service	A
Analysis Period (min)	15		

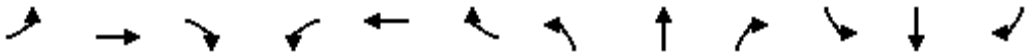
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	68	343	0	0	400	76	49	65	42	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	11	11	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0			3.0			5.0				
Lane Util. Factor	1.00	0.95			0.95			0.91				
Frt	1.00	1.00			0.98			0.96				
Flt Protected	0.95	1.00			1.00			0.98				
Satd. Flow (prot)	1629	3257			3073			4422				
Flt Permitted	0.39	1.00			1.00			0.98				
Satd. Flow (perm)	673	3257			3073			4422				
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	73	369	0	0	430	82	53	70	45	0	0	0
RTOR Reduction (vph)	0	0	0	0	19	0	0	31	0	0	0	0
Lane Group Flow (vph)	73	369	0	0	493	0	0	137	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	pm+pt						Split					
Protected Phases	7	4			8		2	2				
Permitted Phases	4											
Actuated Green, G (s)	48.0	48.0			35.0			27.0				
Effective Green, g (s)	48.0	48.0			35.0			27.0				
Actuated g/C Ratio	0.56	0.56			0.41			0.32				
Clearance Time (s)	5.0	5.0			3.0			5.0				
Lane Grp Cap (vph)	493	1839			1265			1405				
v/s Ratio Prot	0.02	c0.11			c0.16			c0.03				
v/s Ratio Perm	0.07											
v/c Ratio	0.15	0.20			0.39			0.10				
Uniform Delay, d1	11.9	9.1			17.5			20.4				
Progression Factor	0.34	0.34			1.00			1.00				
Incremental Delay, d2	0.6	0.2			0.9			0.1				
Delay (s)	4.6	3.3			18.4			20.6				
Level of Service	A	A			B			C				
Approach Delay (s)		3.5			18.4			20.6			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM Average Control Delay	12.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.7%	ICU Level of Service	A
Analysis Period (min)	15		

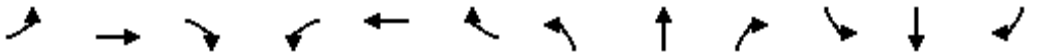
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	307	39	31	243	31	117	85	52	52	85	117
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	12	15	12	12	15	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		0.98			0.98			0.97			0.94	
Flt Protected		0.99			0.99			0.98			0.99	
Satd. Flow (prot)		2979			2979			1792			1750	
Flt Permitted		0.89			0.89			0.76			0.89	
Satd. Flow (perm)		2663			2652			1390			1579	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	42	330	42	33	261	33	126	91	56	56	91	126
RTOR Reduction (vph)	0	13	0	0	13	0	0	14	0	0	48	0
Lane Group Flow (vph)	0	401	0	0	314	0	0	259	0	0	225	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		23.0			23.0			32.0			32.0	
Effective Green, g (s)		23.0			23.0			32.0			32.0	
Actuated g/C Ratio		0.35			0.35			0.49			0.49	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		942			938			684			777	
v/s Ratio Prot												
v/s Ratio Perm		c0.15			0.12			c0.19			0.14	
v/c Ratio		0.43			0.33			0.38			0.29	
Uniform Delay, d1		16.0			15.4			10.3			9.8	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.4			1.0			1.6			0.9	
Delay (s)		17.4			16.4			11.9			10.7	
Level of Service		B			B			B			B	
Approach Delay (s)		17.4			16.4			11.9			10.7	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	14.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	62.9%	ICU Level of Service	B
Analysis Period (min)	15		

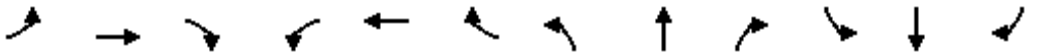
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	169	202	39	50	176	62	59	828	58	66	373	70
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	12	10	16	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.96
Flpb, ped/bikes	0.99	1.00		1.00	1.00		0.99	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1548	3005		1592	3512		1484	3040	1347	1494	3011	1271
Flt Permitted	0.59	1.00		0.58	1.00		0.48	1.00	1.00	0.19	1.00	1.00
Satd. Flow (perm)	954	3005		975	3512		743	3040	1347	291	3011	1271
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	178	213	41	53	185	65	62	872	61	69	393	74
RTOR Reduction (vph)	0	19	0	0	41	0	0	0	37	0	0	45
Lane Group Flow (vph)	178	235	0	53	209	0	62	872	24	69	393	29
Confl. Peds. (#/hr)	31		7	7		31	37		12	12		37
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	2%	4%	0%	0%	6%	2%	3%	5%	0%	3%	6%	4%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	32.0	27.0		32.0	27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)	30.0	28.0		30.0	28.0		36.0	33.0	33.0	36.0	33.0	33.0
Actuated g/C Ratio	0.35	0.33		0.35	0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	365	990		373	1157		350	1180	523	180	1169	493
v/s Ratio Prot	c0.02	0.08		0.01	0.06		0.01	c0.29		c0.02	0.13	
v/s Ratio Perm	c0.15			0.04			0.07		0.02	0.14		0.02
v/c Ratio	0.49	0.24		0.14	0.18		0.18	0.74	0.05	0.38	0.34	0.06
Uniform Delay, d1	20.6	20.7		18.4	20.3		14.8	22.3	16.2	16.1	18.3	16.3
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.55	0.60	0.84
Incremental Delay, d2	4.6	0.6		0.8	0.3		1.1	4.2	0.2	5.6	0.7	0.2
Delay (s)	25.2	21.3		19.2	20.7		15.9	26.5	16.4	30.6	11.7	13.8
Level of Service	C	C		B	C		B	C	B	C	B	B
Approach Delay (s)		22.9			20.4			25.2			14.4	
Approach LOS		C			C			C			B	

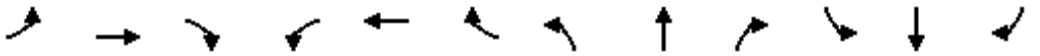
Intersection Summary			
HCM Average Control Delay	21.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	64.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	38	256	18	14	216	8	35	113	25	19	54	39
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	16	12	12	16	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00	0.99		1.00	0.98
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		0.99	1.00
Satd. Flow (prot)		1929	1382		1950	1331		1970	1452		1928	1430
Flt Permitted		0.94	1.00		0.98	1.00		0.93	1.00		0.93	1.00
Satd. Flow (perm)		1829	1382		1910	1331		1861	1452		1814	1430
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	40	269	19	15	227	8	37	119	26	20	57	41
RTOR Reduction (vph)	0	0	10	0	0	4	0	0	15	0	0	24
Lane Group Flow (vph)	0	309	9	0	242	4	0	156	11	0	77	17
Confl. Peds. (#/hr)	5		21	21		5	9		1	1		9
Heavy Vehicles (%)	5%	5%	6%	7%	4%	12%	6%	1%	4%	0%	6%	5%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Effective Green, g (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Actuated g/C Ratio		0.46	0.46		0.46	0.46		0.42	0.42		0.42	0.42
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		844	638		882	614		773	603		754	594
v/s Ratio Prot												
v/s Ratio Perm		c0.17	0.01		0.13	0.00		c0.08	0.01		0.04	0.01
v/c Ratio		0.37	0.01		0.27	0.01		0.20	0.02		0.10	0.03
Uniform Delay, d1		11.3	9.5		10.8	9.4		12.1	11.2		11.6	11.2
Progression Factor		1.00	1.00		0.46	0.36		1.37	1.84		0.89	0.78
Incremental Delay, d2		1.2	0.0		0.8	0.0		0.6	0.1		0.3	0.1
Delay (s)		12.6	9.5		5.8	3.4		17.2	20.6		10.6	8.8
Level of Service		B	A		A	A		B	C		B	A
Approach Delay (s)		12.4			5.7			17.7			10.0	
Approach LOS		B			A			B			B	

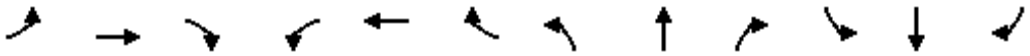
Intersection Summary			
HCM Average Control Delay	11.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	65	235	10	15	200	30	10	190	20	30	70	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.98		1.00	0.99		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1520	3021		1520	2981		1520	2996		1520	2904	
Flt Permitted	0.95	1.00		0.59	1.00		0.68	1.00		0.61	1.00	
Satd. Flow (perm)	1520	3021		942	2981		1095	2996		977	2904	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	70	253	11	16	215	32	11	204	22	32	75	32
RTOR Reduction (vph)	0	5	0	0	18	0	0	12	0	0	19	0
Lane Group Flow (vph)	70	259	0	16	229	0	11	214	0	32	88	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Prot			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Effective Green, g (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.11	0.49		0.34	0.34		0.42	0.42		0.42	0.42	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	164	1487		319	1009		455	1244		406	1206	
v/s Ratio Prot	c0.05	0.09			c0.08			c0.07			0.03	
v/s Ratio Perm				0.02			0.01			0.03		
v/c Ratio	0.43	0.17		0.05	0.23		0.02	0.17		0.08	0.07	
Uniform Delay, d1	27.1	9.2		14.5	15.4		11.2	12.0		11.5	11.5	
Progression Factor	0.82	0.38		0.82	0.74		0.64	0.72		1.15	1.21	
Incremental Delay, d2	7.7	0.2		0.3	0.5		0.1	0.3		0.4	0.1	
Delay (s)	30.0	3.7		12.2	11.9		7.3	8.8		13.6	14.0	
Level of Service	C	A		B	B		A	A		B	B	
Approach Delay (s)		9.2			11.9			8.8			13.9	
Approach LOS		A			B			A			B	

Intersection Summary			
HCM Average Control Delay	10.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	33.5%	ICU Level of Service	A
Analysis Period (min)	15		

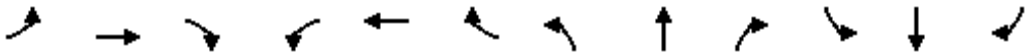
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	35	235	15	90	200	40	25	275	20	20	115	20
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.99		1.00	0.97			0.99			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1520	3013		1520	2964			3213			3172	
Flt Permitted	0.59	1.00		0.95	1.00			0.93			0.90	
Satd. Flow (perm)	948	3013		1520	2964			2993			2867	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	38	253	16	97	215	43	27	296	22	22	124	22
RTOR Reduction (vph)	0	7	0	0	24	0	0	7	0	0	14	0
Lane Group Flow (vph)	38	262	0	97	234	0	0	338	0	0	154	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Prot			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4						2			6		
Actuated Green, G (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Effective Green, g (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Actuated g/C Ratio	0.31	0.31		0.09	0.45			0.38			0.38	
Clearance Time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	292	927		140	1322			1151			1103	
v/s Ratio Prot		c0.09		c0.06	0.08							
v/s Ratio Perm	0.04							c0.11			0.05	
v/c Ratio	0.13	0.28		0.69	0.18			0.29			0.14	
Uniform Delay, d1	16.2	17.1		28.6	10.8			13.9			13.0	
Progression Factor	0.60	0.59		1.36	0.92			0.62			0.80	
Incremental Delay, d2	0.9	0.8		22.3	0.3			0.6			0.3	
Delay (s)	10.7	10.8		61.2	10.3			9.3			10.6	
Level of Service	B	B		E	B			A			B	
Approach Delay (s)		10.8			24.2			9.3			10.6	
Approach LOS		B			C			A			B	

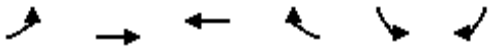
Intersection Summary			
HCM Average Control Delay	14.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	40.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	14	247	14	65	306	65	24	88	152	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	14	12	10	15	10
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			0.95				
Frt		0.99			0.98			0.91				
Flt Protected		1.00			0.99			1.00				
Satd. Flow (prot)		1585			1556			3161				
Flt Permitted		0.98			0.92			1.00				
Satd. Flow (perm)		1551			1437			3161				
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	15	266	15	70	329	70	26	95	163	0	0	0
RTOR Reduction (vph)	0	2	0	0	8	0	0	127	0	0	0	0
Lane Group Flow (vph)	0	294	0	0	461	0	0	157	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		42.8			42.8			14.2				
Effective Green, g (s)		42.8			42.8			14.2				
Actuated g/C Ratio		0.66			0.66			0.22				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		3.0			3.0			8.0				
Lane Grp Cap (vph)		1021			946			691				
v/s Ratio Prot												
v/s Ratio Perm		0.19			c0.32			0.05				
v/c Ratio		0.29			0.49			0.23				
Uniform Delay, d1		4.7			5.6			20.9				
Progression Factor		2.04			1.00			1.00				
Incremental Delay, d2		0.7			1.8			0.7				
Delay (s)		10.2			7.4			21.6				
Level of Service		B			A			C				
Approach Delay (s)		10.2			7.4			21.6			0.0	
Approach LOS		B			A			C			A	

Intersection Summary			
HCM Average Control Delay	12.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	76	323	370	42	58	66
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	86	367	420	48	66	75
Pedestrians		3	5		21	
Lane Width (ft)		16.0	16.0		10.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1319	491			
pX, platoon unblocked	0.87				0.87	0.87
vC, conflicting volume	489				1010	468
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	338				937	314
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	91				71	88
cM capacity (veh/h)	1001				229	620

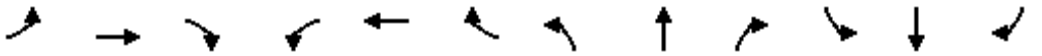
Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	453	468	66	75
Volume Left	86	0	66	0
Volume Right	0	48	0	75
cSH	1001	1700	229	620
Volume to Capacity	0.09	0.28	0.29	0.12
Queue Length 95th (ft)	7	0	29	10
Control Delay (s)	2.5	0.0	27.0	11.6
Lane LOS	A		D	B
Approach Delay (s)	2.5	0.0	18.8	
Approach LOS			C	

Intersection Summary			
Average Delay	3.6		
Intersection Capacity Utilization	60.2%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	426	1	24	582	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0			4.0		
Lane Util. Factor	1.00			1.00		
Frt	1.00			1.00		
Flt Protected	1.00			1.00		
Satd. Flow (prot)	1714			1711		
Flt Permitted	1.00			0.97		
Satd. Flow (perm)	1714			1667		
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	458	1	26	626	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	459	0	0	652	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type			Perm			
Protected Phases	1 2 4			4	3	
Permitted Phases			4			
Actuated Green, G (s)	63.0			31.0		
Effective Green, g (s)	59.0			31.0		
Actuated g/C Ratio	0.69			0.36		
Clearance Time (s)				4.0		
Lane Grp Cap (vph)	1190			608		
v/s Ratio Prot	c0.27					
v/s Ratio Perm				c0.39		
v/c Ratio	0.39			1.07		
Uniform Delay, d1	5.4			27.0		
Progression Factor	0.02			1.00		
Incremental Delay, d2	0.4			57.4		
Delay (s)	0.5			84.4		
Level of Service	A			F		
Approach Delay (s)	0.5			84.4	0.0	
Approach LOS	A			F	A	

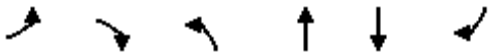
Intersection Summary			
HCM Average Control Delay	49.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	56.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	176	182	23	507	0	0	0	0	3	0	196
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	0	187	194	24	539	0	0	0	0	3	0	209
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	539			187			872	872	190	682	776	539
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	539			187			872	872	190	682	776	539
tC, single (s)	4.1			5.5			7.5	6.5	6.9	7.5	6.5	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.9			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			100	100	100	99	100	57
cM capacity (veh/h)	1039			1005			138	284	825	334	323	481

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	125	256	564	3	209
Volume Left	0	0	24	3	0
Volume Right	0	194	0	0	209
cSH	1700	1700	1005	334	481
Volume to Capacity	0.07	0.15	0.02	0.01	0.43
Queue Length 95th (ft)	0	0	2	1	54
Control Delay (s)	0.0	0.0	0.7	15.9	18.1
Lane LOS			A	C	C
Approach Delay (s)	0.0		0.7	18.0	
Approach LOS				C	

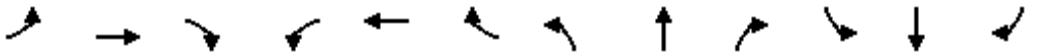
Intersection Summary				
Average Delay	3.6			
Intersection Capacity Utilization	54.1%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	179	0	530	0	0	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	192	0	570	0	0	0

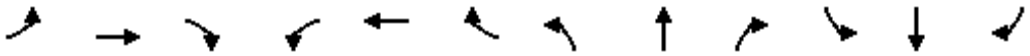
Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	96	96	570
Volume Left (vph)	96	96	570
Volume Right (vph)	0	0	0
Hadj (s)	0.58	0.58	0.29
Departure Headway (s)	6.6	6.6	4.8
Degree Utilization, x	0.18	0.18	0.76
Capacity (veh/h)	513	513	737
Control Delay (s)	9.8	9.8	21.1
Approach Delay (s)	9.8		21.1
Approach LOS	A		C

Intersection Summary			
Delay	18.2		
HCM Level of Service	C		
Intersection Capacity Utilization	43.1%	ICU Level of Service	A
Analysis Period (min)	15		



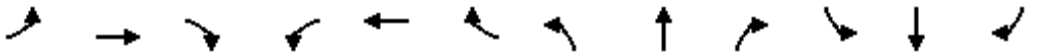
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	420	195	145	427	0	0	0	0	117	107	273
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	13	12	12	12	12	10	10	11
Total Lost time (s)		6.0	6.0		6.0					6.0	6.0	6.0
Lane Util. Factor		0.95	1.00		0.95					0.86	0.81	0.86
Frpb, ped/bikes		1.00	0.98		1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	0.93	0.85
Flt Protected		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (prot)		2978	1202		3372					1346	3693	1122
Flt Permitted		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (perm)		2978	1202		3372					1346	3693	1122
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	447	207	154	454	0	0	0	0	124	114	290
RTOR Reduction (vph)	0	0	153	0	0	0	0	0	0	0	99	87
Lane Group Flow (vph)	0	447	54	0	608	0	0	0	0	68	216	58
Confl. Peds. (#/hr)	5		3	3		5						
Heavy Vehicles (%)	0%	11%	9%	2%	4%	0%	0%	0%	0%	2%	2%	2%
Parking (#/hr)			0									0
Turn Type			Perm	Split						Split		custom
Protected Phases		2		10 12 14	10 12 14					4	4	
Permitted Phases			2									4 2
Actuated Green, G (s)		39.7	39.7		73.7					18.8	18.8	64.5
Effective Green, g (s)		39.7	39.7		73.7					18.8	18.8	64.5
Actuated g/C Ratio		0.25	0.25		0.46					0.12	0.12	0.40
Clearance Time (s)		6.0	6.0							6.0	6.0	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		739	298		1553					158	434	452
v/s Ratio Prot		c0.15			c0.18					0.05	c0.06	
v/s Ratio Perm			0.04									0.05
v/c Ratio		0.60	0.18		0.39					0.43	0.50	0.13
Uniform Delay, d1		53.2	47.3		28.4					65.6	66.2	30.1
Progression Factor		1.00	1.00		0.02					1.00	1.00	1.00
Incremental Delay, d2		3.7	1.3		0.1					1.9	0.9	0.1
Delay (s)		56.9	48.7		0.6					67.5	67.1	30.2
Level of Service		E	D		A					E	E	C
Approach Delay (s)		54.3			0.6			0.0			57.0	
Approach LOS		D			A			A			E	

Intersection Summary			
HCM Average Control Delay	36.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	29.8
Intersection Capacity Utilization	50.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



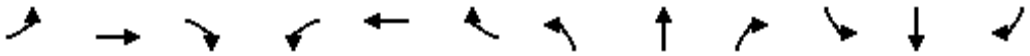
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	204	333	0	0	380	91	192	122	110	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	13	12	12	11	12	13	13	14	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0				
Lane Util. Factor	1.00	0.95			0.95	1.00	0.91	0.91				
Frt	1.00	1.00			1.00	0.85	1.00	0.94				
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (prot)	1574	3366			3149	1457	1531	3008				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (perm)	1574	3366			3149	1457	1531	3008				
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	219	358	0	0	409	98	206	131	118	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	79	0	52	0	0	0	0
Lane Group Flow (vph)	219	358	0	0	409	19	154	249	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Split					Perm	Split					
Protected Phases	2 4 8	2 4 8			10		12	12				
Permitted Phases						10						
Actuated Green, G (s)	78.3	78.3			30.8	30.8	24.1	24.1				
Effective Green, g (s)	78.3	78.3			30.8	30.8	24.1	24.1				
Actuated g/C Ratio	0.49	0.49			0.19	0.19	0.15	0.15				
Clearance Time (s)					6.0	6.0	6.0	6.0				
Vehicle Extension (s)					3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	770	1647			606	280	231	453				
v/s Ratio Prot	c0.14	0.11			c0.13		c0.10	0.08				
v/s Ratio Perm						0.01						
v/c Ratio	0.28	0.22			0.67	0.07	0.67	0.55				
Uniform Delay, d1	24.2	23.3			60.0	52.8	64.2	62.9				
Progression Factor	0.04	0.04			1.00	1.00	1.00	1.00				
Incremental Delay, d2	0.2	0.1			3.0	0.1	7.1	1.4				
Delay (s)	1.1	1.0			62.9	53.0	71.2	64.4				
Level of Service	A	A			E	D	E	E				
Approach Delay (s)		1.1			61.0			66.7			0.0	
Approach LOS		A			E			E			A	

Intersection Summary			
HCM Average Control Delay	40.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	28.8
Intersection Capacity Utilization	46.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	192	238	66	34	136	44	78	730	55	46	348	81
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	14	12	10	10	12	9	10	12
Total Lost time (s)	4.0	4.0	5.0	4.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.99	1.00	1.00	1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1535	1556	1328	1594	1718		1520	2990		1508	2869	
Flt Permitted	0.54	1.00	1.00	0.56	1.00		0.42	1.00		0.23	1.00	
Satd. Flow (perm)	866	1556	1328	939	1718		669	2990		369	2869	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	196	243	67	35	139	45	80	745	56	47	355	83
RTOR Reduction (vph)	0	0	44	0	12	0	0	6	0	0	22	0
Lane Group Flow (vph)	196	243	23	35	172	0	80	795	0	47	416	0
Confl. Peds. (#/hr)	33		3	3		33	42		8	8		42
Confl. Bikes (#/hr)							1					1
Heavy Vehicles (%)	3%	8%	6%	0%	7%	5%	4%	5%	11%	2%	6%	9%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	38.2	31.2	31.2	32.4	28.3		41.5	36.0		38.7	34.6	
Effective Green, g (s)	36.2	32.2	31.2	30.4	28.3		39.5	36.0		36.7	34.6	
Actuated g/C Ratio	0.40	0.36	0.35	0.34	0.31		0.44	0.40		0.41	0.38	
Clearance Time (s)	3.0	5.0	5.0	3.0	5.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	391	554	458	338	538		335	1191		189	1098	
v/s Ratio Prot	c0.03	0.16		0.00	0.10		c0.01	c0.27		0.01	0.14	
v/s Ratio Perm	c0.17		0.02	0.03			0.09			0.09		
v/c Ratio	0.50	0.44	0.05	0.10	0.32		0.24	0.67		0.25	0.38	
Uniform Delay, d1	19.8	22.2	19.7	20.4	23.7		15.3	22.3		17.2	20.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.0	2.5	0.2	0.1	1.6		0.4	3.0		0.7	1.0	
Delay (s)	20.8	24.7	19.9	20.5	25.3		15.7	25.3		17.9	21.1	
Level of Service	C	C	B	C	C		B	C		B	C	
Approach Delay (s)		22.6			24.5			24.4			20.8	
Approach LOS		C			C			C			C	

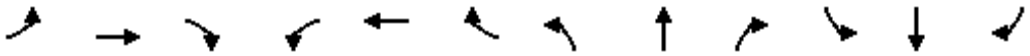
Intersection Summary			
HCM Average Control Delay	23.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	90.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	67.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	243	15	5	182	19	33	75	15	10	37	33
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	10	10	10	12	15	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Frpb, ped/bikes		1.00	0.97		1.00	0.97		1.00			0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.98			0.94	
Flt Protected		0.99	1.00		1.00	1.00		0.99			0.99	
Satd. Flow (prot)		1910	1482		1600	1198		1913			1848	
Flt Permitted		0.94	1.00		0.99	1.00		0.93			0.97	
Satd. Flow (perm)		1815	1482		1592	1198		1800			1812	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	44	267	16	5	200	21	36	82	16	11	41	36
RTOR Reduction (vph)	0	0	8	0	0	11	0	8	0	0	21	0
Lane Group Flow (vph)	0	311	8	0	205	10	0	126	0	0	67	0
Confl. Peds. (#/hr)	6		11	11		6	4		8	8		4
Confl. Bikes (#/hr)	1		1	1		1			1	1		
Heavy Vehicles (%)	0%	7%	0%	0%	5%	16%	0%	0%	0%	10%	0%	3%
Turn Type	Perm		Perm	Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Effective Green, g (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Actuated g/C Ratio		0.49	0.49		0.49	0.49		0.42			0.42	
Clearance Time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		894	730		784	590		748			753	
v/s Ratio Prot												
v/s Ratio Perm		c0.17	0.01		0.13	0.01		c0.07			0.04	
v/c Ratio		0.35	0.01		0.26	0.02		0.17			0.09	
Uniform Delay, d1		10.1	8.4		9.6	8.4		11.9			11.5	
Progression Factor		1.00	1.00		2.02	2.98		1.00			1.51	
Incremental Delay, d2		1.1	0.0		0.8	0.1		0.5			0.2	
Delay (s)		11.2	8.4		20.2	25.3		12.4			17.7	
Level of Service		B	A		C	C		B			B	
Approach Delay (s)		11.0			20.7			12.4			17.7	
Approach LOS		B			C			B			B	

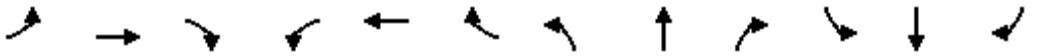
Intersection Summary			
HCM Average Control Delay	14.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	52.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	58	160	19	6	133	6	32	176	17	8	45	26
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.98		1.00	0.96		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.96	
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		1.00	
Satd. Flow (prot)		1663	1392		1604	1497		1754	1390		1652	
Flt Permitted		0.89	1.00		0.99	1.00		0.96	1.00		0.97	
Satd. Flow (perm)		1496	1392		1588	1497		1690	1390		1618	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	60	167	20	6	139	6	33	183	18	8	47	27
RTOR Reduction (vph)	0	0	13	0	0	4	0	0	9	0	14	0
Lane Group Flow (vph)	0	227	7	0	145	2	0	216	9	0	68	0
Confl. Peds. (#/hr)	11		17	17		11	4		17	17		4
Confl. Bikes (#/hr)	1		1	1		1	1					1
Heavy Vehicles (%)	0%	9%	5%	33%	11%	0%	6%	1%	6%	0%	0%	8%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Effective Green, g (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Actuated g/C Ratio		0.35	0.35		0.35	0.35		0.49	0.49		0.49	
Clearance Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Grp Cap (vph)		529	493		562	530		832	684		797	
v/s Ratio Prot												
v/s Ratio Perm		c0.15	0.01		0.09	0.00		c0.13	0.01		0.04	
v/c Ratio		0.43	0.01		0.26	0.00		0.26	0.01		0.09	
Uniform Delay, d1		16.0	13.6		14.9	13.6		9.6	8.4		8.7	
Progression Factor		1.98	3.07		0.92	0.91		0.39	0.40		0.99	
Incremental Delay, d2		2.4	0.1		1.1	0.0		0.7	0.0		0.2	
Delay (s)		34.1	42.0		14.8	12.4		4.4	3.4		8.8	
Level of Service		C	D		B	B		A	A		A	
Approach Delay (s)		34.8			14.7			4.3			8.8	
Approach LOS		C			B			A			A	

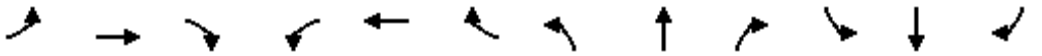
Intersection Summary			
HCM Average Control Delay	17.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	56.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	138	18	27	9	17	6	26	286	19	5	168	82
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.97		0.99			1.00			1.00	0.95
Flpb, ped/bikes		0.98	1.00		0.99			1.00			1.00	1.00
Frt		1.00	0.85		0.98			0.99			1.00	0.85
Flt Protected		0.96	1.00		0.99			1.00			1.00	1.00
Satd. Flow (prot)		1770	1390		1815			1974			1873	1328
Flt Permitted		0.76	1.00		0.94			0.97			0.99	1.00
Satd. Flow (perm)		1413	1390		1726			1931			1862	1328
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	145	19	28	9	18	6	27	301	20	5	177	86
RTOR Reduction (vph)	0	0	16	0	4	0	0	4	0	0	0	44
Lane Group Flow (vph)	0	164	12	0	29	0	0	344	0	0	182	42
Confl. Peds. (#/hr)	49		22	22		49	34		17	17		34
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	9%	0%	7%	0%	0%	0%	0%	2%	0%	0%	9%	9%
Turn Type	pm+pt		Perm	Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		27.0	27.0		17.0			32.0			32.0	32.0
Effective Green, g (s)		27.0	27.0		17.0			32.0			32.0	32.0
Actuated g/C Ratio		0.42	0.42		0.26			0.49			0.49	0.49
Clearance Time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		631	577		451			951			917	654
v/s Ratio Prot		c0.03										
v/s Ratio Perm		0.08	0.01		0.02			c0.18			0.10	0.03
v/c Ratio		0.26	0.02		0.06			0.36			0.20	0.06
Uniform Delay, d1		12.5	11.2		18.0			10.2			9.3	8.7
Progression Factor		0.48	0.67		1.00			0.55			0.46	0.33
Incremental Delay, d2		0.9	0.1		0.3			1.0			0.5	0.2
Delay (s)		6.9	7.6		18.3			6.7			4.8	3.0
Level of Service		A	A		B			A			A	A
Approach Delay (s)		7.0			18.3			6.7			4.2	
Approach LOS		A			B			A			A	

Intersection Summary			
HCM Average Control Delay	6.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	57.8%	ICU Level of Service	B
Analysis Period (min)	15		

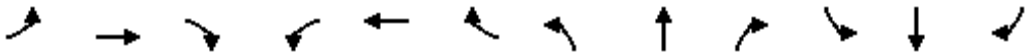
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	765	212	236	1004	0	0	0	0	270	196	366
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	11	8	8	8	11	12	14
Total Lost time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Lane Util. Factor		0.91		1.00	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00		1.00	1.00					1.00	0.99	0.99
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.97		1.00	1.00					1.00	0.94	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.99	1.00
Satd. Flow (prot)		4303		1589	3226					1419	2712	1355
Flt Permitted		1.00		0.22	1.00					0.95	0.99	1.00
Satd. Flow (perm)		4303		366	3226					1419	2712	1355
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	781	216	241	1024	0	0	0	0	276	200	373
RTOR Reduction (vph)	0	38	0	0	0	0	0	0	0	0	87	90
Lane Group Flow (vph)	0	959	0	241	1024	0	0	0	0	221	343	108
Confl. Peds. (#/hr)	6		4	4		6	2					2
Heavy Vehicles (%)	0%	11%	7%	4%	6%	0%	0%	0%	0%	6%	4%	8%
Turn Type				pm+pt						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Actuated Green, G (s)		53.0		70.3	70.3					22.7	22.7	22.7
Effective Green, g (s)		53.0		70.3	70.3					22.7	22.7	22.7
Actuated g/C Ratio		0.50		0.67	0.67					0.22	0.22	0.22
Clearance Time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Vehicle Extension (s)		7.0		3.5	7.0					3.5	3.5	3.5
Lane Grp Cap (vph)		2172		394	2160					307	586	293
v/s Ratio Prot		0.22		c0.07	0.32							
v/s Ratio Perm				c0.33						c0.16	0.13	0.08
v/c Ratio		0.44		0.61	0.47					0.72	0.59	0.37
Uniform Delay, d1		16.6		8.1	8.4					38.2	36.9	35.0
Progression Factor		1.00		1.62	1.58					1.00	1.00	1.00
Incremental Delay, d2		0.7		2.1	0.5					8.1	1.6	0.9
Delay (s)		17.2		15.3	13.8					46.3	38.5	36.0
Level of Service		B		B	B					D	D	D
Approach Delay (s)		17.2			14.1			0.0			40.0	
Approach LOS		B			B			A			D	

Intersection Summary			
HCM Average Control Delay	22.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	69.7%	ICU Level of Service	C
Analysis Period (min)	15		

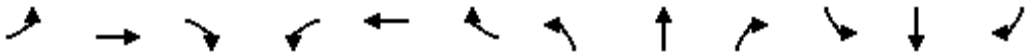
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	301	734	0	0	815	234	425	281	297	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	11	12	12	12	12	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0		6.0				
Lane Util. Factor	0.97	0.95			0.95	1.00		0.91				
Frpb, ped/bikes	1.00	1.00			1.00	0.99		1.00				
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00				
Frt	1.00	1.00			1.00	0.85		0.96				
Flt Protected	0.95	1.00			1.00	1.00		0.98				
Satd. Flow (prot)	2915	3138			3119	1450		4421				
Flt Permitted	0.21	1.00			1.00	1.00		0.98				
Satd. Flow (perm)	633	3138			3119	1450		4421				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	317	773	0	0	858	246	447	296	313	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	107	0	72	0	0	0	0
Lane Group Flow (vph)	317	773	0	0	858	139	0	984	0	0	0	0
Confl. Peds. (#/hr)	4					4						
Heavy Vehicles (%)	10%	9%	0%	0%	6%	4%	4%	3%	5%	0%	0%	0%
Turn Type	pm+pt					Perm	Perm					
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8					
Actuated Green, G (s)	63.5	63.5			46.4	46.4		29.5				
Effective Green, g (s)	63.5	63.5			46.4	46.4		29.5				
Actuated g/C Ratio	0.60	0.60			0.44	0.44		0.28				
Clearance Time (s)	6.0	6.0			6.0	6.0		6.0				
Vehicle Extension (s)	3.5	7.0			7.0	7.0		5.0				
Lane Grp Cap (vph)	624	1898			1378	641		1242				
v/s Ratio Prot	c0.05	0.25			c0.28							
v/s Ratio Perm	0.25					0.10		0.22				
v/c Ratio	0.51	0.41			0.62	0.22		0.79				
Uniform Delay, d1	11.9	10.9			22.6	18.1		34.9				
Progression Factor	0.93	1.03			0.90	1.16		1.00				
Incremental Delay, d2	0.7	0.6			1.6	0.6		4.1				
Delay (s)	11.7	11.8			21.9	21.6		39.0				
Level of Service	B	B			C	C		D				
Approach Delay (s)		11.8			21.8			39.0			0.0	
Approach LOS		B			C			D			A	

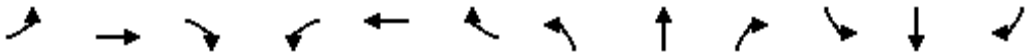
Intersection Summary			
HCM Average Control Delay	24.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	69.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	95	405	204	71	683	38	226	178	40	37	111	91
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	11	12	12	10	10	13	10	10	10
Total Lost time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.97		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1565	3061	1292	1601	3232		1446	3007		1544	2782	
Flt Permitted	0.17	1.00	1.00	0.50	1.00		0.52	1.00		0.61	1.00	
Satd. Flow (perm)	284	3061	1292	844	3232		787	3007		987	2782	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	101	431	217	76	727	40	240	189	43	39	118	97
RTOR Reduction (vph)	0	0	90	0	4	0	0	21	0	0	80	0
Lane Group Flow (vph)	101	431	127	76	763	0	240	211	0	39	135	0
Confl. Peds. (#/hr)	3		12	12		3	9		6	6		9
Heavy Vehicles (%)	2%	8%	5%	3%	5%	3%	10%	3%	2%	3%	7%	4%
Parking (#/hr)			0									
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	61.7	51.9	61.6	38.4	32.1		31.3	22.8		23.1	18.1	
Effective Green, g (s)	61.7	51.9	61.6	38.4	32.1		31.3	22.8		23.1	18.1	
Actuated g/C Ratio	0.59	0.49	0.59	0.37	0.31		0.30	0.22		0.22	0.17	
Clearance Time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0		3.0	7.0		3.0	7.0	
Lane Grp Cap (vph)	485	1513	758	354	988		295	653		244	480	
v/s Ratio Prot	c0.05	c0.14	0.02	0.01	c0.24		c0.08	0.07		0.01	0.05	
v/s Ratio Perm	0.07		0.08	0.07			c0.17			0.03		
v/c Ratio	0.21	0.28	0.17	0.21	0.77		0.81	0.32		0.16	0.28	
Uniform Delay, d1	11.5	15.6	9.9	22.2	33.1		32.6	34.6		32.8	37.8	
Progression Factor	0.84	0.95	2.07	1.00	1.00		0.90	0.84		1.00	1.00	
Incremental Delay, d2	0.8	0.4	0.1	0.3	5.8		15.1	1.0		0.3	1.1	
Delay (s)	10.5	15.3	20.7	22.5	39.0		44.5	30.0		33.1	38.9	
Level of Service	B	B	C	C	D		D	C		C	D	
Approach Delay (s)		16.2			37.5			37.4			38.0	
Approach LOS		B			D			D			D	

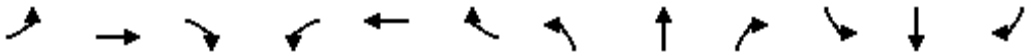
Intersection Summary			
HCM Average Control Delay	30.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	69.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	106	229	47	139	85	323	375	62	91	258	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	12	11	12	12	11	13	12	10	11	12
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.90		1.00	0.94		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1632	2807		1463	3016		1589	3257		1549	3136	
Flt Permitted	0.60	1.00		0.47	1.00		0.45	1.00		0.48	1.00	
Satd. Flow (perm)	1029	2807		728	3016		750	3257		779	3136	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	55	116	252	52	153	93	355	412	68	100	284	59
RTOR Reduction (vph)	0	183	0	0	67	0	0	13	0	0	16	0
Lane Group Flow (vph)	55	185	0	52	179	0	355	467	0	100	327	0
Confl. Peds. (#/hr)	20					20	1		2	2		1
Heavy Vehicles (%)	4%	5%	6%	13%	6%	5%	4%	6%	5%	3%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	35.7	28.9		35.9	29.0		53.2	41.9		38.3	31.0	
Effective Green, g (s)	35.7	28.9		35.9	29.0		53.2	41.9		38.3	31.0	
Actuated g/C Ratio	0.34	0.28		0.34	0.28		0.51	0.40		0.36	0.30	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.5	7.0		3.5	7.0		3.5	7.0		3.5	7.0	
Lane Grp Cap (vph)	389	773		297	833		525	1300		338	926	
v/s Ratio Prot	0.01	c0.07		c0.01	0.06		c0.12	0.14		0.02	0.10	
v/s Ratio Perm	0.04			0.05			c0.23			0.09		
v/c Ratio	0.14	0.24		0.18	0.21		0.68	0.36		0.30	0.35	
Uniform Delay, d1	23.7	29.5		23.6	29.2		16.8	22.1		22.6	29.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.01	0.90	
Incremental Delay, d2	0.2	0.7		0.3	0.6		3.6	0.8		0.6	1.0	
Delay (s)	23.9	30.3		24.0	29.8		20.3	22.9		23.5	27.2	
Level of Service	C	C		C	C		C	C		C	C	
Approach Delay (s)		29.4			28.8			21.8			26.4	
Approach LOS		C			C			C			C	

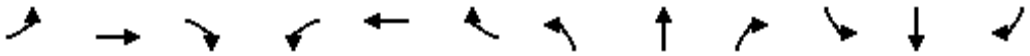
Intersection Summary			
HCM Average Control Delay	25.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	65.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	151	359	73	6	372	100	56	490	6	65	251	81
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	9	11	12	9	9	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.97		1.00	1.00		1.00	0.96	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		2889			2888		1435	3187		1450	2789	
Flt Permitted		0.61			0.95		0.51	1.00		0.37	1.00	
Satd. Flow (perm)		1772			2739		776	3187		569	2789	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	162	386	78	6	400	108	60	527	6	70	270	87
RTOR Reduction (vph)	0	17	0	0	37	0	0	1	0	0	48	0
Lane Group Flow (vph)	0	609	0	0	477	0	60	532	0	70	309	0
Confl. Peds. (#/hr)	9		11	11		9	11		14	14		11
Heavy Vehicles (%)	3%	6%	18%	50%	6%	6%	7%	3%	50%	6%	7%	2%
Turn Type	pm+pt			Perm			pm+pt			pm+pt		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			19.0		26.0	22.0		26.0	22.0	
Effective Green, g (s)		27.0			19.0		26.0	22.0		26.0	22.0	
Actuated g/C Ratio		0.42			0.29		0.40	0.34		0.40	0.34	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		805			801		351	1079		282	944	
v/s Ratio Prot		c0.05					0.01	c0.17		c0.02	0.11	
v/s Ratio Perm		c0.27			0.17		0.06			0.08		
v/c Ratio		0.76			0.60		0.17	0.49		0.25	0.33	
Uniform Delay, d1		16.2			19.7		12.2	17.1		12.4	16.0	
Progression Factor		1.00			1.62		0.80	0.67		1.00	1.00	
Incremental Delay, d2		6.6			1.9		1.0	1.5		2.1	0.9	
Delay (s)		22.8			33.8		10.8	12.9		14.5	16.9	
Level of Service		C			C		B	B		B	B	
Approach Delay (s)		22.8			33.8			12.7			16.5	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM Average Control Delay	21.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	64.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	90	37	59	111	11	31	529	65	8	291	35
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	0.99		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1665	1856		1611	1938		1658	3211		1137	3196	
Flt Permitted	0.67	1.00		0.67	1.00		0.54	1.00		0.37	1.00	
Satd. Flow (perm)	1178	1856		1134	1938		942	3211		441	3196	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	43	98	40	64	121	12	34	575	71	9	316	38
RTOR Reduction (vph)	0	23	0	0	6	0	0	15	0	0	14	0
Lane Group Flow (vph)	43	115	0	64	127	0	34	631	0	9	340	0
Confl. Peds. (#/hr)	10		16	16		10	4		6	6		4
Confl. Bikes (#/hr)			4	4								
Heavy Vehicles (%)	2%	4%	5%	5%	4%	0%	3%	4%	8%	50%	5%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.48	0.48		0.48	0.48	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	435	685		419	716		449	1531		210	1524	
v/s Ratio Prot		0.06			c0.07			c0.20			0.11	
v/s Ratio Perm	0.04			0.06			0.04			0.02		
v/c Ratio	0.10	0.17		0.15	0.18		0.08	0.41		0.04	0.22	
Uniform Delay, d1	13.4	13.8		13.7	13.8		9.2	11.1		9.1	10.0	
Progression Factor	1.00	1.00		1.77	1.85		1.00	1.00		0.59	0.61	
Incremental Delay, d2	0.5	0.5		0.6	0.4		0.3	0.8		0.4	0.3	
Delay (s)	13.9	14.3		24.8	25.9		9.6	11.9		5.7	6.4	
Level of Service	B	B		C	C		A	B		A	A	
Approach Delay (s)		14.2			25.6			11.8			6.4	
Approach LOS		B			C			B			A	

Intersection Summary			
HCM Average Control Delay	12.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	54.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR	SBR2
Lane Configurations												
Volume (vph)	403	146	505	13	3	12	3	41	9	0	2	4
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	12	12	16	12	12	16	12	12
Total Lost time (s)	5.0		5.0				4.0			4.0		
Lane Util. Factor	0.95		0.95				1.00			1.00		
Frpb, ped/bikes	1.00		1.00				1.00			0.99		
Flpb, ped/bikes	1.00		1.00				1.00			1.00		
Frt	1.00		1.00				0.90			0.95		
Flt Protected	1.00		0.99				0.99			0.97		
Satd. Flow (prot)	2956		2958				1732			1859		
Flt Permitted	1.00		0.67				0.95			0.88		
Satd. Flow (perm)	2956		1999				1657			1681		
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	448	162	561	14	3	13	3	46	10	0	2	4
RTOR Reduction (vph)	0	0	2	0	0	0	36	0	0	3	0	0
Lane Group Flow (vph)	448	0	735	0	0	0	29	0	0	13	0	0
Confl. Peds. (#/hr)		7		6		3					3	
Confl. Bikes (#/hr)		1										
Heavy Vehicles (%)	8%	8%	6%	0%	0%	8%	0%	5%	0%	0%	0%	0%
Turn Type		custom			Perm	Perm			Perm			
Protected Phases	8	7	4				2			6		
Permitted Phases		4 7			2	2			6			
Actuated Green, G (s)	18.0		27.0				14.0			14.0		
Effective Green, g (s)	18.0		27.0				14.0			14.0		
Actuated g/C Ratio	0.28		0.42				0.22			0.22		
Clearance Time (s)	5.0		5.0				4.0			4.0		
Lane Grp Cap (vph)	819		919				357			362		
v/s Ratio Prot	0.15		c0.07									
v/s Ratio Perm			c0.26				c0.02			0.01		
v/c Ratio	0.55		0.80				0.08			0.04		
Uniform Delay, d1	20.0		16.6				20.4			20.2		
Progression Factor	1.32		0.84				1.00			1.00		
Incremental Delay, d2	1.9		7.0				0.4			0.2		
Delay (s)	28.4		21.0				20.8			20.3		
Level of Service	C		C				C			C		
Approach Delay (s)	28.4		21.0				20.8			20.3		
Approach LOS	C		C				C			C		

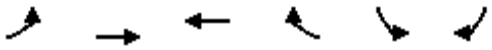
Intersection Summary			
HCM Average Control Delay	29.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	73.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



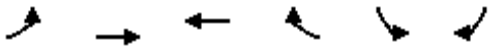
Movement	NEL	NER
Lane Configurations		
Volume (vph)	1	173
Ideal Flow (vphpl)	1800	1800
Lane Width	12	12
Total Lost time (s)	5.0	
Lane Util. Factor	1.00	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Frt	0.87	
Flt Protected	1.00	
Satd. Flow (prot)	1430	
Flt Permitted	1.00	
Satd. Flow (perm)	1430	
Peak-hour factor, PHF	0.90	0.90
Adj. Flow (vph)	1	192
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	193	0
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Heavy Vehicles (%)	0%	9%
Turn Type		
Protected Phases	3	
Permitted Phases		
Actuated Green, G (s)	10.0	
Effective Green, g (s)	10.0	
Actuated g/C Ratio	0.15	
Clearance Time (s)	5.0	
Lane Grp Cap (vph)	220	
v/s Ratio Prot	c0.13	
v/s Ratio Perm		
v/c Ratio	0.88	
Uniform Delay, d1	26.9	
Progression Factor	1.11	
Incremental Delay, d2	35.1	
Delay (s)	64.8	
Level of Service	E	
Approach Delay (s)	64.8	
Approach LOS	E	

Intersection Summary



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	157	469	508	57	41	156
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frt		1.00	0.98		1.00	0.85
Flt Protected		0.99	1.00		0.95	1.00
Satd. Flow (prot)		3217	3208		1629	1457
Flt Permitted		0.69	1.00		0.95	1.00
Satd. Flow (perm)		2253	3208		1629	1457
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	169	504	546	61	44	168
RTOR Reduction (vph)	0	0	13	0	0	124
Lane Group Flow (vph)	0	673	594	0	44	44
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		40.0	40.0		17.0	17.0
Effective Green, g (s)		40.0	40.0		17.0	17.0
Actuated g/C Ratio		0.62	0.62		0.26	0.26
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1386	1974		426	381
v/s Ratio Prot			0.19		0.03	
v/s Ratio Perm		c0.30				c0.03
v/c Ratio		0.49	0.30		0.10	0.12
Uniform Delay, d1		6.9	5.9		18.2	18.3
Progression Factor		1.21	1.38		0.92	0.78
Incremental Delay, d2		1.0	0.4		0.5	0.6
Delay (s)		9.3	8.5		17.2	14.9
Level of Service		A	A		B	B
Approach Delay (s)		9.3	8.5		15.4	
Approach LOS		A	A		B	

Intersection Summary			
HCM Average Control Delay	9.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	48.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	46	464	516	169	118	49
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	12	10	11	12	10	10
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frpb, ped/bikes		1.00	0.99		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.96		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2927	2905		1464	1373
Flt Permitted		0.85	1.00		0.95	1.00
Satd. Flow (perm)		2501	2905		1464	1373
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	50	504	561	184	128	53
RTOR Reduction (vph)	0	0	49	0	0	38
Lane Group Flow (vph)	0	554	696	0	128	15
Confl. Peds. (#/hr)	1			1		
Confl. Bikes (#/hr)	1			1		
Heavy Vehicles (%)	4%	9%	8%	12%	9%	4%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		38.0	38.0		19.0	19.0
Effective Green, g (s)		38.0	38.0		19.0	19.0
Actuated g/C Ratio		0.58	0.58		0.29	0.29
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1462	1698		428	401
v/s Ratio Prot			c0.24		c0.09	
v/s Ratio Perm		0.22				0.01
v/c Ratio		0.38	0.41		0.30	0.04
Uniform Delay, d1		7.2	7.4		17.8	16.5
Progression Factor		0.21	0.54		0.87	0.99
Incremental Delay, d2		0.7	0.6		1.8	0.2
Delay (s)		2.2	4.6		17.2	16.5
Level of Service		A	A		B	B
Approach Delay (s)		2.2	4.6		17.0	
Approach LOS		A	A		B	

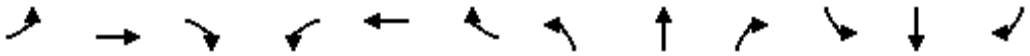
Intersection Summary			
HCM Average Control Delay	5.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



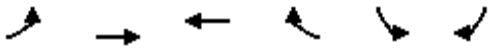
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	420	127	92	472	326	64
Ideal Flow (vphpl)	2300	1800	1800	2300	1800	1800
Lane Width	15	12	14	16	15	12
Total Lost time (s)	5.0		5.0	5.0	5.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	0.99		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.97		1.00	1.00	0.98	
Flt Protected	1.00		0.95	1.00	0.96	
Satd. Flow (prot)	2214		1768	2436	1817	
Flt Permitted	1.00		0.27	1.00	0.96	
Satd. Flow (perm)	2214		496	2436	1817	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	462	140	101	519	358	70
RTOR Reduction (vph)	17	0	0	0	11	0
Lane Group Flow (vph)	585	0	101	519	417	0
Confl. Peds. (#/hr)		4	4			8
Heavy Vehicles (%)	11%	7%	3%	7%	2%	2%
Turn Type			Perm			
Protected Phases	4			8	2	
Permitted Phases			8			
Actuated Green, G (s)	31.0		31.0	31.0	24.0	
Effective Green, g (s)	31.0		31.0	31.0	24.0	
Actuated g/C Ratio	0.48		0.48	0.48	0.37	
Clearance Time (s)	5.0		5.0	5.0	5.0	
Lane Grp Cap (vph)	1056		237	1162	671	
v/s Ratio Prot	c0.26			0.21	c0.23	
v/s Ratio Perm			0.20			
v/c Ratio	0.55		0.43	0.45	0.62	
Uniform Delay, d1	12.1		11.2	11.3	16.8	
Progression Factor	1.20		1.00	1.00	1.00	
Incremental Delay, d2	2.0		5.5	1.2	4.3	
Delay (s)	16.5		16.7	12.5	21.1	
Level of Service	B		B	B	C	
Approach Delay (s)	16.5			13.2	21.1	
Approach LOS	B			B	C	

Intersection Summary			
HCM Average Control Delay	16.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	65.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	454	69	227	552	8	56	0	144	1	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	15	13	11	11	12	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0	4.0	3.0	3.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00		0.95	
Satd. Flow (prot)	1881	3213	1422	1589	3138	1366		1642	1443		969	
Flt Permitted	0.44	1.00	1.00	0.45	1.00	1.00		0.76	1.00		0.72	
Satd. Flow (perm)	863	3213	1422	748	3138	1366		1309	1443		734	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	1	473	72	236	575	8	58	0	150	1	0	0
RTOR Reduction (vph)	0	0	26	0	0	2	0	0	134	0	0	0
Lane Group Flow (vph)	1	473	46	236	575	6	0	58	16	0	1	0
Heavy Vehicles (%)	0%	10%	4%	4%	9%	12%	18%	0%	6%	100%	0%	0%
Turn Type	Perm		Perm	custom		custom	Perm		Perm	Perm		
Protected Phases		4		3	3 8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)	53.9	53.9	53.9	67.7	67.7	67.7		9.3	9.3		9.3	
Effective Green, g (s)	53.9	53.9	53.9	67.7	67.7	67.7		9.3	9.3		9.3	
Actuated g/C Ratio	0.63	0.63	0.63	0.80	0.80	0.80		0.11	0.11		0.11	
Clearance Time (s)	4.0	4.0	4.0	3.0		4.0		4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0		3.0	
Lane Grp Cap (vph)	547	2037	902	703	2499	1088		143	158		80	
v/s Ratio Prot		0.15		c0.04	0.18							
v/s Ratio Perm	0.00		0.03	c0.22		0.00		c0.04	0.01		0.00	
v/c Ratio	0.00	0.23	0.05	0.34	0.23	0.01		0.41	0.10		0.01	
Uniform Delay, d1	5.7	6.7	5.9	2.2	2.2	1.8		35.3	34.1		33.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	0.0	0.3	0.1	0.3	0.0	0.0		1.9	0.3		0.1	
Delay (s)	5.7	6.9	6.0	2.5	2.2	1.8		37.2	34.4		33.8	
Level of Service	A	A	A	A	A	A		D	C		C	
Approach Delay (s)		6.8			2.3			35.2			33.8	
Approach LOS		A			A			D			C	

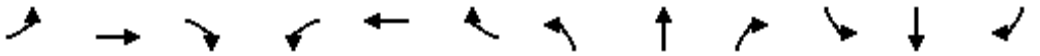
Intersection Summary			
HCM Average Control Delay	8.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	41.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	10	626	645	35	21	8
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	12	10	10
Total Lost time (s)		5.0	5.0		3.0	
Lane Util. Factor		0.95	0.95		1.00	
Frt		1.00	0.99		0.96	
Flt Protected		1.00	1.00		0.97	
Satd. Flow (prot)		3038	3016		1486	
Flt Permitted		0.94	1.00		0.97	
Satd. Flow (perm)		2858	3016		1486	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	11	673	694	38	23	9
RTOR Reduction (vph)	0	0	4	0	8	0
Lane Group Flow (vph)	0	684	728	0	24	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type	Perm					
Protected Phases		4	8 2 11		5	
Permitted Phases	4					
Actuated Green, G (s)		33.0	64.0		7.0	
Effective Green, g (s)		33.0	64.0		7.0	
Actuated g/C Ratio		0.37	0.71		0.08	
Clearance Time (s)		5.0			3.0	
Lane Grp Cap (vph)		1048	2145		116	
v/s Ratio Prot			c0.24		c0.02	
v/s Ratio Perm		c0.24				
v/c Ratio		0.65	0.34		0.20	
Uniform Delay, d1		23.7	4.9		38.9	
Progression Factor		1.00	0.01		1.00	
Incremental Delay, d2		3.2	0.3		3.9	
Delay (s)		26.9	0.3		42.8	
Level of Service		C	A		D	
Approach Delay (s)		26.9	0.3		42.8	
Approach LOS		C	A		D	

Intersection Summary			
HCM Average Control Delay	13.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	36.6%	ICU Level of Service	A
Analysis Period (min)	15		

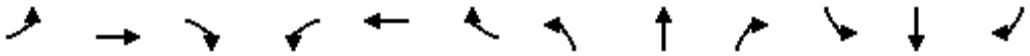
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	69	388	1	24	487	71	0	0	1	38	3	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12	12	11	12	11
Total Lost time (s)		4.0			4.0			3.0			3.0	3.0
Lane Util. Factor		1.00			0.95			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			0.92			1.00	0.96
Flpb, ped/bikes		1.00			1.00			1.00			0.98	1.00
Frt		1.00			0.98			0.86			1.00	0.85
Flt Protected		0.99			1.00			1.00			0.96	1.00
Satd. Flow (prot)		1729			3229			1432			1611	1282
Flt Permitted		0.82			0.94			1.00			0.96	1.00
Satd. Flow (perm)		1435			3030			1432			1619	1282
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	77	431	1	27	541	79	0	0	1	42	3	72
RTOR Reduction (vph)	0	0	0	0	13	0	0	1	0	0	0	48
Lane Group Flow (vph)	0	509	0	0	634	0	0	0	0	0	45	24
Confl. Peds. (#/hr)	33		13	13		33	29		13	13		29
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	4%	3%	0%	0%	4%	0%	0%	0%	0%	5%	0%	11%
Turn Type	Perm			Prot			Perm			pm+pt		Perm
Protected Phases		4		3	3 4			1		2	1 2	
Permitted Phases	4				3		1	1		1 2		1 2
Actuated Green, G (s)		31.0			45.0			9.0			25.0	28.0
Effective Green, g (s)		31.0			45.0			9.0			25.0	28.0
Actuated g/C Ratio		0.36			0.53			0.11			0.29	0.33
Clearance Time (s)		4.0						3.0				
Lane Grp Cap (vph)		523			1637			152			475	422
v/s Ratio Prot					c0.06			0.00			c0.02	
v/s Ratio Perm		c0.35			0.14						c0.01	0.02
v/c Ratio		0.97			0.39			0.00			0.09	0.06
Uniform Delay, d1		26.6			11.8			34.0			21.8	19.5
Progression Factor		1.00			1.38			1.00			1.00	1.00
Incremental Delay, d2		33.3			0.1			0.0			0.4	0.3
Delay (s)		59.9			16.4			34.0			22.2	19.7
Level of Service		E			B			C			C	B
Approach Delay (s)		59.9			16.4			34.0			20.7	
Approach LOS		E			B			C			C	

Intersection Summary			
HCM Average Control Delay	34.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	66.7%	ICU Level of Service	C
Analysis Period (min)	15		

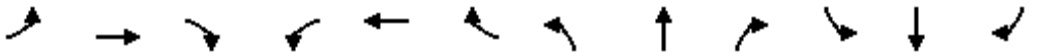
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	598	27	33	939	54	34	17	48	23	22	85
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	16	10	10	16	8	15	8	8	14	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			0.98	
Flpb, ped/bikes	0.97	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.99			0.93			0.91	
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.99	
Satd. Flow (prot)	1551	3022		1587	3021			1787			1701	
Flt Permitted	0.20	1.00		0.37	1.00			0.89			0.95	
Satd. Flow (perm)	327	3022		610	3021			1614			1628	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	41	623	28	34	978	56	35	18	50	24	23	89
RTOR Reduction (vph)	0	5	0	0	6	0	0	32	0	0	27	0
Lane Group Flow (vph)	41	646	0	34	1028	0	0	71	0	0	109	0
Confl. Peds. (#/hr)	145		16	16		145	17		19	19		17
Confl. Bikes (#/hr)	5					5			2	2		
Heavy Vehicles (%)	0%	5%	0%	0%	4%	2%	0%	0%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			22.0			22.0	
Effective Green, g (s)	34.0	34.0		34.0	34.0			23.0			23.0	
Actuated g/C Ratio	0.52	0.52		0.52	0.52			0.35			0.35	
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0			5.0	
Lane Grp Cap (vph)	171	1581		319	1580			571			576	
v/s Ratio Prot		0.21			c0.34							
v/s Ratio Perm	0.13			0.06				0.04			c0.07	
v/c Ratio	0.24	0.41		0.11	0.65			0.12			0.19	
Uniform Delay, d1	8.5	9.4		7.8	11.2			14.2			14.5	
Progression Factor	1.00	1.00		0.72	1.29			1.00			1.00	
Incremental Delay, d2	3.3	0.8		0.6	1.9			0.4			0.7	
Delay (s)	11.7	10.2		6.3	16.3			14.6			15.3	
Level of Service	B	B		A	B			B			B	
Approach Delay (s)		10.3			16.0			14.6			15.3	
Approach LOS		B			B			B			B	

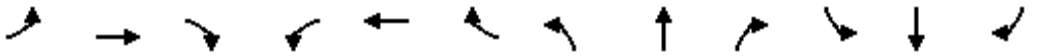
Intersection Summary			
HCM Average Control Delay	13.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	778	5	28	555	35	0	0	0	551	85	361
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00				0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.67				1.00	1.00	0.98
Flpb, ped/bikes	0.91	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	780	3379		1710	3226	514				3285	1731	1481
Flt Permitted	0.43	1.00		0.14	1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	350	3379		248	3226	514				3285	1731	1481
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	27	837	5	30	597	38	0	0	0	592	91	388
RTOR Reduction (vph)	0	0	0	0	0	17	0	0	0	0	0	172
Lane Group Flow (vph)	27	842	0	30	597	21	0	0	0	592	91	216
Confl. Peds. (#/hr)	350		4	4		350	8		6	6		8
Confl. Bikes (#/hr)	7		1	1		7						
Heavy Vehicles (%)	100%	1%	20%	0%	6%	100%	0%	0%	0%	1%	4%	1%
Turn Type	pm+pt			pm+pt		Perm				Split		Perm
Protected Phases	7	4		3	8					6	6	
Permitted Phases	4			8		8						6
Actuated Green, G (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Effective Green, g (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Actuated g/C Ratio	0.33	0.33		0.56	0.56	0.56				0.23	0.23	0.23
Clearance Time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Grp Cap (vph)	162	1118		634	1812	289				758	399	342
v/s Ratio Prot	0.02	c0.25		0.02	c0.19					c0.18	0.05	
v/s Ratio Perm	0.04			0.01		0.04						0.15
v/c Ratio	0.17	0.75		0.05	0.33	0.07				0.78	0.23	0.63
Uniform Delay, d1	31.5	38.8		15.2	15.3	13.0				46.9	40.6	45.0
Progression Factor	0.84	0.86		0.37	0.77	1.35				1.00	1.00	1.00
Incremental Delay, d2	2.1	4.6		0.1	0.4	0.4				7.8	1.3	8.6
Delay (s)	28.6	37.8		5.8	12.2	17.9				54.8	41.9	53.7
Level of Service	C	D		A	B	B				D	D	D
Approach Delay (s)		37.5			12.2			0.0			53.3	
Approach LOS		D			B			A			D	

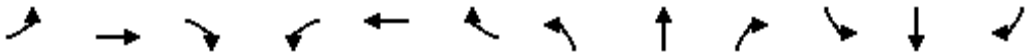
Intersection Summary			
HCM Average Control Delay	37.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	48.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	329	787	213	49	499	257	91	233	51	37	0	28
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.67		1.00	0.91	1.00		0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.97		1.00	1.00	0.85		1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (prot)	3285	3262		1710	3138	1018		3301	1359	855		734
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (perm)	3285	3262		1710	3138	1018		3301	1359	855		734
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	350	837	227	52	531	273	97	248	54	39	0	30
RTOR Reduction (vph)	0	18	0	0	0	206	0	0	42	0	0	28
Lane Group Flow (vph)	350	1046	0	52	531	67	0	345	12	39	0	2
Confl. Peds. (#/hr)	327		13	13		327	6		60	60		6
Confl. Bikes (#/hr)	6					6						
Heavy Vehicles (%)	1%	1%	0%	0%	9%	1%	0%	3%	2%	100%	0%	100%
Turn Type	Prot			Prot		Perm	Split		Perm	Prot		custom
Protected Phases	7	4		3	8		2	2		6		
Permitted Phases						8			2			6
Actuated Green, G (s)	44.0	68.0		8.0	32.0	32.0		28.0	28.0	8.0		8.0
Effective Green, g (s)	44.0	68.0		8.0	32.0	32.0		28.0	28.0	8.0		8.0
Actuated g/C Ratio	0.34	0.52		0.06	0.25	0.25		0.22	0.22	0.06		0.06
Clearance Time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	1112	1706		105	772	251		711	293	53		45
v/s Ratio Prot	0.11	c0.32		0.03	c0.17			c0.10		c0.05		
v/s Ratio Perm						0.07			0.01			0.00
v/c Ratio	0.31	0.61		0.50	0.69	0.27		0.49	0.04	0.74		0.04
Uniform Delay, d1	31.8	21.8		59.0	44.5	39.5		44.7	40.4	60.0		57.4
Progression Factor	0.92	0.16		1.00	1.00	1.00		0.95	1.01	1.00		1.00
Incremental Delay, d2	0.5	1.0		15.7	5.0	2.6		2.4	0.3	41.0		0.4
Delay (s)	29.8	4.6		74.8	49.4	42.1		44.6	41.2	100.9		57.8
Level of Service	C	A		E	D	D		D	D	F		E
Approach Delay (s)		10.8			48.6			44.2			82.2	
Approach LOS		B			D			D			F	

Intersection Summary			
HCM Average Control Delay	29.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	67.2%	ICU Level of Service	C
Analysis Period (min)	15		

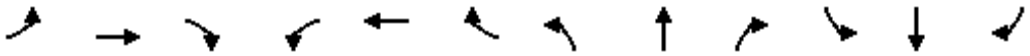
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	859	160	90	724	0	74	0	79	9	14	7
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	11	11	8	12	12	12	14	15	12
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes		0.99		1.00	1.00		1.00		0.98	1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00		0.97		1.00	0.99	1.00	
Frt		0.98		1.00	1.00		1.00		0.85	1.00	0.95	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		2997		1648	3149		1387		1451	1803	1857	
Flt Permitted		1.00		0.21	1.00		0.74		1.00	0.95	1.00	
Satd. Flow (perm)		2997		358	3149		1085		1451	1803	1857	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	895	167	94	754	0	77	0	82	9	15	7
RTOR Reduction (vph)	0	15	0	0	0	0	0	0	56	0	5	0
Lane Group Flow (vph)	0	1047	0	94	754	0	77	0	26	9	17	0
Confl. Peds. (#/hr)	67		19	19		67	38		12	12		38
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	2%	11%	0%	5%	0%	19%	0%	3%	0%	0%	0%
Turn Type				Perm			custom		custom	Perm		
Protected Phases		4			8						6	
Permitted Phases				8			2		2	6		
Actuated Green, G (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Effective Green, g (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Actuated g/C Ratio		0.60		0.60	0.60		0.32		0.32	0.32	0.32	
Clearance Time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)		1798		215	1889		347		464	577	594	
v/s Ratio Prot		c0.35			0.24						0.01	
v/s Ratio Perm				0.26			c0.07		0.02	0.00		
v/c Ratio		0.58		0.44	0.40		0.22		0.06	0.02	0.03	
Uniform Delay, d1		12.3		10.8	10.5		24.9		23.5	23.2	23.3	
Progression Factor		1.00		1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		1.4		6.3	0.6		1.5		0.2	0.0	0.1	
Delay (s)		13.7		17.2	11.2		26.4		23.8	23.3	23.4	
Level of Service		B		B	B		C		C	C	C	
Approach Delay (s)		13.7			11.8			25.0			23.4	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	13.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.3%	ICU Level of Service	B
Analysis Period (min)	15		

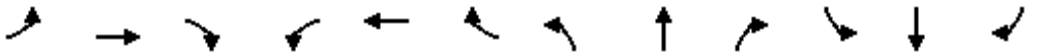
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	254	0	1043	203	645	0	0	785	490
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	12	10	10	12	12	11	12
Total Lost time (s)				4.0		5.0	3.0	4.0			4.0	
Lane Util. Factor				0.95		1.00	1.00	0.91			0.91	
Frpb, ped/bikes				1.00		1.00	1.00	1.00			0.98	
Flpb, ped/bikes				1.00		1.00	1.00	1.00			1.00	
Frt				1.00		0.85	1.00	1.00			0.94	
Flt Protected				0.95		1.00	0.95	1.00			1.00	
Satd. Flow (prot)				1540		1530	1535	4327			4269	
Flt Permitted				0.95		1.00	0.95	1.00			1.00	
Satd. Flow (perm)				1540		1530	1535	4327			4269	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	0	0	262	0	1075	209	665	0	0	809	505
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	262	0	1075	209	665	0	0	1314	0
Confl. Peds. (#/hr)	2					2	18		3	3		18
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%	4%	6%	0%	0%	4%	1%
Turn Type				Split		Prot	Prot					
Protected Phases				8	8	8	5	2			6	
Permitted Phases												
Actuated Green, G (s)				30.0		30.0	32.0	66.0			31.0	
Effective Green, g (s)				31.0		30.0	32.0	66.0			31.0	
Actuated g/C Ratio				0.30		0.29	0.30	0.63			0.30	
Clearance Time (s)				5.0		5.0	3.0	4.0			4.0	
Lane Grp Cap (vph)				455		437	468	2720			1260	
v/s Ratio Prot				0.17		c0.70	c0.14	0.15			c0.31	
v/s Ratio Perm												
v/c Ratio				0.58		2.46	0.45	0.24			1.17dr	
Uniform Delay, d1				31.4		37.5	29.4	8.6			37.0	
Progression Factor				1.00		1.00	0.62	2.01			1.00	
Incremental Delay, d2				5.2		663.8	2.6	0.2			37.3	
Delay (s)				36.6		701.3	20.8	17.4			74.3	
Level of Service				D		F	C	B			E	
Approach Delay (s)		0.0			571.1			18.2			74.3	
Approach LOS		A			F			B			E	

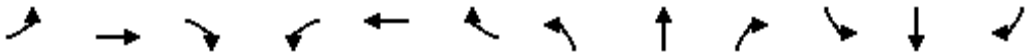
Intersection Summary			
HCM Average Control Delay	248.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.29		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	89.2%	ICU Level of Service	E
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	331	770	144	0	0	0	0	517	375	343	696	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	13	12	12	12	12	12	10	10	8	12	12	12
Total Lost time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Util. Factor	0.91	0.91						0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00						1.00	1.00	1.00	1.00	
Flpb, ped/bikes	0.99	1.00						1.00	1.00	1.00	1.00	
Frt	1.00	0.98						1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1509	3156						4368	2244	1598	4680	
Flt Permitted	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1509	3156						4368	2244	1598	4680	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	348	811	152	0	0	0	0	544	395	361	733	0
RTOR Reduction (vph)	0	13	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	313	985	0	0	0	0	0	544	395	361	733	0
Confl. Peds. (#/hr)	6		1	1		6	6					6
Heavy Vehicles (%)	6%	1%	0%	0%	0%	0%	0%	5%	4%	7%	5%	0%
Turn Type	Perm								Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Actuated Green, G (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Effective Green, g (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Actuated g/C Ratio	0.32	0.32						0.27	0.27	0.30	0.59	
Clearance Time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Grp Cap (vph)	489	1022						1165	598	472	2763	
v/s Ratio Prot								0.12		c0.23	0.16	
v/s Ratio Perm	0.21	0.31							c0.18			
v/c Ratio	0.64	0.96						0.47	0.66	0.76	0.27	
Uniform Delay, d1	30.3	34.9						32.2	34.3	33.7	10.4	
Progression Factor	1.00	1.00						1.14	1.14	0.84	0.16	
Incremental Delay, d2	6.3	20.7						1.2	5.2	4.7	0.1	
Delay (s)	36.6	55.6						38.0	44.4	33.1	1.8	
Level of Service	D	E						D	D	C	A	
Approach Delay (s)		51.1			0.0			40.7			12.1	
Approach LOS		D			A			D			B	

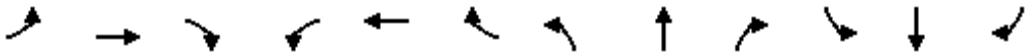
Intersection Summary			
HCM Average Control Delay	35.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	89.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	274	24	23	9	114	0	0	137	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	14	12	12	16	12
Total Lost time (s)				4.0	4.0		4.0	4.0			-3.0	
Lane Util. Factor				1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes				1.00	0.99		1.00	1.00			1.00	
Flpb, ped/bikes				1.00	1.00		1.00	1.00			1.00	
Frt				1.00	0.93		1.00	1.00			1.00	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1688	3133		1710	1846			1955	
Flt Permitted				0.95	1.00		0.56	1.00			1.00	
Satd. Flow (perm)				1688	3133		1011	1846			1955	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	288	25	24	9	120	0	0	144	5
RTOR Reduction (vph)	0	0	0	0	16	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	288	33	0	9	120	0	0	148	0
Confl. Peds. (#/hr)	2		2	2		2			6	6		
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	0%	4%	0%	0%	4%	0%
Turn Type				Perm			pm+pt					
Protected Phases					8		7	2			6	
Permitted Phases				8			2					
Actuated Green, G (s)				27.0	27.0		50.0	50.0			40.0	
Effective Green, g (s)				27.0	27.0		50.0	50.0			46.0	
Actuated g/C Ratio				0.32	0.32		0.59	0.59			0.54	
Clearance Time (s)				4.0	4.0		4.0	4.0			3.0	
Lane Grp Cap (vph)				536	995		652	1086			1058	
v/s Ratio Prot					0.01		0.00	c0.07			c0.08	
v/s Ratio Perm				c0.17			0.01					
v/c Ratio				0.54	0.03		0.01	0.11			0.14	
Uniform Delay, d1				23.9	20.0		10.2	7.7			9.7	
Progression Factor				1.00	1.00		1.07	1.16			1.00	
Incremental Delay, d2				3.8	0.1		0.0	0.2			0.3	
Delay (s)				27.7	20.1		10.9	9.1			10.0	
Level of Service				C	C		B	A			A	
Approach Delay (s)		0.0			26.6			9.3			10.0	
Approach LOS		A			C			A			A	

Intersection Summary			
HCM Average Control Delay	18.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	1.0
Intersection Capacity Utilization	36.0%	ICU Level of Service	A
Analysis Period (min)	15		

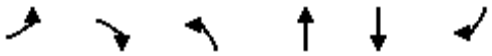
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	12	11	22	3	0	14	0	97	26	44	367	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	16	15	12	8	12	8	12	12	12	10	13	12
Total Lost time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.97			0.98			0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00			1.00		1.00	1.00	
Frt	1.00	0.90			0.89			0.97		1.00	1.00	
Flt Protected	0.95	1.00			0.99			1.00		0.95	1.00	
Satd. Flow (prot)	1935	1739			1550			1723		1589	1860	
Flt Permitted	0.75	1.00			0.98			1.00		0.65	1.00	
Satd. Flow (perm)	1517	1739			1533			1723		1094	1860	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	14	13	25	3	0	16	0	111	30	51	422	0
RTOR Reduction (vph)	0	17	0	0	11	0	0	12	0	0	0	0
Lane Group Flow (vph)	14	21	0	0	8	0	0	129	0	51	422	0
Confl. Peds. (#/hr)	1		11	11		1	1		10	10		1
Confl. Bikes (#/hr)			2	2			1		2	2		1
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Turn Type	Perm			Perm						pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Effective Green, g (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Actuated g/C Ratio	0.32	0.32			0.32			0.47		0.59	0.59	
Clearance Time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Grp Cap (vph)	482	552			487			811		684	1094	
v/s Ratio Prot		c0.01						0.08		0.01	c0.23	
v/s Ratio Perm	0.01				0.01					0.04		
v/c Ratio	0.03	0.04			0.02			0.16		0.07	0.39	
Uniform Delay, d1	20.0	20.0			19.9			12.9		7.9	9.3	
Progression Factor	1.00	1.00			1.00			1.00		0.97	0.86	
Incremental Delay, d2	0.1	0.1			0.1			0.4		0.2	1.0	
Delay (s)	20.1	20.2			20.0			13.3		7.9	9.0	
Level of Service	C	C			B			B		A	A	
Approach Delay (s)		20.1			20.0			13.3			8.9	
Approach LOS		C			B			B			A	

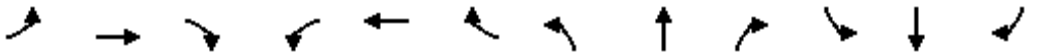
Intersection Summary			
HCM Average Control Delay	10.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



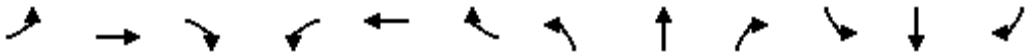
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	37	32	8	149	222	22
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	14	12	13	12	10	12
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.94		1.00	1.00	0.99	
Flt Protected	0.97		0.95	1.00	1.00	
Satd. Flow (prot)	1753		1765	1782	1656	
Flt Permitted	0.97		0.55	1.00	1.00	
Satd. Flow (perm)	1753		1017	1782	1656	
Peak-hour factor, PHF	0.81	0.81	0.81	0.81	0.81	0.81
Adj. Flow (vph)	46	40	10	184	274	27
RTOR Reduction (vph)	27	0	0	0	5	0
Lane Group Flow (vph)	59	0	10	184	296	0
Confl. Peds. (#/hr)			2			2
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.0		36.0	36.0	36.0	
Effective Green, g (s)	21.0		36.0	36.0	36.0	
Actuated g/C Ratio	0.32		0.55	0.55	0.55	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	566		563	987	917	
v/s Ratio Prot	c0.03			0.10	c0.18	
v/s Ratio Perm			0.01			
v/c Ratio	0.10		0.02	0.19	0.32	
Uniform Delay, d1	15.4		6.5	7.2	7.9	
Progression Factor	1.00		0.46	0.58	1.46	
Incremental Delay, d2	0.4		0.1	0.4	0.8	
Delay (s)	15.8		3.0	4.6	12.3	
Level of Service	B		A	A	B	
Approach Delay (s)	15.8			4.5	12.3	
Approach LOS	B			A	B	

Intersection Summary			
HCM Average Control Delay	10.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	24.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



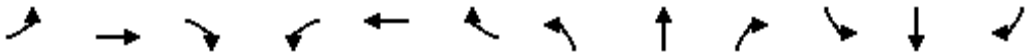
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	29	256	9	253	120	0	0	256	16
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	14	16	12	12	15	12	12	13	10
Total Lost time (s)					4.0		4.0	4.0			3.0	3.0
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Frt					1.00		1.00	1.00			1.00	0.85
Flt Protected					1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3772		1693	1678			1738	1428
Flt Permitted					1.00		0.52	1.00			1.00	1.00
Satd. Flow (perm)					3772		922	1678			1738	1428
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	31	269	9	266	126	0	0	269	17
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	0	0	0	9
Lane Group Flow (vph)	0	0	0	0	306	0	266	126	0	0	269	8
Confl. Peds. (#/hr)	1					1			5	5		
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	1%	18%	0%	0%	7%	0%
Turn Type				Split			pm+pt					Perm
Protected Phases				8	8		7	2			6	
Permitted Phases							2					6
Actuated Green, G (s)					26.0		51.0	51.0			38.0	38.0
Effective Green, g (s)					26.0		51.0	51.0			38.0	38.0
Actuated g/C Ratio					0.31		0.60	0.60			0.45	0.45
Clearance Time (s)					4.0		4.0	4.0			3.0	3.0
Lane Grp Cap (vph)					1154		644	1007			777	638
v/s Ratio Prot					c0.08		c0.05	0.08			0.15	
v/s Ratio Perm							c0.20					0.01
v/c Ratio					0.27		0.41	0.13			0.35	0.01
Uniform Delay, d1					22.3		12.1	7.4			15.4	13.1
Progression Factor					1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2					0.6		2.0	0.3			1.2	0.0
Delay (s)					22.8		14.1	7.6			16.6	13.1
Level of Service					C		B	A			B	B
Approach Delay (s)		0.0			22.8			12.0			16.4	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM Average Control Delay	16.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	95	94	38	133	203	30	59	702	44
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	15	12	12	12	12	12	13	12
Total Lost time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.98		1.00	0.98		1.00	0.99	
Flt Protected					0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1896		1710	3286		1707	3467	
Flt Permitted					0.98		0.23	1.00		0.58	1.00	
Satd. Flow (perm)					1896		408	3286		1048	3467	
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	0	0	0	112	111	45	156	239	35	69	826	52
RTOR Reduction (vph)	0	0	0	0	10	0	0	15	0	0	6	0
Lane Group Flow (vph)	0	0	0	0	258	0	156	259	0	69	872	0
Confl. Peds. (#/hr)							5		5	5		5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	1%	0%
Turn Type				Split			pm+pt			pm+pt		
Protected Phases				8	8		5	2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)					23.0		41.0	34.0		41.0	34.0	
Effective Green, g (s)					23.0		41.0	34.0		41.0	34.0	
Actuated g/C Ratio					0.31		0.55	0.45		0.55	0.45	
Clearance Time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Grp Cap (vph)					581		345	1490		634	1572	
v/s Ratio Prot					c0.14		c0.04	0.08		0.01	c0.25	
v/s Ratio Perm							0.21			0.05		
v/c Ratio					0.44		0.45	0.17		0.11	0.55	
Uniform Delay, d1					20.9		17.8	12.2		8.2	15.0	
Progression Factor					1.00		0.81	0.81		1.00	1.00	
Incremental Delay, d2					2.5		4.2	0.3		0.3	1.4	
Delay (s)					23.3		18.6	10.1		8.6	16.4	
Level of Service					C		B	B		A	B	
Approach Delay (s)		0.0			23.3			13.2			15.8	
Approach LOS		A			C			B			B	

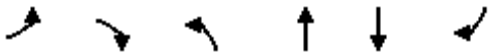
Intersection Summary			
HCM Average Control Delay	16.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	53.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	32	49	12	8	63	63	5	271	20	159	588	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	16	12	12	10	11	12	12	11	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.94		1.00	0.99		1.00	0.99	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1966			1654		1596	3177		1704	3232	
Flt Permitted		0.88			0.99		0.33	1.00		0.55	1.00	
Satd. Flow (perm)		1761			1638		552	3177		987	3232	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	37	56	14	9	72	72	6	311	23	183	676	57
RTOR Reduction (vph)	0	7	0	0	43	0	0	7	0	0	8	0
Lane Group Flow (vph)	0	100	0	0	110	0	6	327	0	183	725	0
Confl. Peds. (#/hr)	2					2	1		6	6		1
Confl. Bikes (#/hr)			1	1			3					3
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	0%	3%	0%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Effective Green, g (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Actuated g/C Ratio		0.33			0.33		0.56	0.56		0.56	0.56	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		587			546		309	1779		553	1810	
v/s Ratio Prot								0.10			c0.22	
v/s Ratio Perm		0.06			c0.07		0.01			0.19		
v/c Ratio		0.17			0.20		0.02	0.18		0.33	0.40	
Uniform Delay, d1		17.7			17.9		7.3	8.1		8.9	9.4	
Progression Factor		1.00			1.00		1.00	1.00		0.26	0.25	
Incremental Delay, d2		0.6			0.8		0.1	0.2		1.4	0.6	
Delay (s)		18.3			18.7		7.5	8.3		3.7	2.9	
Level of Service		B			B		A	A		A	A	
Approach Delay (s)		18.3			18.7			8.3			3.0	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	6.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	49.2%	ICU Level of Service	A
Analysis Period (min)	15		

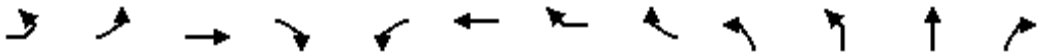
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	29	148	52	192	452	63
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	31	159	56	206	486	68

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	190	125	138	324	230
Volume Left (vph)	31	56	0	0	0
Volume Right (vph)	159	0	0	0	68
Hadj (s)	-0.42	0.28	0.05	0.05	-0.16
Departure Headway (s)	5.2	5.9	5.7	5.4	5.2
Degree Utilization, x	0.28	0.21	0.22	0.49	0.33
Capacity (veh/h)	637	580	602	647	672
Control Delay (s)	10.2	9.3	9.1	12.2	9.5
Approach Delay (s)	10.2	9.2		11.1	
Approach LOS	B	A		B	

Intersection Summary			
Delay	10.4		
HCM Level of Service	B		
Intersection Capacity Utilization	43.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	32	35	371	18	18	367	63	71	53	66	341	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	0.95	
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.93			1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Frt		1.00	1.00	0.85	1.00	1.00	0.85			1.00	0.99	
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	
Satd. Flow (prot)		1611	1731	1530	1710	1731	1421			1710	3252	
Flt Permitted		0.14	1.00	1.00	0.51	1.00	1.00			0.14	1.00	
Satd. Flow (perm)		238	1731	1530	925	1731	1421			257	3252	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	37	40	426	21	21	422	72	82	61	76	392	34
RTOR Reduction (vph)	0	0	0	12	0	0	39	0	0	0	6	0
Lane Group Flow (vph)	0	77	426	9	21	422	115	0	0	137	420	0
Confl. Peds. (#/hr)		25					25					3
Heavy Vehicles (%)	6%	6%	4%	0%	0%	4%	0%	0%	0%	0%	4%	0%
Turn Type	Perm	pm+pt		Perm	Perm		Perm		Perm	Perm		
Protected Phases		7	4			8					2	
Permitted Phases	4	4		4	8		8		2	2		
Actuated Green, G (s)		44.0	44.0	44.0	25.0	25.0	25.0			28.0	28.0	
Effective Green, g (s)		44.0	44.0	44.0	25.0	25.0	25.0			28.0	28.0	
Actuated g/C Ratio		0.42	0.42	0.42	0.24	0.24	0.24			0.27	0.27	
Clearance Time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Grp Cap (vph)		302	725	641	220	412	338			69	867	
v/s Ratio Prot		0.04	c0.25			c0.24					0.13	
v/s Ratio Perm		0.07		0.01	0.02		0.08			c0.53		
v/c Ratio		0.25	0.59	0.01	0.10	1.02	0.34			1.99	0.48	
Uniform Delay, d1		21.5	23.5	17.8	31.2	40.0	33.2			38.5	32.4	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Incremental Delay, d2		2.0	3.5	0.0	0.9	50.7	2.7			491.0	1.9	
Delay (s)		23.5	27.0	17.9	32.0	90.7	35.9			529.5	34.4	
Level of Service		C	C	B	C	F	D			F	C	
Approach Delay (s)			26.1			74.5					154.8	
Approach LOS			C			E					F	

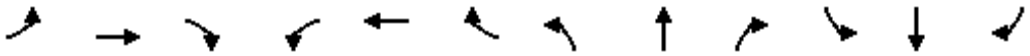
Intersection Summary			
HCM Average Control Delay	116.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.37		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	94.6%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations								
Volume (vph)	95	515	74	93	4	95	515	167
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5				4.5	4.5	
Lane Util. Factor	1.00	0.95				1.00	0.88	
Frpb, ped/bikes	1.00	1.00				1.00	1.00	
Flpb, ped/bikes	1.00	1.00				1.00	1.00	
Frt	1.00	0.96				1.00	0.85	
Flt Protected	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1705	3245				1710	2633	
Flt Permitted	0.38	1.00				0.95	1.00	
Satd. Flow (perm)	675	3245				1710	2633	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	109	592	85	107	5	109	592	192
RTOR Reduction (vph)	0	12	0	0	0	0	26	0
Lane Group Flow (vph)	109	772	0	0	0	114	758	0
Confl. Peds. (#/hr)	3							
Heavy Vehicles (%)	0%	2%	0%	0%	0%	0%	3%	0%
Turn Type	Perm				Split		Perm	
Protected Phases		6			9	9		
Permitted Phases	6						9	
Actuated Green, G (s)	27.5	27.5				20.5	20.5	
Effective Green, g (s)	27.5	27.5				20.5	20.5	
Actuated g/C Ratio	0.26	0.26				0.20	0.20	
Clearance Time (s)	4.5	4.5				4.5	4.5	
Lane Grp Cap (vph)	177	850				334	514	
v/s Ratio Prot		0.24				0.07		
v/s Ratio Perm	0.16						c0.29	
v/c Ratio	0.62	0.91				0.34	1.48	
Uniform Delay, d1	34.1	37.5				36.4	42.2	
Progression Factor	1.00	1.00				1.00	1.00	
Incremental Delay, d2	15.0	15.3				2.8	224.2	
Delay (s)	49.1	52.8				39.2	266.5	
Level of Service	D	D				D	F	
Approach Delay (s)		52.4				237.6		
Approach LOS		D				F		

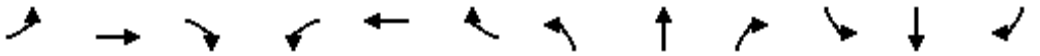
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	532	0	0	403	45	77	47	16	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	11	11	16	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.99			0.98				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		1681			1954			1842				
Flt Permitted		0.92			1.00			0.97				
Satd. Flow (perm)		1557			1954			1842				
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	63	572	0	0	433	48	83	51	17	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	635	0	0	481	0	0	151	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		40.0			40.0			17.0				
Effective Green, g (s)		40.0			40.0			17.0				
Actuated g/C Ratio		0.62			0.62			0.26				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		958			1202			482				
v/s Ratio Prot					0.25							
v/s Ratio Perm		c0.41						0.08				
v/c Ratio		0.66			0.40			0.31				
Uniform Delay, d1		8.1			6.4			19.3				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		3.6			1.0			1.7				
Delay (s)		11.7			7.4			21.0				
Level of Service		B			A			C				
Approach Delay (s)		11.7			7.4			21.0			0.0	
Approach LOS		B			A			C			A	

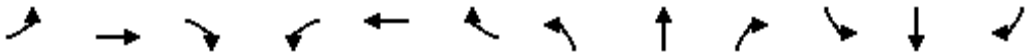
Intersection Summary			
HCM Average Control Delay	11.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	76.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	64	294	137	103	270	110	95	576	76	131	723	90
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	9	9	10	9
Total Lost time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.96	1.00	1.00	0.95	1.00	1.00	0.94
Flpb, ped/bikes		1.00	1.00		0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1981	1434		1944	1444	1546	3040	1296	1505	3069	1252
Flt Permitted		0.54	1.00		0.78	1.00	0.24	1.00	1.00	0.32	1.00	1.00
Satd. Flow (perm)		1077	1434		1541	1444	391	3040	1296	503	3069	1252
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	69	316	147	111	290	118	102	619	82	141	777	97
RTOR Reduction (vph)	0	0	87	0	0	84	0	0	49	0	0	50
Lane Group Flow (vph)	0	385	60	0	401	34	102	619	33	141	777	47
Confl. Peds. (#/hr)	24		45	45		24	36		24	24		36
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	2%	2%	2%	2%	3%	2%	3%	5%	1%	2%	4%	3%
Turn Type	pm+pt		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		43.0	43.0		30.0	30.0	50.6	42.4	42.4	51.4	42.8	42.8
Effective Green, g (s)		43.0	43.0		30.0	30.0	50.6	42.4	42.4	51.4	42.8	42.8
Actuated g/C Ratio		0.41	0.41		0.29	0.29	0.48	0.40	0.40	0.49	0.41	0.41
Clearance Time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		527	587		440	413	279	1228	523	328	1251	510
v/s Ratio Prot		c0.07					0.03	0.20		c0.04	c0.25	
v/s Ratio Perm		0.23	0.04		c0.26	0.02	0.15		0.03	0.18		0.04
v/c Ratio		0.73	0.10		0.91	0.08	0.37	0.50	0.06	0.43	0.62	0.09
Uniform Delay, d1		26.1	19.1		36.2	27.4	16.2	23.4	19.2	15.7	24.7	19.1
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.79	1.58	2.83
Incremental Delay, d2		8.6	0.4		25.6	0.4	0.8	1.5	0.2	0.9	2.2	0.3
Delay (s)		34.8	19.5		61.8	27.8	17.0	24.9	19.4	29.0	41.2	54.4
Level of Service		C	B		E	C	B	C	B	C	D	D
Approach Delay (s)		30.5			54.1			23.3			40.8	
Approach LOS		C			D			C			D	

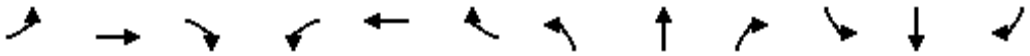
Intersection Summary			
HCM Average Control Delay	36.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	81.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	74	347	74	78	367	78	44	52	59	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		0.98			0.98			0.95				
Flt Protected		0.99			0.99			0.99				
Satd. Flow (prot)		1643			1643			1798				
Flt Permitted		0.86			0.87			0.99				
Satd. Flow (perm)		1430			1437			1798				
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	80	373	80	84	395	84	47	56	63	0	0	0
RTOR Reduction (vph)	0	10	0	0	10	0	0	34	0	0	0	0
Lane Group Flow (vph)	0	523	0	0	553	0	0	132	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		40.0			40.0			17.0				
Effective Green, g (s)		40.0			40.0			17.0				
Actuated g/C Ratio		0.62			0.62			0.26				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		880			884			470				
v/s Ratio Prot												
v/s Ratio Perm		0.37			c0.38			0.07				
v/c Ratio		0.59			0.63			0.28				
Uniform Delay, d1		7.6			7.8			19.1				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		3.0			3.3			1.5				
Delay (s)		10.5			11.2			20.6				
Level of Service		B			B			C				
Approach Delay (s)		10.5			11.2			20.6			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM Average Control Delay	12.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	15		

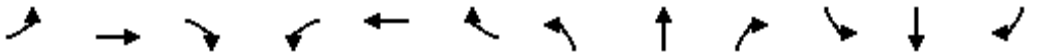
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	19	382	64	66	441	32	37	76	72	51	225	45
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	11	12	12	15	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.96		1.00	0.96		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		0.99	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.98	
Flt Protected		1.00	1.00		0.99	1.00		0.98	1.00		0.99	
Satd. Flow (prot)		1687	1382		1712	1417		1685	1455		1886	
Flt Permitted		0.97	1.00		0.90	1.00		0.85	1.00		0.94	
Satd. Flow (perm)		1641	1382		1558	1417		1449	1455		1781	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	20	402	67	69	464	34	39	80	76	54	237	47
RTOR Reduction (vph)	0	0	29	0	0	12	0	0	52	0	7	0
Lane Group Flow (vph)	0	422	38	0	533	22	0	119	24	0	331	0
Confl. Peds. (#/hr)	25		19	19		25	36		30	30		36
Confl. Bikes (#/hr)	1		2	2		1	3					3
Heavy Vehicles (%)	0%	3%	3%	0%	1%	0%	0%	1%	1%	0%	1%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Effective Green, g (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.32	0.32		0.32	
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Grp Cap (vph)		941	792		893	812		464	466		570	
v/s Ratio Prot												
v/s Ratio Perm		0.26	0.03		c0.34	0.02		0.08	0.02		c0.19	
v/c Ratio		0.45	0.05		0.60	0.03		0.26	0.05		0.58	
Uniform Delay, d1		9.2	7.0		10.4	6.9		18.9	17.6		21.3	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		1.5	0.1		2.9	0.1		1.3	0.2		4.3	
Delay (s)		10.7	7.1		13.3	7.0		20.2	17.8		25.6	
Level of Service		B	A		B	A		C	B		C	
Approach Delay (s)		10.2			12.9			19.3			25.6	
Approach LOS		B			B			B			C	

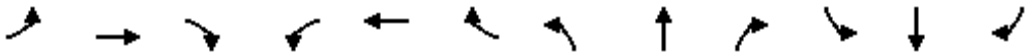
Intersection Summary			
HCM Average Control Delay	15.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	86.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	55	426	29	39	453	47	44	165	55	95	162	25
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	11	16	8	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	0.98	1.00		1.00	1.00		0.99	1.00	1.00	0.99	1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1526	3067		1651	3728		1584	1663	1370	1568	1680	1397
Flt Permitted	0.42	1.00		0.45	1.00		0.65	1.00	1.00	0.64	1.00	1.00
Satd. Flow (perm)	677	3067		785	3728		1076	1663	1370	1057	1680	1397
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	59	453	31	41	482	50	47	176	59	101	172	27
RTOR Reduction (vph)	0	8	0	0	12	0	0	0	35	0	0	16
Lane Group Flow (vph)	59	476	0	41	520	0	47	176	24	101	172	11
Confl. Peds. (#/hr)	51		3	3		51	13		13	13		13
Heavy Vehicles (%)	2%	3%	3%	0%	2%	0%	0%	1%	2%	1%	0%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Effective Green, g (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	323	1463		374	1778		430	665	548	423	672	559
v/s Ratio Prot		c0.16			0.14			c0.11			0.10	
v/s Ratio Perm	0.09			0.05			0.04		0.02	0.10		0.01
v/c Ratio	0.18	0.33		0.11	0.29		0.11	0.26	0.04	0.24	0.26	0.02
Uniform Delay, d1	9.7	10.5		9.4	10.3		12.2	13.1	11.9	12.9	13.0	11.8
Progression Factor	1.00	1.00		1.00	1.00		0.88	0.94	0.88	0.54	0.54	0.29
Incremental Delay, d2	1.2	0.6		0.6	0.4		0.5	1.0	0.1	1.3	0.9	0.1
Delay (s)	11.0	11.1		10.0	10.8		11.3	13.3	10.6	8.3	8.0	3.4
Level of Service	B	B		A	B		B	B	B	A	A	A
Approach Delay (s)		11.1			10.7			12.4			7.7	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	10.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



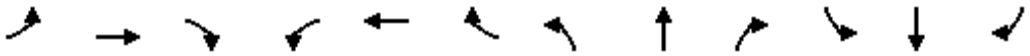
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	389	71	58	305	53	54	175	63	81	223	70
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	11	10	11	11	10	11	11	10	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	0.96	1.00		0.95	1.00		0.99	1.00		0.95	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.96		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1319	3143		1513	3125		1579	2917		1451	3002	
Flt Permitted	0.52	1.00		0.45	1.00		0.56	1.00		0.60	1.00	
Satd. Flow (perm)	724	3143		717	3125		935	2917		916	3002	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	52	401	73	60	314	55	56	180	65	84	230	72
RTOR Reduction (vph)	0	0	0	0	0	0	0	38	0	0	40	0
Lane Group Flow (vph)	52	474	0	60	369	0	56	207	0	84	262	0
Confl. Peds. (#/hr)	112		99	99		112	23		53	53		23
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	16%	1%	0%	0%	1%	9%	0%	8%	2%	5%	5%	7%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.41	0.41		0.41	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	348	1509		344	1500		386	1206		379	1241	
v/s Ratio Prot		c0.15			0.12			0.07			0.09	
v/s Ratio Perm	0.07			0.08			0.06			c0.09		
v/c Ratio	0.15	0.31		0.17	0.25		0.15	0.17		0.22	0.21	
Uniform Delay, d1	10.9	11.9		11.1	11.5		13.7	13.9		14.2	14.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.9	0.5		1.1	0.4		0.8	0.3		1.3	0.4	
Delay (s)	11.8	12.5		12.2	11.9		14.5	14.2		15.6	14.5	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		12.4			11.9			14.3			14.8	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	49.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	78	382	52	27	433	40	68	163	48	76	473	106
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	8	16	12	9	10	10	9	10	10
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		0.98	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1594	1654		1362	1973		1534	2997		1534	3015	
Flt Permitted	0.34	1.00		0.39	1.00		0.28	1.00		0.61	1.00	
Satd. Flow (perm)	577	1654		554	1973		446	2997		989	3015	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	82	402	55	28	456	42	72	172	51	80	498	112
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	82	457	0	28	498	0	72	223	0	80	610	0
Confl. Peds. (#/hr)	21		95	95		21	36		8	8		36
Confl. Bikes (#/hr)	2		3	3		2	2					2
Heavy Vehicles (%)	0%	2%	0%	7%	2%	0%	0%	3%	0%	0%	2%	1%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	46.4	41.2		40.0	38.0		25.8	21.2		25.8	21.2	
Effective Green, g (s)	46.4	39.2		40.0	36.0		25.8	19.2		25.8	19.2	
Actuated g/C Ratio	0.55	0.46		0.47	0.42		0.30	0.23		0.30	0.23	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	377	763		280	836		194	677		330	681	
v/s Ratio Prot	c0.01	c0.28		0.00	0.25		c0.02	0.07		0.01	c0.20	
v/s Ratio Perm	0.11			0.04			0.09			0.06		
v/c Ratio	0.22	0.60		0.10	0.60		0.37	0.33		0.24	0.90	
Uniform Delay, d1	16.6	17.0		17.6	18.9		29.1	27.5		22.4	31.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	3.5		0.2	3.1		1.2	1.3		0.4	16.7	
Delay (s)	16.9	20.5		17.7	22.0		30.3	28.8		22.8	48.7	
Level of Service	B	C		B	C		C	C		C	D	
Approach Delay (s)		20.0			21.8			29.2			45.7	
Approach LOS		B			C			C			D	

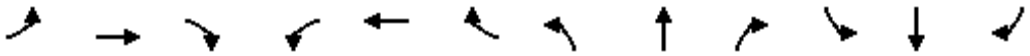
Intersection Summary			
HCM Average Control Delay	30.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	71.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	62	327	53	90	391	91	51	122	45	98	283	63
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	11	11	11	11	12	12	10	10	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		0.99	1.00	
Frt		0.98			0.98		1.00	0.96		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3681			3130		1652	3236		1548	3026	
Flt Permitted		0.80			0.80		0.51	1.00		0.64	1.00	
Satd. Flow (perm)		2979			2521		891	3236		1041	3026	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	67	352	57	97	420	98	55	131	48	105	304	68
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	476	0	0	615	0	55	179	0	105	372	0
Confl. Peds. (#/hr)	23		30	30		23	1		20	20		1
Confl. Bikes (#/hr)	3					3						
Heavy Vehicles (%)	0%	3%	0%	2%	2%	0%	0%	1%	0%	2%	2%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.0			33.0		32.0	32.0		32.0	32.0	
Effective Green, g (s)		34.0			34.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio		0.45			0.45		0.44	0.44		0.44	0.44	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		1350			1143		392	1424		458	1331	
v/s Ratio Prot								0.06			c0.12	
v/s Ratio Perm		0.16			c0.24		0.06			0.10		
v/c Ratio		0.35			0.54		0.14	0.13		0.23	0.28	
Uniform Delay, d1		13.3			14.8		12.5	12.4		13.1	13.4	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.7			1.8		0.7	0.2		1.2	0.5	
Delay (s)		14.1			16.6		13.3	12.6		14.2	13.9	
Level of Service		B			B		B	B		B	B	
Approach Delay (s)		14.1			16.6			12.8			14.0	
Approach LOS		B			B			B			B	

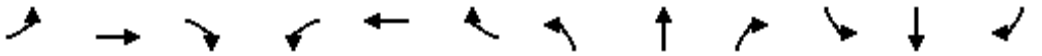
Intersection Summary			
HCM Average Control Delay	14.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	76	667	5	16	449	192	1	1	7	164	1	62
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	12	12	12	12	12	13	13	13
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	1.00		1.00	1.00	0.85		0.89			0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00		1.00			0.97	
Satd. Flow (prot)	1605	3206		1660	3320	1485		1551			3175	
Flt Permitted	0.48	1.00		0.36	1.00	1.00		0.98			0.77	
Satd. Flow (perm)	804	3206		622	3320	1485		1523			2544	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	82	717	5	17	483	206	1	1	8	176	1	67
RTOR Reduction (vph)	0	0	0	0	0	72	0	6	0	0	51	0
Lane Group Flow (vph)	82	722	0	17	483	134	0	4	0	0	193	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	46.0	46.0		46.0	46.0	46.0		16.7			16.7	
Effective Green, g (s)	46.0	46.0		46.0	46.0	46.0		16.7			16.7	
Actuated g/C Ratio	0.65	0.65		0.65	0.65	0.65		0.24			0.24	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		8.0			8.0	
Lane Grp Cap (vph)	523	2086		405	2160	966		360			601	
v/s Ratio Prot		c0.23			0.15							
v/s Ratio Perm	0.10			0.03		0.09		0.00			c0.08	
v/c Ratio	0.16	0.35		0.04	0.22	0.14		0.01			0.32	
Uniform Delay, d1	4.8	5.6		4.4	5.0	4.7		20.7			22.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	0.6	0.5		0.2	0.2	0.3		0.1			1.3	
Delay (s)	5.4	6.0		4.6	5.3	5.0		20.7			23.6	
Level of Service	A	A		A	A	A		C			C	
Approach Delay (s)		6.0			5.2			20.7			23.6	
Approach LOS		A			A			C			C	

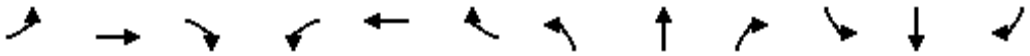
Intersection Summary			
HCM Average Control Delay	8.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	70.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	49.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	101	176	94	93	160	54	114	769	77	118	786	90
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	9	12	10	10	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.95		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1560	1506		1561	1586		1493	3069	1337	1523	3099	1318
Flt Permitted	0.46	1.00		0.36	1.00		0.22	1.00	1.00	0.23	1.00	1.00
Satd. Flow (perm)	761	1506		587	1586		347	3069	1337	368	3099	1318
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	106	185	99	98	168	57	120	809	81	124	827	95
RTOR Reduction (vph)	0	23	0	0	14	0	0	0	40	0	0	46
Lane Group Flow (vph)	106	261	0	98	211	0	120	809	41	124	827	49
Confl. Peds. (#/hr)	10		13	13		10	18		7	7		18
Confl. Bikes (#/hr)	2					2	2		1	1		2
Heavy Vehicles (%)	2%	1%	1%	2%	1%	2%	3%	4%	0%	1%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	28.0	21.0		28.0	21.0		42.0	35.0	35.0	42.0	35.0	35.0
Effective Green, g (s)	26.0	22.0		26.0	22.0		40.0	35.0	35.0	40.0	35.0	35.0
Actuated g/C Ratio	0.31	0.26		0.31	0.26		0.47	0.41	0.41	0.47	0.41	0.41
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	289	390		248	410		244	1264	551	255	1276	543
v/s Ratio Prot	0.03	c0.17		c0.03	0.13		c0.03	0.26		0.03	c0.27	
v/s Ratio Perm	0.09			0.09			0.20		0.03	0.19		0.04
v/c Ratio	0.37	0.67		0.40	0.51		0.49	0.64	0.07	0.49	0.65	0.09
Uniform Delay, d1	22.1	28.2		22.2	26.9		14.0	20.0	15.2	14.0	20.1	15.3
Progression Factor	1.00	1.00		1.00	1.00		0.62	0.79	0.57	1.00	1.00	1.00
Incremental Delay, d2	3.6	8.8		4.7	4.6		6.7	2.4	0.3	6.5	2.6	0.3
Delay (s)	25.7	37.1		26.9	31.5		15.4	18.1	8.8	20.5	22.6	15.6
Level of Service	C	D		C	C		B	B	A	C	C	B
Approach Delay (s)		34.0			30.1			17.1			21.7	
Approach LOS		C			C			B			C	

Intersection Summary			
HCM Average Control Delay	22.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	64.7%	ICU Level of Service	C
Analysis Period (min)	15		

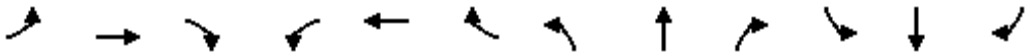
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	21	173	33	20	173	20	18	115	31	35	239	47
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	14	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.99			1.00			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.99			0.97			0.98	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1840			1852			1938			1976	
Flt Permitted		0.97			0.97			0.95			0.96	
Satd. Flow (perm)		1786			1795			1858			1905	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	22	184	35	21	184	21	19	122	33	37	254	50
RTOR Reduction (vph)	0	9	0	0	6	0	0	13	0	0	10	0
Lane Group Flow (vph)	0	232	0	0	220	0	0	161	0	0	331	0
Confl. Peds. (#/hr)	18		34	34		18	16		19	19		16
Confl. Bikes (#/hr)			6	6			1		4	4		1
Heavy Vehicles (%)	0%	1%	0%	5%	1%	0%	0%	2%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.42			0.42			0.46			0.46	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		742			746			858			879	
v/s Ratio Prot												
v/s Ratio Perm		c0.13			0.12			0.09			c0.17	
v/c Ratio		0.31			0.30			0.19			0.38	
Uniform Delay, d1		12.8			12.7			10.3			11.4	
Progression Factor		1.00			0.60			1.20			1.00	
Incremental Delay, d2		1.1			1.0			0.5			1.2	
Delay (s)		13.9			8.6			12.9			12.6	
Level of Service		B			A			B			B	
Approach Delay (s)		13.9			8.6			12.9			12.6	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	12.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	48.6%	ICU Level of Service	A
Analysis Period (min)	15		

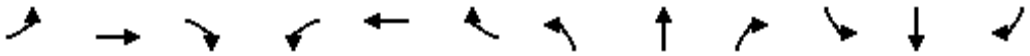
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	179	34	25	179	18	38	195	31	33	180	33
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.97	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1496	3063		1576	3121		1518	3117		1550	3075	
Flt Permitted	0.62	1.00		0.61	1.00		0.61	1.00		0.60	1.00	
Satd. Flow (perm)	970	3063		1005	3121		968	3117		975	3075	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	25	197	37	27	197	20	42	214	34	36	198	36
RTOR Reduction (vph)	0	24	0	0	12	0	0	14	0	0	15	0
Lane Group Flow (vph)	25	210	0	27	205	0	42	234	0	36	219	0
Confl. Peds. (#/hr)	20		17	17		20	2					2
Confl. Bikes (#/hr)	32		36	36		32	22		25	25		22
Heavy Vehicles (%)	4%	1%	0%	0%	0%	0%	5%	0%	0%	3%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0		39.0	39.0		39.0	39.0	
Effective Green, g (s)	19.0	19.0		19.0	19.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.58	0.58		0.58	0.58	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	284	895		294	912		566	1822		570	1798	
v/s Ratio Prot		c0.07			0.07			c0.08			0.07	
v/s Ratio Perm	0.03			0.03			0.04			0.04		
v/c Ratio	0.09	0.23		0.09	0.22		0.07	0.13		0.06	0.12	
Uniform Delay, d1	16.7	17.5		16.7	17.4		5.9	6.1		5.8	6.0	
Progression Factor	0.86	0.87		0.83	0.83		1.14	1.11		0.48	0.45	
Incremental Delay, d2	0.6	0.6		0.6	0.6		0.3	0.1		0.2	0.1	
Delay (s)	15.0	15.8		14.5	15.0		6.9	6.9		3.0	2.9	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		15.7			15.0			6.9			2.9	
Approach LOS		B			B			A			A	

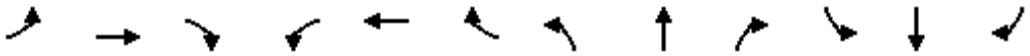
Intersection Summary			
HCM Average Control Delay	9.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.16		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



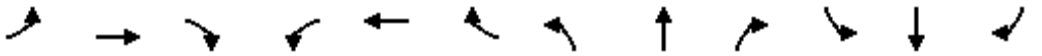
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	61	153	38	21	132	30	23	238	16	30	316	33
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	9	9	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.97		1.00	0.97			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1554	3057		1524	2940			1923			1938	
Flt Permitted	0.65	1.00		0.63	1.00			0.96			0.96	
Satd. Flow (perm)	1058	3057		1009	2940			1851			1874	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	62	156	39	21	135	31	23	243	16	31	322	34
RTOR Reduction (vph)	0	23	0	0	19	0	0	3	0	0	5	0
Lane Group Flow (vph)	62	172	0	21	147	0	0	279	0	0	382	0
Confl. Peds. (#/hr)	11		17	17		11	26		7	7		26
Heavy Vehicles (%)	2%	1%	0%	0%	1%	3%	4%	5%	0%	0%	4%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Effective Green, g (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40			0.48			0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	423	1223		404	1176			883			894	
v/s Ratio Prot		0.06			0.05							
v/s Ratio Perm	c0.06			0.02				0.15			c0.20	
v/c Ratio	0.15	0.14		0.05	0.13			0.32			0.43	
Uniform Delay, d1	12.4	12.4		11.9	12.3			10.5			11.2	
Progression Factor	0.98	0.91		0.78	0.77			0.95			1.00	
Incremental Delay, d2	0.7	0.2		0.2	0.2			0.9			1.5	
Delay (s)	12.9	11.5		9.5	9.7			10.8			12.7	
Level of Service	B	B		A	A			B			B	
Approach Delay (s)		11.8			9.7			10.8			12.7	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



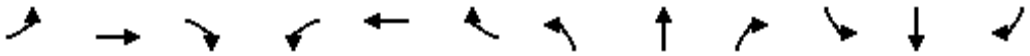
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	47	111	26	16	124	20	28	212	10	28	347	55
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	16	12	10	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.97		1.00	0.98			0.99			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			1.00	
Satd. Flow (prot)	1652	1974		1584	1977			1982			1979	
Flt Permitted	0.63	1.00		0.64	1.00			0.93			0.97	
Satd. Flow (perm)	1099	1974		1074	1977			1848			1924	
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	55	129	30	19	144	23	33	247	12	33	403	64
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	55	159	0	19	167	0	0	292	0	0	500	0
Confl. Peds. (#/hr)	1		10	10		1	2		5	5		2
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	2%	0%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Effective Green, g (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Actuated g/C Ratio	0.31	0.31		0.31	0.31			0.57			0.57	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	338	607		330	608			1052			1095	
v/s Ratio Prot		0.08			c0.08							
v/s Ratio Perm	0.05			0.02				0.16			c0.26	
v/c Ratio	0.16	0.26		0.06	0.27			0.28			0.46	
Uniform Delay, d1	16.4	16.9		15.9	17.0			7.2			8.1	
Progression Factor	0.79	0.78		0.92	0.91			0.99			1.00	
Incremental Delay, d2	1.0	1.0		0.3	1.1			0.7			1.4	
Delay (s)	14.0	14.3		15.0	16.6			7.7			9.5	
Level of Service	B	B		B	B			A			A	
Approach Delay (s)		14.2			16.4			7.7			9.5	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



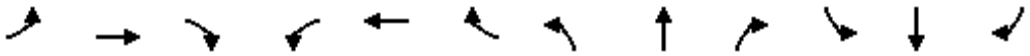
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	42	10	74	2	4	7	45	181	4	3	359	59
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	10	11	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98		1.00	0.98		1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.87		1.00	0.91		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1695	1727		1702	1819		1594	1647	1428	1653	2000	1496
Flt Permitted	0.75	1.00		0.70	1.00		0.47	1.00	1.00	0.63	1.00	1.00
Satd. Flow (perm)	1336	1727		1246	1819		795	1647	1428	1094	2000	1496
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	48	11	84	2	5	8	51	206	5	3	408	67
RTOR Reduction (vph)	0	61	0	0	6	0	0	0	2	0	0	27
Lane Group Flow (vph)	48	34	0	2	7	0	51	206	3	3	408	40
Confl. Peds. (#/hr)	5		5	5		5	3					3
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	0%	2%	0%	0%	2%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	17.0	17.0		17.0	17.0		39.0	39.0	39.0	39.0	39.0	39.0
Effective Green, g (s)	18.0	18.0		18.0	18.0		39.0	39.0	39.0	39.0	39.0	39.0
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.60	0.60	0.60	0.60	0.60	0.60
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	370	478		345	504		477	988	857	656	1200	898
v/s Ratio Prot		0.02			0.00			0.13			c0.20	
v/s Ratio Perm	c0.04			0.00			0.06		0.00	0.00		0.03
v/c Ratio	0.13	0.07		0.01	0.01		0.11	0.21	0.00	0.00	0.34	0.04
Uniform Delay, d1	17.6	17.3		17.0	17.1		5.6	5.9	5.2	5.2	6.5	5.3
Progression Factor	1.44	2.79		1.00	1.00		0.69	0.66	0.67	1.00	1.00	1.00
Incremental Delay, d2	0.7	0.3		0.0	0.1		0.4	0.4	0.0	0.0	0.8	0.1
Delay (s)	26.0	48.7		17.1	17.1		4.2	4.3	3.5	5.2	7.3	5.4
Level of Service	C	D		B	B		A	A	A	A	A	A
Approach Delay (s)		41.1			17.1			4.3			7.0	
Approach LOS		D			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	251	163	154	191	0	0	0	0	109	470	377
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)		4.0		3.0	3.0					5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	
Frpb, ped/bikes		0.99		1.00	1.00					1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Frt		0.94		1.00	1.00					1.00	0.93	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		2904		1693	3288					1503	3021	
Flt Permitted		1.00		0.40	1.00					0.95	1.00	
Satd. Flow (perm)		2904		719	3288					1503	3021	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	267	173	164	203	0	0	0	0	116	500	401
RTOR Reduction (vph)	0	104	0	0	0	0	0	0	0	0	141	0
Lane Group Flow (vph)	0	337	0	164	203	0	0	0	0	116	760	0
Confl. Peds. (#/hr)	18		3	3		18	1					1
Heavy Vehicles (%)	0%	4%	1%	1%	4%	0%	0%	0%	0%	10%	2%	1%
Turn Type				D.P+P						Split		
Protected Phases		8		7	7 8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		33.0		53.0	56.0					37.0	37.0	
Effective Green, g (s)		33.0		53.0	56.0					37.0	37.0	
Actuated g/C Ratio		0.32		0.52	0.55					0.36	0.36	
Clearance Time (s)		4.0		3.0						5.0	5.0	
Lane Grp Cap (vph)		940		565	1805					545	1096	
v/s Ratio Prot		c0.12		c0.06	0.06					0.08	c0.25	
v/s Ratio Perm				0.09								
v/c Ratio		0.36		0.29	0.11					0.21	0.69	
Uniform Delay, d1		26.4		13.3	11.1					22.4	27.7	
Progression Factor		1.00		2.23	2.17					1.00	1.00	
Incremental Delay, d2		1.1		1.1	0.1					0.9	3.6	
Delay (s)		27.5		30.7	24.1					23.3	31.3	
Level of Service		C		C	C					C	C	
Approach Delay (s)		27.5			27.1			0.0			30.4	
Approach LOS		C			C			A			C	

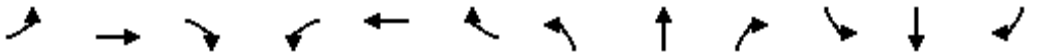
Intersection Summary			
HCM Average Control Delay	29.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	102.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	59.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	141	219	0	0	284	109	61	415	175	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	9	12	13	12	13	12	12	12
Total Lost time (s)	4.0	4.0			4.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.96		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1674	3196			2847		1767	1782	1560			
Flt Permitted	0.36	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	637	3196			2847		1767	1782	1560			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	157	243	0	0	316	121	68	461	194	0	0	0
RTOR Reduction (vph)	0	0	0	0	39	0	0	0	137	0	0	0
Lane Group Flow (vph)	157	243	0	0	398	0	68	461	57	0	0	0
Confl. Peds. (#/hr)	9		13	13		9			1	1		
Confl. Bikes (#/hr)	3					3						
Heavy Vehicles (%)	2%	7%	0%	0%	3%	1%	0%	1%	0%	0%	0%	0%
Turn Type	pm+pt						custom		Perm			
Protected Phases	4	1 4			1		2	2				
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	59.0	63.0			26.0		30.0	30.0	30.0			
Effective Green, g (s)	59.0	63.0			26.0		30.0	30.0	30.0			
Actuated g/C Ratio	0.58	0.62			0.25		0.29	0.29	0.29			
Clearance Time (s)	4.0				4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	704	1974			726		520	524	459			
v/s Ratio Prot	c0.07	0.08			c0.14		0.04	c0.26				
v/s Ratio Perm	0.06								0.04			
v/c Ratio	0.22	0.12			0.55		0.13	0.88	0.12			
Uniform Delay, d1	10.3	8.1			32.9		26.4	34.3	26.4			
Progression Factor	0.44	0.45			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.7	0.1			3.0		0.5	18.7	0.6			
Delay (s)	5.3	3.8			35.9		26.9	53.0	26.9			
Level of Service	A	A			D		C	D	C			
Approach Delay (s)		4.3			35.9			43.5			0.0	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM Average Control Delay	31.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	102.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	59.7%	ICU Level of Service	B
Analysis Period (min)	15		

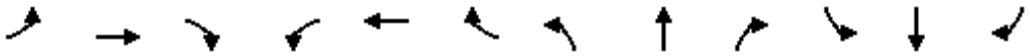
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	391	369	63	411	0	0	0	0	9	432	269
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	11	12	12	12	12	10	10	12
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	1.00
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.93		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3096		1710	3306					1596	3192	1530
Flt Permitted		1.00		0.18	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3096		318	3306					1596	3192	1530
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	434	410	70	457	0	0	0	0	10	480	299
RTOR Reduction (vph)	0	172	0	0	0	0	0	0	0	0	0	197
Lane Group Flow (vph)	0	672	0	70	457	0	0	0	0	10	480	102
Confl. Peds. (#/hr)	8		8	8		8	3					3
Confl. Bikes (#/hr)	9					9			61	61		
Heavy Vehicles (%)	0%	1%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type				pm+pt						Split		Prot
Protected Phases		8		7	7 8					6	6	6
Permitted Phases				7 8								
Actuated Green, G (s)		36.0		54.0	58.0					34.0	34.0	34.0
Effective Green, g (s)		36.0		54.0	58.0					34.0	34.0	34.0
Actuated g/C Ratio		0.36		0.54	0.58					0.34	0.34	0.34
Clearance Time (s)		4.0		4.0						4.0	4.0	4.0
Lane Grp Cap (vph)		1115		422	1917					543	1085	520
v/s Ratio Prot		c0.22		0.03	c0.14					0.01	c0.15	0.07
v/s Ratio Perm				0.06								
v/c Ratio		0.60		0.17	0.24					0.02	0.44	0.20
Uniform Delay, d1		26.2		12.7	10.2					21.9	25.6	23.3
Progression Factor		1.00		1.05	1.25					1.00	1.00	1.00
Incremental Delay, d2		2.4		0.7	0.3					0.1	1.3	0.8
Delay (s)		28.6		14.0	13.0					22.0	26.9	24.2
Level of Service		C		B	B					C	C	C
Approach Delay (s)		28.6			13.1			0.0			25.8	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM Average Control Delay	23.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	51.3%	ICU Level of Service	A
Analysis Period (min)	15		

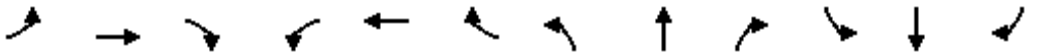
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	320	80	0	0	116	4	358	369	45	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	10	12	11	11	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	0.91	0.91			0.95		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			1.00		1.00	1.00	0.85			
Flt Protected	0.95	0.97			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1469	3109			3173		1555	1653	1530			
Flt Permitted	0.67	0.73			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	1039	2346			3173		1555	1653	1530			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	337	84	0	0	122	4	377	388	47	0	0	0
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	30	0	0	0
Lane Group Flow (vph)	168	253	0	0	123	0	377	388	17	0	0	0
Confl. Peds. (#/hr)	13		6	6		13			8	8		
Confl. Bikes (#/hr)	1					1			2	2		
Heavy Vehicles (%)	2%	1%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%
Turn Type	pm+pt						custom		custom			
Protected Phases	4	1 4			1		2	2	2			
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Effective Green, g (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Actuated g/C Ratio	0.51	0.51			0.15		0.37	0.37	0.37			
Clearance Time (s)	4.0				4.0		4.0	4.0	4.0			
Lane Grp Cap (vph)	685	1471			476		575	612	566			
v/s Ratio Prot	c0.09	0.06			c0.04		c0.24	0.23	0.01			
v/s Ratio Perm	0.04	0.03										
v/c Ratio	0.25	0.17			0.26		0.66	0.63	0.03			
Uniform Delay, d1	13.6	13.2			37.6		26.2	25.9	20.1			
Progression Factor	0.29	0.31			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.7	0.2			1.3		5.7	4.9	0.1			
Delay (s)	4.6	4.2			38.9		31.9	30.9	20.2			
Level of Service	A	A			D		C	C	C			
Approach Delay (s)		4.4			38.9			30.8			0.0	
Approach LOS		A			D			C			A	

Intersection Summary			
HCM Average Control Delay	23.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	51.3%	ICU Level of Service	A
Analysis Period (min)	15		

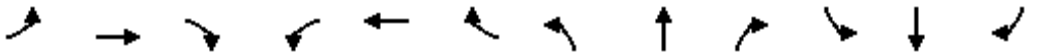
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	76	205	100	90	198	91	65	538	59	96	842	62
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	9	10	9	9	10	9
Total Lost time (s)		4.0			4.0		4.0	3.5	4.0	4.0	3.5	4.0
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		0.99			0.99		1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.96			0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		2934			2924		1508	3069	1309	1507	3099	1298
Flt Permitted		0.80			0.77		0.18	1.00	1.00	0.35	1.00	1.00
Satd. Flow (perm)		2384			2271		291	3069	1309	562	3099	1298
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	78	211	103	93	204	94	67	555	61	99	868	64
RTOR Reduction (vph)	0	42	0	0	36	0	0	0	37	0	0	33
Lane Group Flow (vph)	0	350	0	0	355	0	67	555	24	99	868	31
Confl. Peds. (#/hr)	35		30	30		35	34		8	8		34
Confl. Bikes (#/hr)	1					1	1					1
Heavy Vehicles (%)	1%	4%	0%	1%	3%	3%	2%	4%	2%	2%	3%	2%
Turn Type	pm+pt			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		35.0			27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)		36.0			28.0		36.0	33.5	33.0	36.0	33.5	33.0
Actuated g/C Ratio		0.42			0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)		5.0			5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)		1049			748		181	1210	508	282	1221	504
v/s Ratio Prot		c0.02					c0.02	0.18		0.02	c0.28	
v/s Ratio Perm		0.12			c0.16		0.14		0.02	0.13		0.02
v/c Ratio		0.33			0.48		0.37	0.46	0.05	0.35	0.71	0.06
Uniform Delay, d1		16.4			22.7		16.1	19.0	16.2	15.4	21.7	16.3
Progression Factor		1.00			1.00		1.05	0.70	0.47	1.09	1.19	1.91
Incremental Delay, d2		0.9			2.2		5.5	1.2	0.2	2.7	2.8	0.2
Delay (s)		17.3			24.8		22.5	14.5	7.8	19.5	28.5	31.3
Level of Service		B			C		C	B	A	B	C	C
Approach Delay (s)		17.3			24.8			14.7			27.8	
Approach LOS		B			C			B			C	

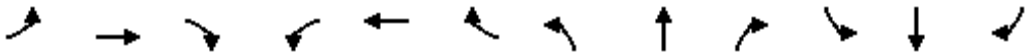
Intersection Summary			
HCM Average Control Delay	22.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	68.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	76	305	0	0	278	69	47	39	30	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.97			0.97				
Flt Protected		0.99			1.00			0.98				
Satd. Flow (prot)		1730			1701			1653				
Flt Permitted		0.87			1.00			0.98				
Satd. Flow (perm)		1518			1701			1653				
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	82	328	0	0	299	74	51	42	32	0	0	0
RTOR Reduction (vph)	0	0	0	0	14	0	0	19	0	0	0	0
Lane Group Flow (vph)	0	410	0	0	359	0	0	106	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		38.0			38.0			19.0				
Effective Green, g (s)		38.0			38.0			19.0				
Actuated g/C Ratio		0.58			0.58			0.29				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		887			994			483				
v/s Ratio Prot					0.21							
v/s Ratio Perm		c0.27						0.06				
v/c Ratio		0.46			0.36			0.22				
Uniform Delay, d1		7.7			7.1			17.4				
Progression Factor		1.00			0.49			1.00				
Incremental Delay, d2		1.7			1.0			1.0				
Delay (s)		9.4			4.4			18.4				
Level of Service		A			A			B				
Approach Delay (s)		9.4			4.4			18.4			0.0	
Approach LOS		A			A			B			A	

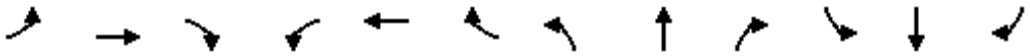
Intersection Summary			
HCM Average Control Delay	8.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	19	289	27	32	285	41	22	91	30	50	142	40
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	10	12	12	10	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			0.98	
Flpb, ped/bikes		1.00			1.00			0.99			0.99	
Frt		0.99			0.98			0.97			0.97	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1955			1938			2969			2985	
Flt Permitted		0.97			0.95			0.90			0.87	
Satd. Flow (perm)		1907			1852			2698			2637	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	20	307	29	34	303	44	23	97	32	53	151	43
RTOR Reduction (vph)	0	5	0	0	7	0	0	19	0	0	25	0
Lane Group Flow (vph)	0	351	0	0	374	0	0	133	0	0	222	0
Confl. Peds. (#/hr)	32		25	25		32	59		24	24		59
Confl. Bikes (#/hr)	3		2	2		3	4		2	2		4
Heavy Vehicles (%)	0%	3%	0%	3%	3%	0%	0%	0%	7%	4%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0			27.0			27.0	
Effective Green, g (s)		30.0			30.0			27.0			27.0	
Actuated g/C Ratio		0.46			0.46			0.42			0.42	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		880			855			1121			1095	
v/s Ratio Prot												
v/s Ratio Perm		0.18			c0.20			0.05			c0.08	
v/c Ratio		0.40			0.44			0.12			0.20	
Uniform Delay, d1		11.6			11.8			11.7			12.1	
Progression Factor		0.57			0.45			1.25			0.45	
Incremental Delay, d2		1.2			1.5			0.2			0.4	
Delay (s)		7.8			6.9			14.8			5.8	
Level of Service		A			A			B			A	
Approach Delay (s)		7.8			6.9			14.8			5.8	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM Average Control Delay	8.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.6%	ICU Level of Service	C
Analysis Period (min)	15		

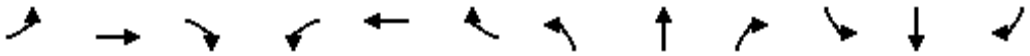
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	41	255	39	66	362	70	42	211	95	64	175	48
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	9	10	10	9	10	10	12	10	10	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00		0.99	1.00		0.99	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.95		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1507	3034		1568	3074		1586	2961		1585	3075	
Flt Permitted	0.43	1.00		0.55	1.00		0.60	1.00		0.56	1.00	
Satd. Flow (perm)	680	3034		914	3074		1009	2961		926	3075	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	44	271	41	70	385	74	45	224	101	68	186	51
RTOR Reduction (vph)	0	19	0	0	24	0	0	47	0	0	24	0
Lane Group Flow (vph)	44	293	0	70	435	0	45	278	0	68	213	0
Confl. Peds. (#/hr)	20		31	31		20	16		20	20		16
Confl. Bikes (#/hr)							1		3	3		1
Heavy Vehicles (%)	5%	3%	0%	0%	1%	0%	0%	2%	2%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	230	1027		309	1040		543	1594		499	1656	
v/s Ratio Prot		0.10			c0.14			c0.09			0.07	
v/s Ratio Perm	0.06			0.08			0.04			0.07		
v/c Ratio	0.19	0.29		0.23	0.42		0.08	0.17		0.14	0.13	
Uniform Delay, d1	15.2	15.7		15.4	16.6		7.2	7.6		7.5	7.4	
Progression Factor	0.73	0.70		0.95	0.96		0.83	0.81		1.13	1.14	
Incremental Delay, d2	1.8	0.7		1.7	1.2		0.3	0.2		0.6	0.2	
Delay (s)	12.8	11.8		16.4	17.1		6.3	6.5		9.0	8.7	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		11.9			17.0			6.4			8.7	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	47.6%	ICU Level of Service	A
Analysis Period (min)	15		

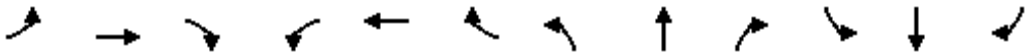
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	55	287	68	69	316	40	40	207	52	46	279	64
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	9	10	9	9	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			0.98	
Flpb, ped/bikes	0.98	1.00		0.99	1.00			0.99			1.00	
Frt	1.00	0.97		1.00	0.98			0.97			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1503	3014		1429	3719			3486			3519	
Flt Permitted	0.52	1.00		0.52	1.00			0.87			0.88	
Satd. Flow (perm)	827	3014		789	3719			3043			3131	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	59	305	72	73	336	43	43	220	55	49	297	68
RTOR Reduction (vph)	0	32	0	0	15	0	0	27	0	0	25	0
Lane Group Flow (vph)	59	345	0	73	364	0	0	291	0	0	389	0
Confl. Peds. (#/hr)	38		17	17		38	125		53	53		125
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	3%	0%	7%	2%	0%	0%	6%	10%	2%	5%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Effective Green, g (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48			0.40			0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	394	1437		376	1774			1217			1252	
v/s Ratio Prot		c0.11			0.10							
v/s Ratio Perm	0.07			0.09				0.10			c0.12	
v/c Ratio	0.15	0.24		0.19	0.21			0.24			0.31	
Uniform Delay, d1	9.6	10.0		9.8	9.9			12.9			13.4	
Progression Factor	1.59	1.75		1.18	1.18			0.46			0.68	
Incremental Delay, d2	0.8	0.4		1.1	0.2			0.5			0.6	
Delay (s)	16.0	17.9		12.7	11.9			6.4			9.7	
Level of Service	B	B		B	B			A			A	
Approach Delay (s)		17.7			12.0			6.4			9.7	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.4%	ICU Level of Service	B
Analysis Period (min)	15		

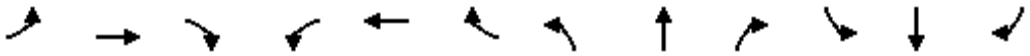
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	82	246	82	73	220	73	100	70	40	40	70	100
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	16	12	12	16	12
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		0.95			1.00			1.00	
Frt		1.00	0.85		0.97			0.97			0.94	
Flt Protected		0.99	1.00		0.99			0.98			0.99	
Satd. Flow (prot)		1669	1436		3084			1885			1835	
Flt Permitted		0.82	1.00		0.82			0.75			0.91	
Satd. Flow (perm)		1385	1436		2565			1438			1679	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	88	265	88	78	237	78	108	75	43	43	75	108
RTOR Reduction (vph)	0	0	42	0	33	0	0	13	0	0	51	0
Lane Group Flow (vph)	0	353	46	0	360	0	0	213	0	0	175	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		34.0	34.0		34.0			21.0			21.0	
Effective Green, g (s)		34.0	34.0		34.0			21.0			21.0	
Actuated g/C Ratio		0.52	0.52		0.52			0.32			0.32	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Grp Cap (vph)		724	751		1342			465			542	
v/s Ratio Prot												
v/s Ratio Perm		c0.25	0.03		0.14			c0.15			0.10	
v/c Ratio		0.49	0.06		0.27			0.46			0.32	
Uniform Delay, d1		9.9	7.6		8.6			17.5			16.6	
Progression Factor		1.83	4.35		0.56			1.00			1.00	
Incremental Delay, d2		2.3	0.2		0.5			3.2			1.6	
Delay (s)		20.5	33.4		5.3			20.7			18.2	
Level of Service		C	C		A			C			B	
Approach Delay (s)		23.1			5.3			20.7			18.2	
Approach LOS		C			A			C			B	

Intersection Summary			
HCM Average Control Delay	16.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	68.4%	ICU Level of Service	C
Analysis Period (min)	15		

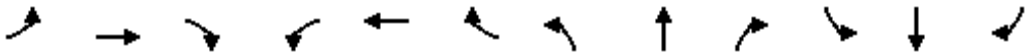
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	45	253	18	22	262	50	22	119	42	61	142	60
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	15	8	16	8	8	16	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			1.00	
Flpb, ped/bikes	0.98	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.98			0.97			0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1440	3038		1563	3017			3580			3601	
Flt Permitted	0.55	1.00		0.58	1.00			0.91			0.85	
Satd. Flow (perm)	836	3038		947	3017			3272			3104	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	48	269	19	23	279	53	23	127	45	65	151	64
RTOR Reduction (vph)	0	8	0	0	24	0	0	26	0	0	37	0
Lane Group Flow (vph)	48	280	0	23	308	0	0	169	0	0	243	0
Confl. Peds. (#/hr)	24		47	47		24	9		36	36		9
Confl. Bikes (#/hr)			4	4			1					1
Heavy Vehicles (%)	9%	4%	0%	0%	3%	0%	0%	1%	10%	0%	0%	8%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	30.0	30.0		30.0	30.0			27.0			27.0	
Effective Green, g (s)	30.0	30.0		30.0	30.0			27.0			27.0	
Actuated g/C Ratio	0.46	0.46		0.46	0.46			0.42			0.42	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	386	1402		437	1392			1359			1289	
v/s Ratio Prot		0.09			c0.10							
v/s Ratio Perm	0.06			0.02				0.05			c0.08	
v/c Ratio	0.12	0.20		0.05	0.22			0.12			0.19	
Uniform Delay, d1	10.0	10.4		9.7	10.5			11.7			12.0	
Progression Factor	0.72	0.73		0.59	0.47			1.06			0.39	
Incremental Delay, d2	0.6	0.3		0.2	0.3			0.2			0.3	
Delay (s)	7.8	7.9		5.9	5.2			12.6			5.0	
Level of Service	A	A		A	A			B			A	
Approach Delay (s)		7.9			5.3			12.6			5.0	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM Average Control Delay	7.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.21		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

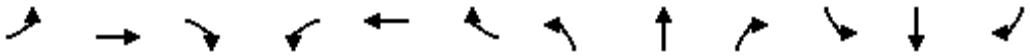


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	43	434	18	71	410	182	17	96	89	262	201	63
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.99			0.96			0.93			0.98	
Flt Protected		1.00			0.99			1.00			0.98	
Satd. Flow (prot)		3288			3167			3087			3181	
Flt Permitted		0.85			0.83			0.93			0.73	
Satd. Flow (perm)		2798			2654			2888			2376	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	46	467	19	76	441	196	18	103	96	282	216	68
RTOR Reduction (vph)	0	4	0	0	61	0	0	52	0	0	16	0
Lane Group Flow (vph)	0	528	0	0	652	0	0	165	0	0	550	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0			30.0			17.0	
Effective Green, g (s)		25.0			25.0			30.0			17.0	
Actuated g/C Ratio		0.38			0.38			0.46			0.26	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		1076			1021			1364			621	
v/s Ratio Prot								c0.02				
v/s Ratio Perm		0.19			c0.25			0.04			c0.23	
v/c Ratio		0.49			0.64			0.12			0.95dl	
Uniform Delay, d1		15.2			16.3			10.0			23.1	
Progression Factor		1.49			1.00			1.00			0.80	
Incremental Delay, d2		1.6			3.1			0.2			16.5	
Delay (s)		24.2			19.4			10.2			35.0	
Level of Service		C			B			B			D	
Approach Delay (s)		24.2			19.4			10.2			35.0	
Approach LOS		C			B			B			D	

Intersection Summary			
HCM Average Control Delay	24.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	73.9%	ICU Level of Service	D
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

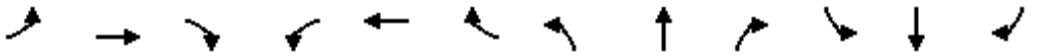
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	782	111	40	648	0	68	0	31	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	10	10	12	12	12	12	12	12	12
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			1.00				
Frt		0.98			1.00			0.96				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		3041			3090			1618				
Flt Permitted		1.00			0.84			0.79				
Satd. Flow (perm)		3041			2600			1329				
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	841	119	43	697	0	73	0	33	0	0	0
RTOR Reduction (vph)	0	15	0	0	0	0	0	18	0	0	0	0
Lane Group Flow (vph)	0	945	0	0	740	0	0	88	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	custom			Perm			Perm			Perm		
Protected Phases		4 5 6 11			8			2			2	
Permitted Phases	4 6 11			8			2			2		
Actuated Green, G (s)		65.0			33.0			16.0				
Effective Green, g (s)		58.0			33.0			16.0				
Actuated g/C Ratio		0.64			0.37			0.18				
Clearance Time (s)					5.0			5.0				
Lane Grp Cap (vph)		1960			953			236				
v/s Ratio Prot		c0.31										
v/s Ratio Perm					c0.28			c0.07				
v/c Ratio		0.48			0.78			0.37				
Uniform Delay, d1		8.3			25.2			32.6				
Progression Factor		0.00			1.30			1.00				
Incremental Delay, d2		0.5			6.0			4.5				
Delay (s)		0.5			38.8			37.0				
Level of Service		A			D			D				
Approach Delay (s)		0.5			38.8			37.0			0.0	
Approach LOS		A			D			D			A	

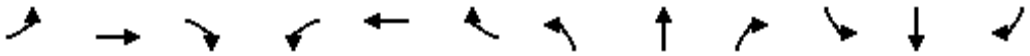
Intersection Summary			
HCM Average Control Delay	18.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	64.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	195	599	20	92	486	152	51	4	91	180	9	180
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	10	12	12	12	12	16	12	12	12	12
Total Lost time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85		0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (prot)	1550	3194		1660	3320	1485		1782		1660	1748	1485
Flt Permitted	0.39	1.00		0.39	1.00	1.00		0.88		0.46	1.00	1.00
Satd. Flow (perm)	636	3194		681	3320	1485		1596		797	1748	1485
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	210	644	22	99	523	163	55	4	98	194	10	194
RTOR Reduction (vph)	0	2	0	0	0	70	0	87	0	0	0	118
Lane Group Flow (vph)	210	664	0	99	523	93	0	70	0	194	10	76
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	56.7	46.4		49.1	41.8	51.6		10.5		23.3	23.3	35.2
Effective Green, g (s)	56.7	46.4		49.1	41.8	51.6		10.5		23.3	23.3	35.2
Actuated g/C Ratio	0.63	0.52		0.55	0.46	0.57		0.12		0.26	0.26	0.39
Clearance Time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Vehicle Extension (s)	4.0	3.0		4.0	3.0	3.0		4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	522	1647		451	1542	851		186		300	453	581
v/s Ratio Prot	c0.05	c0.21		0.02	0.16	0.01				c0.07	0.01	0.02
v/s Ratio Perm	0.20			0.10		0.05		0.04		c0.10		0.03
v/c Ratio	0.40	0.40		0.22	0.34	0.11		0.38		0.65	0.02	0.13
Uniform Delay, d1	7.5	13.3		9.9	15.3	8.7		36.7		28.5	24.9	17.6
Progression Factor	2.52	1.99		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	0.6	0.7		0.3	0.6	0.1		1.8		4.7	0.0	0.1
Delay (s)	19.4	27.2		10.2	15.9	8.8		38.5		33.3	24.9	17.7
Level of Service	B	C		B	B	A		D		C	C	B
Approach Delay (s)		25.4			13.7			38.5			25.5	
Approach LOS		C			B			D			C	

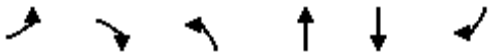
Intersection Summary			
HCM Average Control Delay	22.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	54.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	483	387	2	286	0	0	0	0	16	0	444
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	0	519	416	2	308	0	0	0	0	17	0	477
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		498										
pX, platoon unblocked												
vC, conflicting volume	308			519			677	831	260	572	831	154
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	308			519			677	831	260	572	831	154
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	96	100	45
cM capacity (veh/h)	1243			1036			150	301	736	401	301	862

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	260	260	416	105	205	17	477
Volume Left	0	0	0	2	0	17	0
Volume Right	0	0	416	0	0	0	477
cSH	1700	1700	1700	1036	1700	401	862
Volume to Capacity	0.15	0.15	0.24	0.00	0.12	0.04	0.55
Queue Length 95th (ft)	0	0	0	0	0	3	87
Control Delay (s)	0.0	0.0	0.0	0.2	0.0	14.4	14.2
Lane LOS				A		B	B
Approach Delay (s)	0.0			0.1		14.2	
Approach LOS						B	

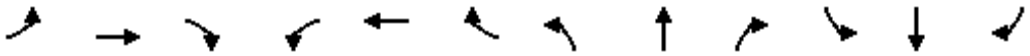
Intersection Summary				
Average Delay	4.1			
Intersection Capacity Utilization	44.1%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	499	0	288	0	0	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	537	0	310	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	268	268	310
Volume Left (vph)	268	268	310
Volume Right (vph)	0	0	0
Hadj (s)	0.55	0.55	0.25
Departure Headway (s)	6.0	6.0	5.4
Degree Utilization, x	0.44	0.44	0.47
Capacity (veh/h)	587	590	639
Control Delay (s)	12.4	12.4	13.2
Approach Delay (s)	12.4		13.2
Approach LOS	B		B

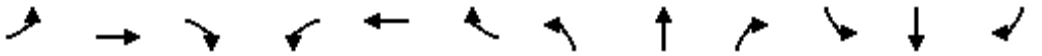
Intersection Summary			
Delay	12.7		
HCM Level of Service	B		
Intersection Capacity Utilization	38.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	472	64	175	451	0	0	0	0	101	21	58
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)		3.0		4.0	4.0						5.0	
Lane Util. Factor		0.95		1.00	0.95						0.95	
Frt		0.98		1.00	1.00						0.95	
Flt Protected		1.00		0.95	1.00						0.97	
Satd. Flow (prot)		3152		1605	3210						3075	
Flt Permitted		1.00		0.36	1.00						0.97	
Satd. Flow (perm)		3152		604	3210						3075	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	508	69	188	485	0	0	0	0	109	23	62
RTOR Reduction (vph)	0	13	0	0	0	0	0	0	0	0	42	0
Lane Group Flow (vph)	0	564	0	188	485	0	0	0	0	0	152	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type				pm+pt						Split		
Protected Phases		4		3	8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		36.0		49.0	49.0						27.0	
Effective Green, g (s)		36.0		49.0	49.0						27.0	
Actuated g/C Ratio		0.42		0.58	0.58						0.32	
Clearance Time (s)		3.0		4.0	4.0						5.0	
Lane Grp Cap (vph)		1335		466	1850						977	
v/s Ratio Prot		c0.18		c0.05	0.15						c0.05	
v/s Ratio Perm				0.19								
v/c Ratio		0.42		0.40	0.26						0.16	
Uniform Delay, d1		17.2		14.6	9.0						20.8	
Progression Factor		1.00		0.36	0.23						1.00	
Incremental Delay, d2		1.0		2.3	0.3						0.3	
Delay (s)		18.2		7.6	2.4						21.2	
Level of Service		B		A	A						C	
Approach Delay (s)		18.2			3.8			0.0			21.2	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	11.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	42.7%	ICU Level of Service	A
Analysis Period (min)	15		

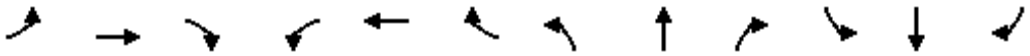
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	95	478	0	0	557	106	69	90	58	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	11	11	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0			3.0			5.0				
Lane Util. Factor	1.00	0.95			0.95			0.91				
Frt	1.00	1.00			0.98			0.96				
Flt Protected	0.95	1.00			1.00			0.98				
Satd. Flow (prot)	1660	3320			3133			4509				
Flt Permitted	0.28	1.00			1.00			0.98				
Satd. Flow (perm)	487	3320			3133			4509				
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	102	514	0	0	599	114	74	97	62	0	0	0
RTOR Reduction (vph)	0	0	0	0	18	0	0	42	0	0	0	0
Lane Group Flow (vph)	102	514	0	0	695	0	0	191	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt						Split					
Protected Phases	7	4			8		2	2				
Permitted Phases	4											
Actuated Green, G (s)	48.0	48.0			35.0			27.0				
Effective Green, g (s)	48.0	48.0			35.0			27.0				
Actuated g/C Ratio	0.56	0.56			0.41			0.32				
Clearance Time (s)	5.0	5.0			3.0			5.0				
Lane Grp Cap (vph)	413	1875			1290			1432				
v/s Ratio Prot	0.03	c0.15			c0.22			c0.04				
v/s Ratio Perm	0.11											
v/c Ratio	0.25	0.27			0.54			0.13				
Uniform Delay, d1	15.5	9.5			18.9			20.7				
Progression Factor	0.35	0.32			1.00			1.00				
Incremental Delay, d2	1.3	0.3			1.6			0.2				
Delay (s)	6.8	3.4			20.5			20.9				
Level of Service	A	A			C			C				
Approach Delay (s)		3.9			20.5			20.9			0.0	
Approach LOS		A			C			C			A	

Intersection Summary			
HCM Average Control Delay	14.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	42.7%	ICU Level of Service	A
Analysis Period (min)	15		

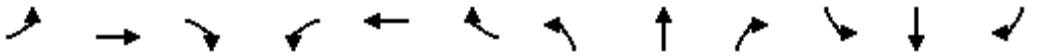
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	114	342	114	79	366	79	129	78	27	27	78	129
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	12	15	12	12	15	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		0.97			0.98			0.98			0.93	
Flt Protected		0.99			0.99			0.97			0.99	
Satd. Flow (prot)		2976			3006			1842			1769	
Flt Permitted		0.68			0.74			0.73			0.95	
Satd. Flow (perm)		2050			2242			1387			1691	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	123	368	123	85	394	85	139	84	29	29	84	139
RTOR Reduction (vph)	0	34	0	0	22	0	0	7	0	0	68	0
Lane Group Flow (vph)	0	580	0	0	542	0	0	245	0	0	184	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		23.0			23.0			32.0			32.0	
Effective Green, g (s)		23.0			23.0			32.0			32.0	
Actuated g/C Ratio		0.35			0.35			0.49			0.49	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		725			793			683			832	
v/s Ratio Prot												
v/s Ratio Perm		c0.28			0.24			c0.18			0.11	
v/c Ratio		0.80			0.68			0.36			0.22	
Uniform Delay, d1		18.9			17.9			10.2			9.4	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		9.0			4.7			1.5			0.6	
Delay (s)		27.9			22.6			11.6			10.0	
Level of Service		C			C			B			B	
Approach Delay (s)		27.9			22.6			11.6			10.0	
Approach LOS		C			C			B			B	

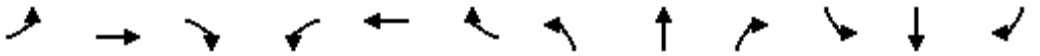
Intersection Summary			
HCM Average Control Delay	21.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	77.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	106	201	88	159	311	65	96	415	52	76	752	117
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	12	10	16	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.95		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1559	2980		1573	3683		1508	3069	1333	1518	3099	1336
Flt Permitted	0.45	1.00		0.53	1.00		0.21	1.00	1.00	0.43	1.00	1.00
Satd. Flow (perm)	739	2980		880	3683		330	3069	1333	692	3099	1336
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	112	212	93	167	327	68	101	437	55	80	792	123
RTOR Reduction (vph)	0	58	0	0	21	0	0	0	35	0	0	78
Lane Group Flow (vph)	112	247	0	167	374	0	101	437	20	80	792	45
Confl. Peds. (#/hr)	19		16	16		19	22		25	25		22
Heavy Vehicles (%)	2%	2%	0%	1%	2%	2%	2%	4%	0%	1%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	32.0	27.0		32.0	27.0		38.0	31.0	31.0	38.0	31.0	31.0
Effective Green, g (s)	30.0	28.0		30.0	28.0		36.0	31.0	31.0	36.0	31.0	31.0
Actuated g/C Ratio	0.35	0.33		0.35	0.33		0.42	0.36	0.36	0.42	0.36	0.36
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	299	982		343	1213		223	1119	486	351	1130	487
v/s Ratio Prot	0.02	0.08		c0.02	0.10		c0.03	0.14		0.02	c0.26	
v/s Ratio Perm	0.11			c0.15			0.16		0.02	0.08		0.03
v/c Ratio	0.37	0.25		0.49	0.31		0.45	0.39	0.04	0.23	0.70	0.09
Uniform Delay, d1	19.4	20.8		20.7	21.3		16.2	20.0	17.4	15.0	23.0	17.7
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.47	1.07	2.37
Incremental Delay, d2	3.6	0.6		4.9	0.7		6.5	1.0	0.2	1.1	2.7	0.3
Delay (s)	23.0	21.5		25.5	21.9		22.7	21.0	17.6	23.1	27.4	42.3
Level of Service	C	C		C	C		C	C	B	C	C	D
Approach Delay (s)		21.9			23.0			21.0			28.9	
Approach LOS		C			C			C			C	

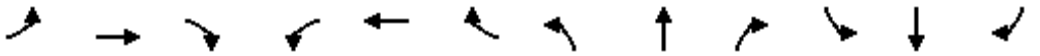
Intersection Summary			
HCM Average Control Delay	24.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	63.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	48	295	30	32	375	23	26	77	32	34	117	61
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	16	12	12	16	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00	0.98		1.00	0.99
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		0.99	1.00
Satd. Flow (prot)		1962	1466		1993	1480		2015	1506		2001	1511
Flt Permitted		0.90	1.00		0.96	1.00		0.92	1.00		0.93	1.00
Satd. Flow (perm)		1787	1466		1912	1480		1882	1506		1884	1511
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	51	311	32	34	395	24	27	81	34	36	123	64
RTOR Reduction (vph)	0	0	17	0	0	13	0	0	20	0	0	37
Lane Group Flow (vph)	0	362	15	0	429	11	0	108	14	0	159	27
Confl. Peds. (#/hr)	11		20	20		11	1		4	4		1
Confl. Bikes (#/hr)	1		1	1		1			1	1		
Heavy Vehicles (%)	4%	3%	0%	0%	2%	0%	0%	0%	0%	0%	1%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Effective Green, g (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Actuated g/C Ratio		0.46	0.46		0.46	0.46		0.42	0.42		0.42	0.42
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		825	677		882	683		782	626		783	628
v/s Ratio Prot												
v/s Ratio Perm		0.20	0.01		c0.22	0.01		0.06	0.01		c0.08	0.02
v/c Ratio		0.44	0.02		0.49	0.02		0.14	0.02		0.20	0.04
Uniform Delay, d1		11.8	9.5		12.2	9.5		11.8	11.2		12.1	11.3
Progression Factor		1.00	1.00		0.62	0.51		1.26	1.61		0.97	0.84
Incremental Delay, d2		1.7	0.1		1.9	0.0		0.4	0.1		0.6	0.1
Delay (s)		13.5	9.6		9.4	4.9		15.2	18.1		12.3	9.6
Level of Service		B	A		A	A		B	B		B	A
Approach Delay (s)		13.2			9.2			15.9			11.6	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	11.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.0%	ICU Level of Service	C
Analysis Period (min)	15		

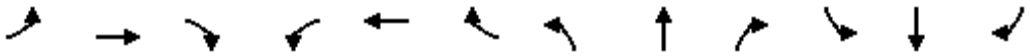
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	75	305	20	40	240	30	10	100	20	85	165	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.98		1.00	0.97		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1550	3070		1550	3048		1550	3020		1550	2990	
Flt Permitted	0.95	1.00		0.54	1.00		0.61	1.00		0.67	1.00	
Satd. Flow (perm)	1550	3070		884	3048		991	3020		1092	2990	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	81	328	22	43	258	32	11	108	22	91	177	54
RTOR Reduction (vph)	0	8	0	0	15	0	0	13	0	0	32	0
Lane Group Flow (vph)	81	342	0	43	275	0	11	117	0	91	199	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Prot			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Effective Green, g (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.11	0.49		0.34	0.34		0.42	0.42		0.42	0.42	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	167	1511		299	1032		412	1254		454	1242	
v/s Ratio Prot	c0.05	0.11			c0.09			0.04			0.07	
v/s Ratio Perm				0.05			0.01			c0.08		
v/c Ratio	0.49	0.23		0.14	0.27		0.03	0.09		0.20	0.16	
Uniform Delay, d1	27.3	9.4		15.0	15.6		11.2	11.6		12.1	11.9	
Progression Factor	0.92	0.50		0.81	0.77		0.98	1.04		1.17	1.18	
Incremental Delay, d2	9.3	0.3		1.0	0.6		0.1	0.1		1.0	0.3	
Delay (s)	34.5	5.0		13.0	12.7		11.1	12.2		15.1	14.3	
Level of Service	C	A		B	B		B	B		B	B	
Approach Delay (s)		10.6			12.7			12.1			14.5	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	12.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	34.5%	ICU Level of Service	A
Analysis Period (min)	15		

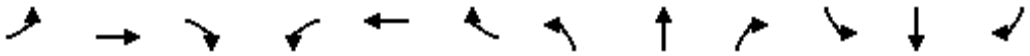
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	250	65	175	285	55	25	245	20	55	270	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.97		1.00	0.98			0.99			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1550	3003		1550	3024			3271			3230	
Flt Permitted	0.53	1.00		0.95	1.00			0.91			0.87	
Satd. Flow (perm)	871	3003		1550	3024			2974			2815	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	65	269	70	188	306	59	27	263	22	59	290	54
RTOR Reduction (vph)	0	36	0	0	24	0	0	9	0	0	19	0
Lane Group Flow (vph)	65	303	0	188	341	0	0	303	0	0	384	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Prot			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4						2			6		
Actuated Green, G (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Effective Green, g (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Actuated g/C Ratio	0.31	0.31		0.09	0.45			0.38			0.38	
Clearance Time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	268	924		143	1349			1144			1083	
v/s Ratio Prot		c0.10		c0.12	0.11							
v/s Ratio Perm	0.07							0.10			c0.14	
v/c Ratio	0.24	0.33		1.31	0.25			0.27			0.35	
Uniform Delay, d1	16.8	17.3		29.5	11.2			13.7			14.3	
Progression Factor	0.64	0.59		1.31	1.08			0.79			0.75	
Incremental Delay, d2	2.1	0.9		172.6	0.3			0.6			0.9	
Delay (s)	12.9	11.1		211.2	12.4			11.4			11.6	
Level of Service	B	B		F	B			B			B	
Approach Delay (s)		11.4			80.0			11.4			11.6	
Approach LOS		B			E			B			B	

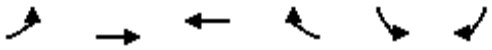
Intersection Summary			
HCM Average Control Delay	34.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	52.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	16	293	16	65	522	65	49	101	152	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	14	12	10	15	10
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			0.95				
Frt		0.99			0.99			0.92				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		1616			1601			3249				
Flt Permitted		0.97			0.94			0.99				
Satd. Flow (perm)		1564			1505			3249				
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	17	315	17	70	561	70	53	109	163	0	0	0
RTOR Reduction (vph)	0	3	0	0	5	0	0	125	0	0	0	0
Lane Group Flow (vph)	0	346	0	0	696	0	0	200	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		41.7			41.7			15.3				
Effective Green, g (s)		41.7			41.7			15.3				
Actuated g/C Ratio		0.64			0.64			0.24				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		3.0			3.0			8.0				
Lane Grp Cap (vph)		1003			966			765				
v/s Ratio Prot												
v/s Ratio Perm		0.22			c0.46			0.06				
v/c Ratio		0.35			0.72			0.26				
Uniform Delay, d1		5.4			7.8			20.2				
Progression Factor		1.64			1.00			1.00				
Incremental Delay, d2		0.9			4.6			0.8				
Delay (s)		9.7			12.4			21.0				
Level of Service		A			B			C				
Approach Delay (s)		9.7			12.4			21.0			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM Average Control Delay	13.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	74.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	73	372	503	34	112	149
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	83	423	572	39	127	169
Pedestrians		5	6		17	
Lane Width (ft)		16.0	16.0		10.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		1	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1319	491			
pX, platoon unblocked	0.85				0.85	0.85
vC, conflicting volume	627				1203	613
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	473				1150	456
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	91				24	67
cM capacity (veh/h)	901				168	508

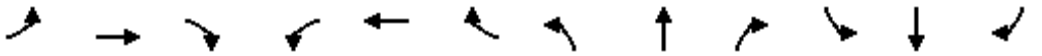
Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	506	610	127	169
Volume Left	83	0	127	0
Volume Right	0	39	0	169
cSH	901	1700	168	508
Volume to Capacity	0.09	0.36	0.76	0.33
Queue Length 95th (ft)	8	0	121	36
Control Delay (s)	2.5	0.0	73.7	15.6
Lane LOS	A		F	C
Approach Delay (s)	2.5	0.0	40.5	
Approach LOS			E	

Intersection Summary			
Average Delay	9.4		
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	645	0	1	530	3	27
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frt	1.00			1.00	0.88	
Flt Protected	1.00			1.00	1.00	
Satd. Flow (prot)	1748			1747	1527	
Flt Permitted	1.00			1.00	1.00	
Satd. Flow (perm)	1748			1746	1527	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	694	0	1	570	3	29
RTOR Reduction (vph)	0	0	0	0	24	0
Lane Group Flow (vph)	694	0	0	571	8	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type			Perm			
Protected Phases	1 2 4			4	3	
Permitted Phases			4			
Actuated Green, G (s)	63.0			31.0	14.0	
Effective Green, g (s)	59.0			31.0	14.0	
Actuated g/C Ratio	0.69			0.36	0.16	
Clearance Time (s)				4.0	4.0	
Lane Grp Cap (vph)	1213			637	252	
v/s Ratio Prot	c0.40				c0.01	
v/s Ratio Perm				c0.33		
v/c Ratio	0.57			0.90	0.03	
Uniform Delay, d1	6.6			25.5	29.8	
Progression Factor	0.08			1.00	1.00	
Incremental Delay, d2	1.3			17.7	0.2	
Delay (s)	1.8			43.2	30.0	
Level of Service	A			D	C	
Approach Delay (s)	1.8			43.2	30.0	
Approach LOS	A			D	C	

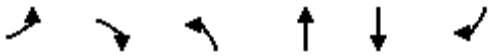
Intersection Summary			
HCM Average Control Delay	20.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	45.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	203	542	25	311	0	0	0	0	15	6	220
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	0	216	577	27	331	0	0	0	0	16	6	234
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	331			216			891	888	396	492	600	331
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	331			216			891	888	396	492	600	331
tC, single (s)	4.1			4.2			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			100	100	100	97	98	65
cM capacity (veh/h)	1240			1337			151	279	609	457	409	665

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	144	649	357	22	234
Volume Left	0	0	27	16	0
Volume Right	0	577	0	0	234
cSH	1700	1700	1337	442	665
Volume to Capacity	0.08	0.38	0.02	0.05	0.35
Queue Length 95th (ft)	0	0	2	4	40
Control Delay (s)	0.0	0.0	0.8	13.6	13.3
Lane LOS			A	B	B
Approach Delay (s)	0.0		0.8	13.3	
Approach LOS				B	

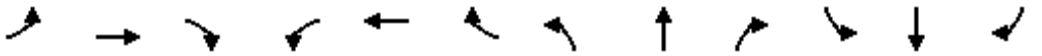
Intersection Summary				
Average Delay	2.6			
Intersection Capacity Utilization	49.1%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	218	0	336	0	0	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	234	0	361	0	0	0

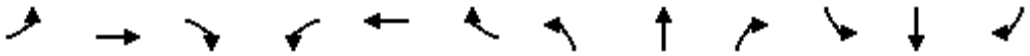
Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	117	117	361
Volume Left (vph)	117	117	361
Volume Right (vph)	0	0	0
Hadj (s)	0.55	0.55	0.25
Departure Headway (s)	6.0	6.0	4.8
Degree Utilization, x	0.20	0.20	0.48
Capacity (veh/h)	570	572	729
Control Delay (s)	9.2	9.2	12.2
Approach Delay (s)	9.2		12.2
Approach LOS	A		B

Intersection Summary			
Delay	11.1		
HCM Level of Service	B		
Intersection Capacity Utilization	32.9%	ICU Level of Service	A
Analysis Period (min)	15		



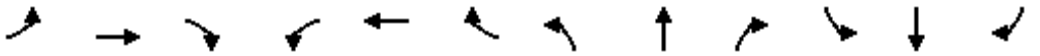
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	456	311	217	512	0	0	0	0	286	269	372
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	13	12	12	12	12	10	10	11
Total Lost time (s)		6.0	6.0		6.0					6.0	6.0	6.0
Lane Util. Factor		0.95	1.00		0.95					0.86	0.81	0.86
Frpb, ped/bikes		1.00	0.97		1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	0.95	0.85
Flt Protected		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (prot)		3179	1215		3424					1359	3807	1133
Flt Permitted		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (perm)		3179	1215		3424					1359	3807	1133
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	485	331	231	545	0	0	0	0	304	286	396
RTOR Reduction (vph)	0	0	228	0	0	0	0	0	0	0	53	114
Lane Group Flow (vph)	0	485	103	0	776	0	0	0	0	167	568	84
Confl. Peds. (#/hr)	4		6	6		4						
Heavy Vehicles (%)	0%	4%	6%	1%	2%	0%	0%	0%	0%	1%	1%	1%
Parking (#/hr)			0									0
Turn Type			Perm	Split						Split		custom
Protected Phases		2		10 12 14	10 12 14					4	4	
Permitted Phases			2									4 2
Actuated Green, G (s)		38.9	38.9		68.3					23.0	23.0	67.9
Effective Green, g (s)		38.9	38.9		68.3					23.0	23.0	67.9
Actuated g/C Ratio		0.24	0.24		0.43					0.14	0.14	0.42
Clearance Time (s)		6.0	6.0							6.0	6.0	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		773	295		1462					195	547	481
v/s Ratio Prot		c0.15			c0.23					0.12	c0.15	
v/s Ratio Perm			0.08									0.07
v/c Ratio		0.63	0.35		0.53					0.86	1.04	0.17
Uniform Delay, d1		54.1	50.1		34.0					66.9	68.5	28.6
Progression Factor		1.00	1.00		0.02					1.00	1.00	1.00
Incremental Delay, d2		3.8	3.2		0.1					28.9	48.7	0.2
Delay (s)		57.9	53.3		0.7					95.8	117.2	28.8
Level of Service		E	D		A					F	F	C
Approach Delay (s)		56.1			0.7			0.0			95.9	
Approach LOS		E			A			A			F	

Intersection Summary			
HCM Average Control Delay	54.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	31.8
Intersection Capacity Utilization	68.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



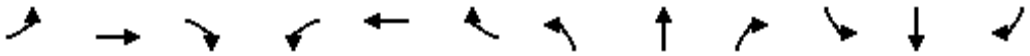
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	282	460	0	0	484	127	245	170	154	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	13	12	12	11	12	13	13	14	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0				
Lane Util. Factor	1.00	0.95			0.95	1.00	0.91	0.91				
Frt	1.00	1.00			1.00	0.85	1.00	0.94				
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (prot)	1605	3431			3210	1485	1561	3063				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (perm)	1605	3431			3210	1485	1561	3063				
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	303	495	0	0	520	137	263	183	166	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	92	0	66	0	0	0	0
Lane Group Flow (vph)	303	495	0	0	520	45	208	338	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Split					Perm	Split					
Protected Phases	2 4 8	2 4 8			10		12	12				
Permitted Phases						10						
Actuated Green, G (s)	83.7	83.7			35.2	35.2	14.1	14.1				
Effective Green, g (s)	83.7	83.7			35.2	35.2	14.1	14.1				
Actuated g/C Ratio	0.52	0.52			0.22	0.22	0.09	0.09				
Clearance Time (s)					6.0	6.0	6.0	6.0				
Vehicle Extension (s)					3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	840	1795			706	327	138	270				
v/s Ratio Prot	c0.19	0.14			c0.16		c0.13	0.11				
v/s Ratio Perm						0.03						
v/c Ratio	0.36	0.28			0.74	0.14	1.51	1.25				
Uniform Delay, d1	22.4	21.3			58.1	50.2	73.0	73.0				
Progression Factor	0.02	0.03			1.00	1.00	1.00	1.00				
Incremental Delay, d2	0.2	0.1			4.0	0.2	262.0	140.6				
Delay (s)	0.7	0.6			62.1	50.4	335.0	213.6				
Level of Service	A	A			E	D	F	F				
Approach Delay (s)		0.6			59.7			254.8			0.0	
Approach LOS		A			E			F			A	

Intersection Summary			
HCM Average Control Delay	94.7	HCM Level of Service	F
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	29.0
Intersection Capacity Utilization	57.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	130	239	126	81	190	61	92	443	60	96	803	120
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	14	12	10	10	12	9	10	12
Total Lost time (s)	4.0	4.0	5.0	4.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.99	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1571	1600	1373	1592	1778		1578	3015		1536	3001	
Flt Permitted	0.46	1.00	1.00	0.52	1.00		0.15	1.00		0.38	1.00	
Satd. Flow (perm)	758	1600	1373	875	1778		246	3015		618	3001	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	133	244	129	83	194	62	94	452	61	98	819	122
RTOR Reduction (vph)	0	0	87	0	12	0	0	12	0	0	13	0
Lane Group Flow (vph)	133	244	42	83	244	0	94	501	0	98	928	0
Confl. Peds. (#/hr)	28		8	8		28	59		11	11		59
Confl. Bikes (#/hr)	3					3	1		2	2		1
Heavy Vehicles (%)	1%	5%	2%	0%	4%	0%	1%	4%	0%	0%	3%	3%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	36.3	29.3	29.3	33.3	27.8		39.6	34.1		39.6	34.1	
Effective Green, g (s)	34.3	30.3	29.3	31.3	27.8		37.6	34.1		37.6	34.1	
Actuated g/C Ratio	0.38	0.34	0.33	0.35	0.31		0.42	0.38		0.42	0.38	
Clearance Time (s)	3.0	5.0	5.0	3.0	5.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	345	542	450	342	553		171	1150		306	1145	
v/s Ratio Prot	c0.03	c0.15		0.01	0.14		c0.03	0.17		0.02	c0.31	
v/s Ratio Perm	0.12		0.03	0.07			0.20			0.12		
v/c Ratio	0.39	0.45	0.09	0.24	0.44		0.55	0.44		0.32	0.81	
Uniform Delay, d1	18.8	23.1	20.8	20.0	24.6		17.9	20.5		16.2	24.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.7	2.7	0.4	0.4	2.5		3.6	1.2		0.6	6.3	
Delay (s)	19.6	25.7	21.3	20.4	27.1		21.5	21.7		16.9	31.0	
Level of Service	B	C	C	C	C		C	C		B	C	
Approach Delay (s)		23.0			25.5			21.7			29.7	
Approach LOS		C			C			C			C	

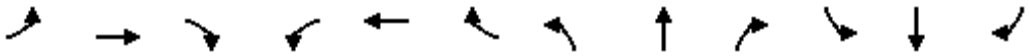
Intersection Summary			
HCM Average Control Delay	25.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	89.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	70.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	35	275	54	11	251	19	32	51	17	18	76	58
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	10	10	10	12	15	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00			0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.98			0.95	
Flt Protected		0.99	1.00		1.00	1.00		0.98			0.99	
Satd. Flow (prot)		1968	1467		1629	1381		1892			1871	
Flt Permitted		0.95	1.00		0.99	1.00		0.90			0.97	
Satd. Flow (perm)		1877	1467		1609	1381		1730			1827	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	38	302	59	12	276	21	35	56	19	20	84	64
RTOR Reduction (vph)	0	0	30	0	0	11	0	11	0	0	34	0
Lane Group Flow (vph)	0	340	29	0	288	10	0	99	0	0	134	0
Confl. Peds. (#/hr)	12		20	20		12	8		2	2		8
Confl. Bikes (#/hr)	1		2	2		1			1	1		
Heavy Vehicles (%)	3%	3%	0%	0%	3%	0%	0%	0%	0%	0%	1%	3%
Turn Type	Perm		Perm	Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Effective Green, g (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Actuated g/C Ratio		0.49	0.49		0.49	0.49		0.42			0.42	
Clearance Time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		924	722		792	680		719			759	
v/s Ratio Prot												
v/s Ratio Perm		c0.18	0.02		0.18	0.01		0.06			c0.07	
v/c Ratio		0.37	0.04		0.36	0.02		0.14			0.18	
Uniform Delay, d1		10.2	8.5		10.2	8.4		11.8			12.0	
Progression Factor		1.00	1.00		1.98	2.85		1.00			1.96	
Incremental Delay, d2		1.1	0.1		1.3	0.0		0.4			0.5	
Delay (s)		11.4	8.7		21.4	24.1		12.2			23.9	
Level of Service		B	A		C	C		B			C	
Approach Delay (s)		11.0			21.6			12.2			23.9	
Approach LOS		B			C			B			C	

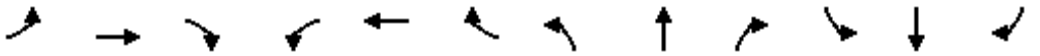
Intersection Summary			
HCM Average Control Delay	16.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	55.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	53	172	37	10	180	9	28	88	15	12	142	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.94		1.00	0.97		1.00	0.97		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.96	
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		1.00	
Satd. Flow (prot)		1747	1443		1728	1487		1713	1489		1712	
Flt Permitted		0.89	1.00		0.98	1.00		0.91	1.00		0.99	
Satd. Flow (perm)		1571	1443		1702	1487		1581	1489		1694	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	55	179	39	10	188	9	29	92	16	12	148	56
RTOR Reduction (vph)	0	0	25	0	0	6	0	0	8	0	19	0
Lane Group Flow (vph)	0	234	14	0	198	3	0	121	8	0	197	0
Confl. Peds. (#/hr)	19		25	25		19	3		6	6		3
Confl. Bikes (#/hr)	1		2	2		1			1	1		
Heavy Vehicles (%)	0%	2%	0%	0%	4%	0%	0%	5%	0%	0%	0%	2%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Effective Green, g (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Actuated g/C Ratio		0.35	0.35		0.35	0.35		0.49	0.49		0.49	
Clearance Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Grp Cap (vph)		556	511		602	526		778	733		834	
v/s Ratio Prot												
v/s Ratio Perm		c0.15	0.01		0.12	0.00		0.08	0.01		c0.12	
v/c Ratio		0.42	0.03		0.33	0.01		0.16	0.01		0.24	
Uniform Delay, d1		15.9	13.7		15.4	13.6		9.1	8.4		9.5	
Progression Factor		1.95	3.44		0.97	0.99		0.21	0.26		1.08	
Incremental Delay, d2		2.2	0.1		1.4	0.0		0.3	0.0		0.7	
Delay (s)		33.3	47.3		16.3	13.5		2.3	2.2		10.9	
Level of Service		C	D		B	B		A	A		B	
Approach Delay (s)		35.3			16.2			2.3			10.9	
Approach LOS		D			B			A			B	

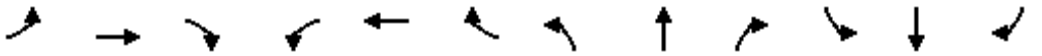
Intersection Summary			
HCM Average Control Delay	18.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	58.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	147	35	76	8	14	9	37	219	8	17	379	161
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.95		0.98			1.00			1.00	0.94
Flpb, ped/bikes		0.98	1.00		0.99			1.00			1.00	1.00
Frt		1.00	0.85		0.96			1.00			1.00	0.85
Flt Protected		0.96	1.00		0.99			0.99			1.00	1.00
Satd. Flow (prot)		1871	1440		1776			1992			1976	1382
Flt Permitted		0.78	1.00		0.94			0.92			0.98	1.00
Satd. Flow (perm)		1509	1440		1693			1845			1950	1382
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	155	37	80	8	15	9	39	231	8	18	399	169
RTOR Reduction (vph)	0	0	47	0	7	0	0	2	0	0	0	86
Lane Group Flow (vph)	0	192	33	0	25	0	0	276	0	0	417	83
Confl. Peds. (#/hr)	37		53	53		37	39		54	54		39
Confl. Bikes (#/hr)							2					2
Heavy Vehicles (%)	4%	0%	1%	0%	0%	0%	0%	1%	0%	0%	3%	4%
Turn Type	pm+pt		Perm	Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		27.0	27.0		17.0			32.0			32.0	32.0
Effective Green, g (s)		27.0	27.0		17.0			32.0			32.0	32.0
Actuated g/C Ratio		0.42	0.42		0.26			0.49			0.49	0.49
Clearance Time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		671	598		443			908			960	680
v/s Ratio Prot		c0.04										
v/s Ratio Perm		0.08	0.02		0.01			0.15			c0.21	0.06
v/c Ratio		0.29	0.06		0.06			0.30			0.43	0.12
Uniform Delay, d1		12.6	11.4		18.0			9.9			10.7	8.9
Progression Factor		0.57	0.58		1.00			0.62			0.53	0.27
Incremental Delay, d2		1.0	0.2		0.2			0.8			1.1	0.3
Delay (s)		8.2	6.8		18.2			6.9			6.7	2.7
Level of Service		A	A		B			A			A	A
Approach Delay (s)		7.8			18.2			6.9			5.6	
Approach LOS		A			B			A			A	

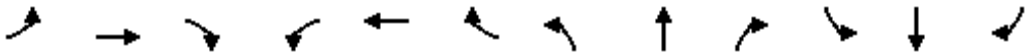
Intersection Summary			
HCM Average Control Delay	6.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	64.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



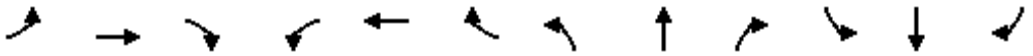
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	866	289	292	842	0	0	0	0	513	284	334
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	11	8	8	8	11	12	14
Total Lost time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Lane Util. Factor		0.91		1.00	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.96		1.00	1.00					1.00	0.98	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.98	1.00
Satd. Flow (prot)		4570		1620	3320					1489	2913	1442
Flt Permitted		1.00		0.15	1.00					0.95	0.98	1.00
Satd. Flow (perm)		4570		255	3320					1489	2913	1442
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	884	295	298	859	0	0	0	0	523	290	341
RTOR Reduction (vph)	0	42	0	0	0	0	0	0	0	0	9	135
Lane Group Flow (vph)	0	1137	0	298	859	0	0	0	0	298	584	128
Confl. Peds. (#/hr)	15		11	11		15						
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	0%	3%	3%	2%	3%	0%	0%	0%	0%	1%	3%	3%
Turn Type				pm+pt						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Actuated Green, G (s)		50.4		75.2	75.2					27.8	27.8	27.8
Effective Green, g (s)		50.4		75.2	75.2					27.8	27.8	27.8
Actuated g/C Ratio		0.44		0.65	0.65					0.24	0.24	0.24
Clearance Time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Vehicle Extension (s)		7.0		3.5	7.0					3.5	3.5	3.5
Lane Grp Cap (vph)		2003		408	2171					360	704	349
v/s Ratio Prot		0.25		c0.13	0.26							
v/s Ratio Perm				c0.35						0.20	0.20	0.09
v/c Ratio		0.57		0.73	0.40					0.83	0.83	0.37
Uniform Delay, d1		24.2		17.7	9.3					41.3	41.4	36.3
Progression Factor		1.00		1.32	1.20					1.00	1.00	1.00
Incremental Delay, d2		1.2		5.6	0.4					14.8	8.2	0.8
Delay (s)		25.3		28.9	11.6					56.1	49.6	37.1
Level of Service		C		C	B					E	D	D
Approach Delay (s)		25.3			16.1			0.0			48.4	
Approach LOS		C			B			A			D	

Intersection Summary			
HCM Average Control Delay	29.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	92.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	341	1038	0	0	811	261	323	270	237	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	11	12	12	12	12	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0		6.0				
Lane Util. Factor	0.97	0.95			0.95	1.00		0.91				
Frpb, ped/bikes	1.00	1.00			1.00	0.98		1.00				
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00				
Frt	1.00	1.00			1.00	0.85		0.96				
Flt Protected	0.95	1.00			1.00	1.00		0.98				
Satd. Flow (prot)	3143	3353			3241	1490		4525				
Flt Permitted	0.23	1.00			1.00	1.00		0.98				
Satd. Flow (perm)	755	3353			3241	1490		4525				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	359	1093	0	0	854	275	340	284	249	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	112	0	63	0	0	0	0
Lane Group Flow (vph)	359	1093	0	0	854	163	0	810	0	0	0	0
Confl. Peds. (#/hr)	7		5	5		7						
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	2%	2%	0%	0%	2%	1%	2%	1%	3%	0%	0%	0%
Turn Type	pm+pt					Perm	Perm					
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8					
Actuated Green, G (s)	73.9	73.9			56.5	56.5		29.1				
Effective Green, g (s)	73.9	73.9			56.5	56.5		29.1				
Actuated g/C Ratio	0.64	0.64			0.49	0.49		0.25				
Clearance Time (s)	6.0	6.0			6.0	6.0		6.0				
Vehicle Extension (s)	3.5	7.0			7.0	7.0		5.0				
Lane Grp Cap (vph)	722	2155			1592	732		1145				
v/s Ratio Prot	0.05	c0.33			c0.26							
v/s Ratio Perm	0.27					0.11		0.18				
v/c Ratio	0.50	0.51			0.54	0.22		0.71				
Uniform Delay, d1	10.7	10.9			20.2	16.7		39.1				
Progression Factor	0.30	0.32			1.02	1.21		1.00				
Incremental Delay, d2	0.5	0.7			1.1	0.6		2.5				
Delay (s)	3.7	4.1			21.8	20.8		41.6				
Level of Service	A	A			C	C		D				
Approach Delay (s)		4.0			21.5			41.6			0.0	
Approach LOS		A			C			D			A	

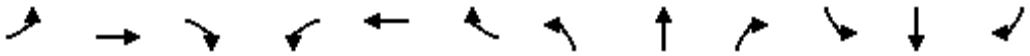
Intersection Summary			
HCM Average Control Delay	19.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	92.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	122	571	368	94	564	48	227	179	66	74	162	121
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	11	12	12	10	10	13	10	10	10
Total Lost time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		0.99	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.96		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1564	3273	1313	1600	3279		1578	3002		1540	2940	
Flt Permitted	0.21	1.00	1.00	0.42	1.00		0.39	1.00		0.59	1.00	
Satd. Flow (perm)	344	3273	1313	711	3279		648	3002		958	2940	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	130	607	391	100	600	51	241	190	70	79	172	129
RTOR Reduction (vph)	0	0	157	0	6	0	0	38	0	0	108	0
Lane Group Flow (vph)	130	607	234	100	645	0	241	222	0	79	193	0
Confl. Peds. (#/hr)	11		23	23		11	8		12	12		8
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	2%	1%	3%	3%	3%	0%	1%	1%	2%	3%	0%	1%
Parking (#/hr)			0									
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	64.7	52.4	68.9	40.6	31.8		38.3	26.8		26.3	18.3	
Effective Green, g (s)	64.7	52.4	68.9	40.6	31.8		38.3	26.8		26.3	18.3	
Actuated g/C Ratio	0.56	0.46	0.60	0.35	0.28		0.33	0.23		0.23	0.16	
Clearance Time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0		3.0	7.0		3.0	7.0	
Lane Grp Cap (vph)	505	1491	787	319	907		349	700		260	468	
v/s Ratio Prot	0.07	c0.19	0.04	c0.02	c0.20		c0.10	0.07		0.02	0.07	
v/s Ratio Perm	0.08		0.14	0.09			c0.13			0.05		
v/c Ratio	0.26	0.41	0.30	0.31	0.71		0.69	0.32		0.30	0.41	
Uniform Delay, d1	13.6	20.9	11.2	25.7	37.5		30.5	36.5		36.1	43.5	
Progression Factor	0.68	0.86	4.05	1.00	1.00		0.81	0.88		1.00	1.00	
Incremental Delay, d2	1.1	0.7	0.2	0.6	4.7		5.6	0.9		0.7	2.1	
Delay (s)	10.3	18.7	45.8	26.2	42.2		30.4	33.0		36.7	45.6	
Level of Service	B	B	D	C	D		C	C		D	D	
Approach Delay (s)		27.1			40.1			31.8			43.7	
Approach LOS		C			D			C			D	

Intersection Summary			
HCM Average Control Delay	33.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	67.9%	ICU Level of Service	C
Analysis Period (min)	15		

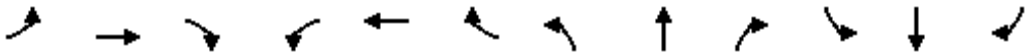
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	46	193	367	56	164	87	362	340	78	206	408	56
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	12	11	12	12	11	13	12	10	11	12
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.90		1.00	0.95		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1704	2894		1653	3183		1620	3407		1580	3183	
Flt Permitted	0.58	1.00		0.28	1.00		0.30	1.00		0.49	1.00	
Satd. Flow (perm)	1034	2894		485	3183		512	3407		810	3183	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	51	212	403	62	180	96	398	374	86	226	448	62
RTOR Reduction (vph)	0	269	0	0	58	0	0	17	0	0	9	0
Lane Group Flow (vph)	51	346	0	62	218	0	398	443	0	226	501	0
Confl. Peds. (#/hr)	12		3	3		12	5					5
Heavy Vehicles (%)	0%	2%	2%	0%	1%	1%	2%	1%	0%	1%	2%	0%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	42.2	35.4		43.4	36.0		56.2	44.2		39.7	31.7	
Effective Green, g (s)	42.2	35.4		43.4	36.0		56.2	44.2		39.7	31.7	
Actuated g/C Ratio	0.37	0.31		0.38	0.31		0.49	0.38		0.35	0.28	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.5	7.0		3.5	7.0		3.5	7.0		3.5	7.0	
Lane Grp Cap (vph)	419	891		258	996		448	1309		333	877	
v/s Ratio Prot	0.01	c0.12		c0.02	0.07		c0.16	0.13		0.05	0.16	
v/s Ratio Perm	0.04			0.08			c0.28			0.19		
v/c Ratio	0.12	0.39		0.24	0.22		0.89	0.34		0.68	0.57	
Uniform Delay, d1	23.8	31.3		23.8	29.1		21.3	25.1		29.5	35.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.98	
Incremental Delay, d2	0.2	1.3		0.6	0.5		19.2	0.7		5.4	2.6	
Delay (s)	23.9	32.6		24.4	29.6		40.5	25.8		34.9	37.8	
Level of Service	C	C		C	C		D	C		C	D	
Approach Delay (s)		31.9			28.7			32.6			36.9	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM Average Control Delay	33.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	73.4%	ICU Level of Service	D
Analysis Period (min)	15		

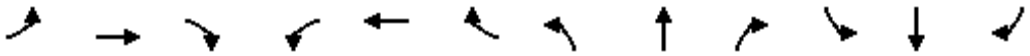
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	86	491	115	10	376	66	94	259	9	153	469	141
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	9	11	12	9	9	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.97			0.98		1.00	0.99		1.00	0.97	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3029			3034		1451	3225		1522	2871	
Flt Permitted		0.74			0.93		0.31	1.00		0.58	1.00	
Satd. Flow (perm)		2268			2838		468	3225		922	2871	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	92	528	124	11	404	71	101	278	10	165	504	152
RTOR Reduction (vph)	0	26	0	0	21	0	0	4	0	0	44	0
Lane Group Flow (vph)	0	718	0	0	465	0	101	284	0	165	612	0
Confl. Peds. (#/hr)	4		2	2		4	8		4	4		8
Confl. Bikes (#/hr)							2					2
Heavy Vehicles (%)	1%	2%	2%	0%	2%	6%	6%	2%	0%	1%	3%	3%
Turn Type	pm+pt			Perm			pm+pt			pm+pt		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			17.0		28.0	24.0		28.0	24.0	
Effective Green, g (s)		25.0			17.0		28.0	24.0		28.0	24.0	
Actuated g/C Ratio		0.38			0.26		0.43	0.37		0.43	0.37	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		919			742		262	1191		434	1060	
v/s Ratio Prot		c0.05					c0.02	0.09		0.02	c0.21	
v/s Ratio Perm		c0.25			0.16		0.14			0.14		
v/c Ratio		0.78			0.63		0.39	0.24		0.38	0.58	
Uniform Delay, d1		17.6			21.2		11.6	14.2		11.8	16.4	
Progression Factor		1.00			1.52		0.71	0.61		1.00	1.00	
Incremental Delay, d2		6.6			1.4		4.1	0.5		2.5	2.3	
Delay (s)		24.2			33.7		12.4	9.1		14.3	18.7	
Level of Service		C			C		B	A		B	B	
Approach Delay (s)		24.2			33.7			9.9			17.9	
Approach LOS		C			C			A			B	

Intersection Summary			
HCM Average Control Delay	21.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	71.9%	ICU Level of Service	C
Analysis Period (min)	15		

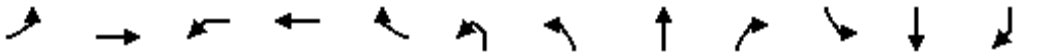
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	67	198	136	84	129	22	64	409	71	27	537	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.94		1.00	0.98		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1707	1885		1599	1991		1676	3221		1435	3273	
Flt Permitted	0.65	1.00		0.42	1.00		0.37	1.00		0.44	1.00	
Satd. Flow (perm)	1174	1885		712	1991		652	3221		668	3273	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	73	215	148	91	140	24	70	445	77	29	584	59
RTOR Reduction (vph)	0	38	0	0	9	0	0	21	0	0	12	0
Lane Group Flow (vph)	73	325	0	91	155	0	70	501	0	29	631	0
Confl. Peds. (#/hr)	3		20	20		3	2		3	3		2
Confl. Bikes (#/hr)			1	1			2		2	2		2
Heavy Vehicles (%)	0%	0%	1%	6%	0%	0%	2%	3%	6%	19%	3%	2%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.48	0.48		0.48	0.48	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	433	696		263	735		311	1536		319	1561	
v/s Ratio Prot		c0.17			0.08			0.16			c0.19	
v/s Ratio Perm	0.06			0.13			0.11			0.04		
v/c Ratio	0.17	0.47		0.35	0.21		0.23	0.33		0.09	0.40	
Uniform Delay, d1	13.8	15.6		14.8	14.0		10.0	10.5		9.3	11.0	
Progression Factor	1.00	1.00		1.35	1.37		1.00	1.00		0.86	0.75	
Incremental Delay, d2	0.8	2.2		1.9	0.3		1.7	0.6		0.5	0.6	
Delay (s)	14.6	17.9		21.9	19.5		11.6	11.1		8.4	8.9	
Level of Service	B	B		C	B		B	B		A	A	
Approach Delay (s)		17.3			20.4			11.2			8.9	
Approach LOS		B			C			B			A	

Intersection Summary			
HCM Average Control Delay	12.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	63.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	628	198	479	16	3	9	8	41	8	0	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	10	10	10	12	12	16	12	12	16	12
Total Lost time (s)		5.0		5.0				4.0			4.0	
Lane Util. Factor		0.95		0.95				1.00			1.00	
Frpb, ped/bikes		1.00		1.00				0.99			0.98	
Flpb, ped/bikes		1.00		1.00				1.00			1.00	
Frt		1.00		1.00				0.91			0.93	
Flt Protected		1.00		0.99				0.99			0.98	
Satd. Flow (prot)		3160		3090				1812			1817	
Flt Permitted		0.95		0.55				0.96			0.90	
Satd. Flow (perm)		3011		1730				1754			1673	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	2	698	220	532	18	3	10	9	46	9	0	3
RTOR Reduction (vph)	0	0	0	2	0	0	0	36	0	0	5	0
Lane Group Flow (vph)	0	700	0	768	0	0	0	32	0	0	13	0
Confl. Peds. (#/hr)	7		4		7		7		2	2		7
Confl. Bikes (#/hr)							2		2	2		2
Heavy Vehicles (%)	0%	1%	2%	1%	6%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Perm		custom			Perm	Perm			Perm		
Protected Phases		8	7	4				2			6	
Permitted Phases	8		4 7			2	2			6		
Actuated Green, G (s)		18.0		27.0				14.0			14.0	
Effective Green, g (s)		18.0		27.0				14.0			14.0	
Actuated g/C Ratio		0.28		0.42				0.22			0.22	
Clearance Time (s)		5.0		5.0				4.0			4.0	
Lane Grp Cap (vph)		834		844				378			360	
v/s Ratio Prot				c0.08								
v/s Ratio Perm		0.23		c0.29				c0.02			0.01	
v/c Ratio		0.84		1.02dl				0.08			0.04	
Uniform Delay, d1		22.1		17.9				20.4			20.2	
Progression Factor		1.47		0.92				1.00			1.00	
Incremental Delay, d2		7.4		15.1				0.4			0.2	
Delay (s)		40.0		31.6				20.8			20.4	
Level of Service		D		C				C			C	
Approach Delay (s)		40.0		31.6				20.8			20.4	
Approach LOS		D		C				C			C	

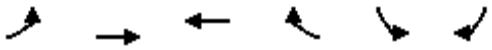
Intersection Summary			
HCM Average Control Delay	47.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	84.1%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group



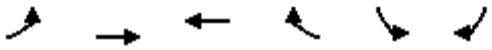
Movement	SBR2	NEL	NER
Lane Configurations			
Volume (vph)	5	3	242
Ideal Flow (vphpl)	1800	1800	1800
Lane Width	12	12	12
Total Lost time (s)		5.0	
Lane Util. Factor		1.00	
Frpb, ped/bikes		1.00	
Flpb, ped/bikes		1.00	
Frt		0.87	
Flt Protected		1.00	
Satd. Flow (prot)		1559	
Flt Permitted		1.00	
Satd. Flow (perm)		1559	
Peak-hour factor, PHF	0.90	0.90	0.90
Adj. Flow (vph)	6	3	269
RTOR Reduction (vph)	0	0	0
Lane Group Flow (vph)	0	272	0
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Heavy Vehicles (%)	0%	0%	0%
Turn Type			
Protected Phases		3	
Permitted Phases			
Actuated Green, G (s)		10.0	
Effective Green, g (s)		10.0	
Actuated g/C Ratio		0.15	
Clearance Time (s)		5.0	
Lane Grp Cap (vph)		240	
v/s Ratio Prot		c0.17	
v/s Ratio Perm			
v/c Ratio		1.13	
Uniform Delay, d1		27.5	
Progression Factor		0.85	
Incremental Delay, d2		96.6	
Delay (s)		120.1	
Level of Service		F	
Approach Delay (s)		120.1	
Approach LOS		F	

Intersection Summary



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	230	689	513	57	74	180
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frt		1.00	0.99		1.00	0.85
Flt Protected		0.99	1.00		0.95	1.00
Satd. Flow (prot)		3279	3271		1660	1485
Flt Permitted		0.67	1.00		0.95	1.00
Satd. Flow (perm)		2208	3271		1660	1485
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	247	741	552	61	80	194
RTOR Reduction (vph)	0	0	13	0	0	143
Lane Group Flow (vph)	0	988	600	0	80	51
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		40.0	40.0		17.0	17.0
Effective Green, g (s)		40.0	40.0		17.0	17.0
Actuated g/C Ratio		0.62	0.62		0.26	0.26
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1359	2013		434	388
v/s Ratio Prot			0.18		c0.05	
v/s Ratio Perm		c0.45				0.03
v/c Ratio		0.73	0.30		0.18	0.13
Uniform Delay, d1		8.7	5.9		18.6	18.4
Progression Factor		1.30	1.33		1.19	1.93
Incremental Delay, d2		1.6	0.4		0.9	0.7
Delay (s)		12.8	8.2		23.0	36.1
Level of Service		B	A		C	D
Approach Delay (s)		12.8	8.2		32.3	
Approach LOS		B	A		C	

Intersection Summary			
HCM Average Control Delay	14.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



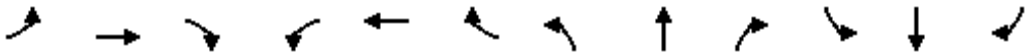
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	70	693	490	136	239	80
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	12	10	11	12	10	10
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frpb, ped/bikes		1.00	1.00		1.00	0.99
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.97		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3118	3068		1506	1343
Flt Permitted		0.83	1.00		0.95	1.00
Satd. Flow (perm)		2612	3068		1506	1343
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	76	753	533	148	260	87
RTOR Reduction (vph)	0	0	39	0	0	56
Lane Group Flow (vph)	0	829	642	0	260	31
Confl. Peds. (#/hr)	2			2		1
Heavy Vehicles (%)	1%	2%	2%	10%	6%	5%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		34.0	34.0		23.0	23.0
Effective Green, g (s)		34.0	34.0		23.0	23.0
Actuated g/C Ratio		0.52	0.52		0.35	0.35
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1366	1605		533	475
v/s Ratio Prot			0.21		c0.17	
v/s Ratio Perm		c0.32				0.02
v/c Ratio		0.61	0.40		0.49	0.06
Uniform Delay, d1		10.8	9.3		16.4	13.9
Progression Factor		1.00	1.04		1.60	3.14
Incremental Delay, d2		1.5	0.7		3.0	0.2
Delay (s)		12.3	10.5		29.2	43.9
Level of Service		B	B		C	D
Approach Delay (s)		12.3	10.5		32.9	
Approach LOS		B	B		C	

Intersection Summary			
HCM Average Control Delay	15.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	65.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



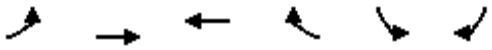
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	562	218	104	504	158	45
Ideal Flow (vphpl)	2300	1800	1800	2300	1800	1800
Lane Width	15	12	14	16	15	12
Total Lost time (s)	5.0		5.0	5.0	5.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.96		1.00	1.00	0.97	
Flt Protected	1.00		0.95	1.00	0.96	
Satd. Flow (prot)	2387		1788	2506	1748	
Flt Permitted	1.00		0.13	1.00	0.96	
Satd. Flow (perm)	2387		243	2506	1748	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	618	240	114	554	174	49
RTOR Reduction (vph)	21	0	0	0	16	0
Lane Group Flow (vph)	837	0	114	554	207	0
Confl. Peds. (#/hr)						1
Heavy Vehicles (%)	2%	2%	2%	4%	7%	0%
Turn Type			Perm			
Protected Phases	4			8	2	
Permitted Phases			8			
Actuated Green, G (s)	31.0		31.0	31.0	24.0	
Effective Green, g (s)	31.0		31.0	31.0	24.0	
Actuated g/C Ratio	0.48		0.48	0.48	0.37	
Clearance Time (s)	5.0		5.0	5.0	5.0	
Lane Grp Cap (vph)	1138		116	1195	645	
v/s Ratio Prot	0.35			0.22	c0.12	
v/s Ratio Perm			c0.47			
v/c Ratio	0.74		0.98	0.46	0.32	
Uniform Delay, d1	13.7		16.7	11.4	14.7	
Progression Factor	1.28		1.00	1.00	1.00	
Incremental Delay, d2	3.5		79.1	1.3	1.3	
Delay (s)	21.0		95.8	12.7	16.0	
Level of Service	C		F	B	B	
Approach Delay (s)	21.0			26.9	16.0	
Approach LOS	C			C	B	

Intersection Summary			
HCM Average Control Delay	22.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	67.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	823	32	94	587	1	48	0	121	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	15	13	11	11	12	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0	4.0	3.0	3.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00			
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1881	3431	1479	1589	3320	1530		1938	1500			
Flt Permitted	0.42	1.00	1.00	0.28	1.00	1.00		0.76	1.00			
Satd. Flow (perm)	833	3431	1479	470	3320	1530		1545	1500			
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	1	857	33	98	611	1	50	0	126	0	0	0
RTOR Reduction (vph)	0	0	11	0	0	0	0	0	114	0	0	0
Lane Group Flow (vph)	1	857	22	98	611	1	0	50	12	0	0	0
Heavy Vehicles (%)	0%	3%	0%	4%	3%	0%	0%	0%	2%	0%	0%	0%
Turn Type	Perm		Perm	custom		custom	Perm		Perm	Perm		
Protected Phases		4		3	3 8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)	55.8	55.8	55.8	68.7	68.7	68.7		8.3	8.3			
Effective Green, g (s)	55.8	55.8	55.8	68.7	68.7	68.7		8.3	8.3			
Actuated g/C Ratio	0.66	0.66	0.66	0.81	0.81	0.81		0.10	0.10			
Clearance Time (s)	4.0	4.0	4.0	3.0		4.0		4.0	4.0			
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0			
Lane Grp Cap (vph)	547	2252	971	510	2683	1237		151	146			
v/s Ratio Prot		c0.25		0.02	c0.18							
v/s Ratio Perm	0.00		0.01	0.13		0.00		c0.03	0.01			
v/c Ratio	0.00	0.38	0.02	0.19	0.23	0.00		0.33	0.08			
Uniform Delay, d1	5.0	6.7	5.1	2.2	1.9	1.6		35.8	34.9			
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00			
Incremental Delay, d2	0.0	0.5	0.0	0.2	0.0	0.0		1.3	0.2			
Delay (s)	5.0	7.2	5.1	2.4	2.0	1.6		37.1	35.1			
Level of Service	A	A	A	A	A	A		D	D			
Approach Delay (s)		7.1			2.0			35.7			0.0	
Approach LOS		A			A			D			A	

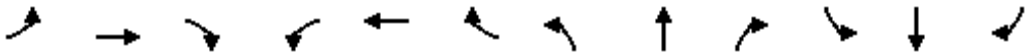
Intersection Summary			
HCM Average Control Delay	7.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	44.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	8	822	691	25	71	13
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10
Total Lost time (s)		5.0	5.0		3.0	
Lane Util. Factor		0.95	0.95		1.00	
Frt		1.00	0.99		0.98	
Flt Protected		1.00	1.00		0.96	
Satd. Flow (prot)		3097	3083		1532	
Flt Permitted		0.95	1.00		0.96	
Satd. Flow (perm)		2931	3083		1532	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	9	884	743	27	76	14
RTOR Reduction (vph)	0	0	3	0	7	0
Lane Group Flow (vph)	0	893	767	0	83	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Perm					
Protected Phases		4	8 2 11		5	
Permitted Phases	4					
Actuated Green, G (s)		33.0	64.0		7.0	
Effective Green, g (s)		33.0	64.0		7.0	
Actuated g/C Ratio		0.37	0.71		0.08	
Clearance Time (s)		5.0			3.0	
Lane Grp Cap (vph)		1075	2192		119	
v/s Ratio Prot			c0.25		c0.05	
v/s Ratio Perm		c0.30				
v/c Ratio		0.83	0.35		0.69	
Uniform Delay, d1		26.0	5.0		40.5	
Progression Factor		1.00	0.01		1.00	
Incremental Delay, d2		7.5	0.3		28.5	
Delay (s)		33.4	0.3		68.9	
Level of Service		C	A		E	
Approach Delay (s)		33.4	0.3		68.9	
Approach LOS		C	A		E	

Intersection Summary			
HCM Average Control Delay	20.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	42.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

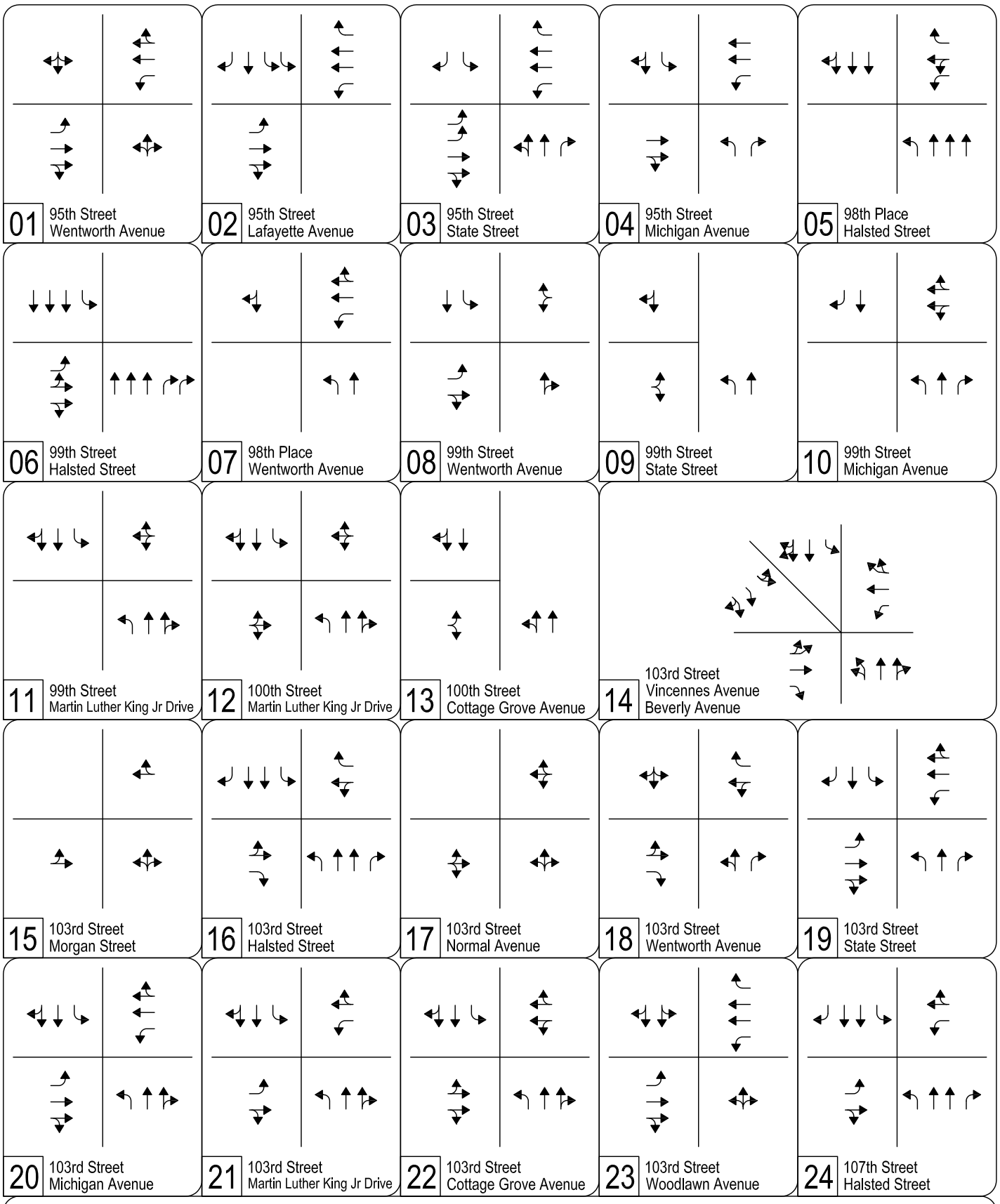


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	37	462	0	1	498	34	3	2	27	156	0	103
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12	12	11	12	11
Total Lost time (s)		4.0			4.0			3.0			3.0	3.0
Lane Util. Factor		1.00			0.95			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			0.94			1.00	0.98
Flpb, ped/bikes		1.00			1.00			1.00			0.99	1.00
Frt		1.00			0.99			0.88			1.00	0.85
Flt Protected		1.00			1.00			1.00			0.95	1.00
Satd. Flow (prot)		1774			3339			1466			1669	1348
Flt Permitted		0.93			0.95			0.97			0.89	1.00
Satd. Flow (perm)		1649			3189			1435			1556	1348
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	41	513	0	1	553	38	3	2	30	173	0	114
RTOR Reduction (vph)	0	0	0	0	6	0	0	27	0	0	0	76
Lane Group Flow (vph)	0	554	0	0	586	0	0	8	0	0	173	38
Confl. Peds. (#/hr)	60		44	44		60	14		10	10		14
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	0%	1%	0%	0%	1%	3%	20%	0%	0%	1%	0%	7%
Turn Type	Perm			Prot			Perm			pm+pt		Perm
Protected Phases		4		3	3 4			1		2	1 2	
Permitted Phases	4				3		1	1		1 2		1 2
Actuated Green, G (s)		31.0			45.0			9.0			25.0	28.0
Effective Green, g (s)		31.0			45.0			9.0			25.0	28.0
Actuated g/C Ratio		0.36			0.53			0.11			0.29	0.33
Clearance Time (s)		4.0						3.0				
Lane Grp Cap (vph)		601			1713			152			479	444
v/s Ratio Prot					c0.06						c0.07	
v/s Ratio Perm		c0.34			0.12			0.01			c0.04	0.03
v/c Ratio		0.92			0.34			0.05			0.36	0.08
Uniform Delay, d1		25.8			11.5			34.2			23.7	19.7
Progression Factor		1.00			0.91			1.00			1.00	1.00
Incremental Delay, d2		21.8			0.3			0.7			2.1	0.4
Delay (s)		47.6			10.7			34.8			25.8	20.0
Level of Service		D			B			C			C	C
Approach Delay (s)		47.6			10.7			34.8			23.5	
Approach LOS		D			B			C			C	

Intersection Summary			
HCM Average Control Delay	27.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	69.6%	ICU Level of Service	C
Analysis Period (min)	15		

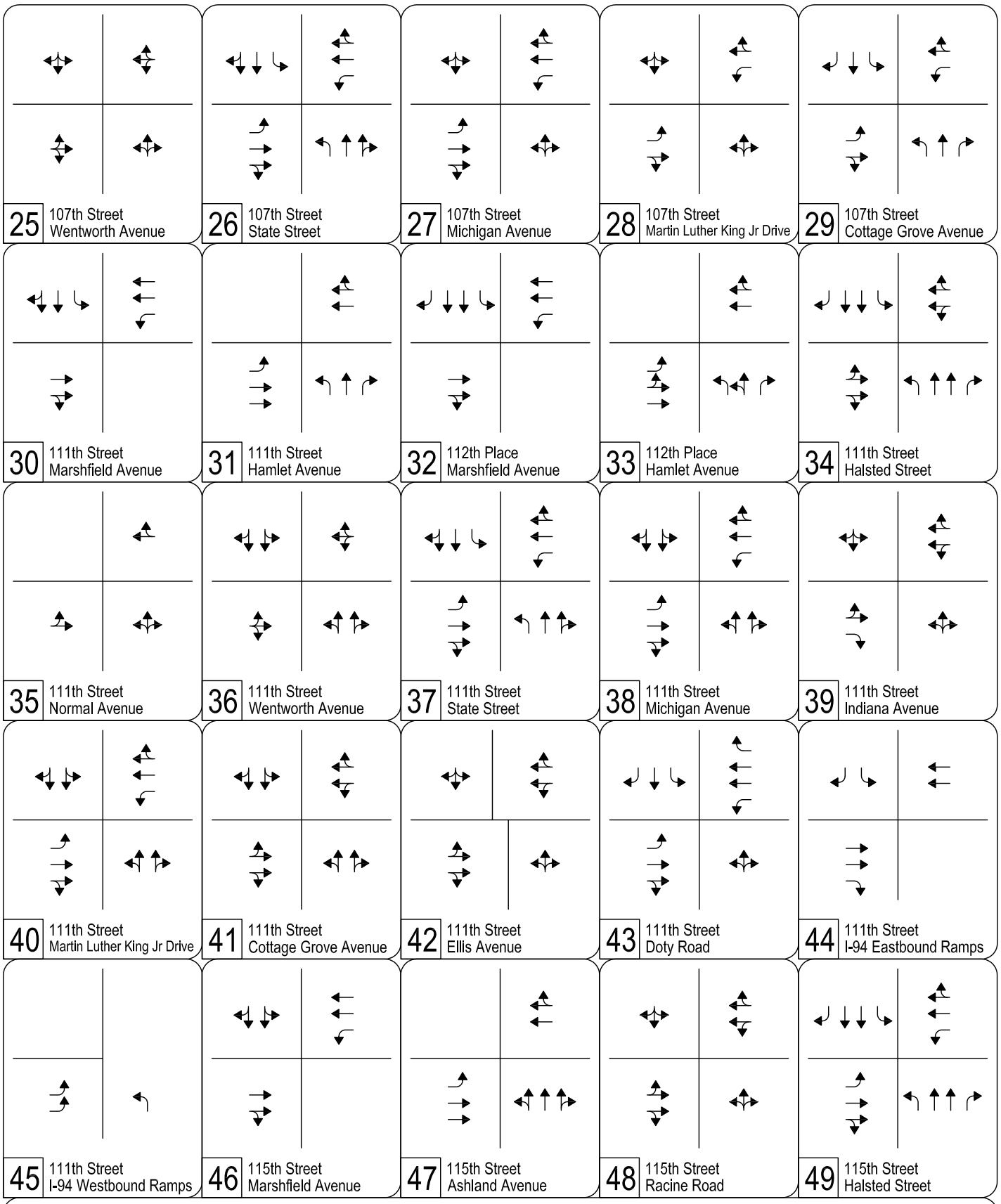
c Critical Lane Group

Appendix B
No Build Alternative



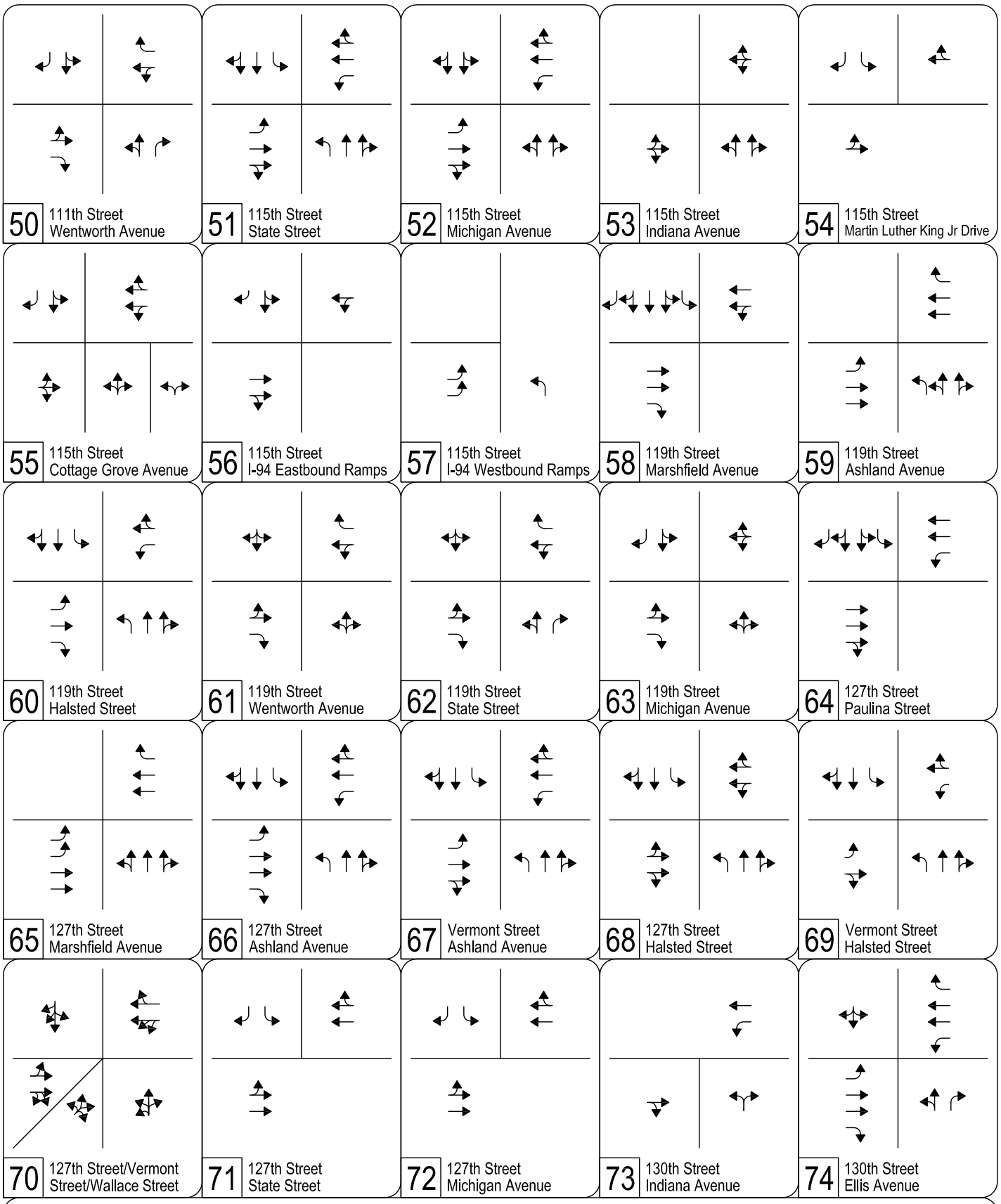
No Build (2026) Intersection Lane Geometry

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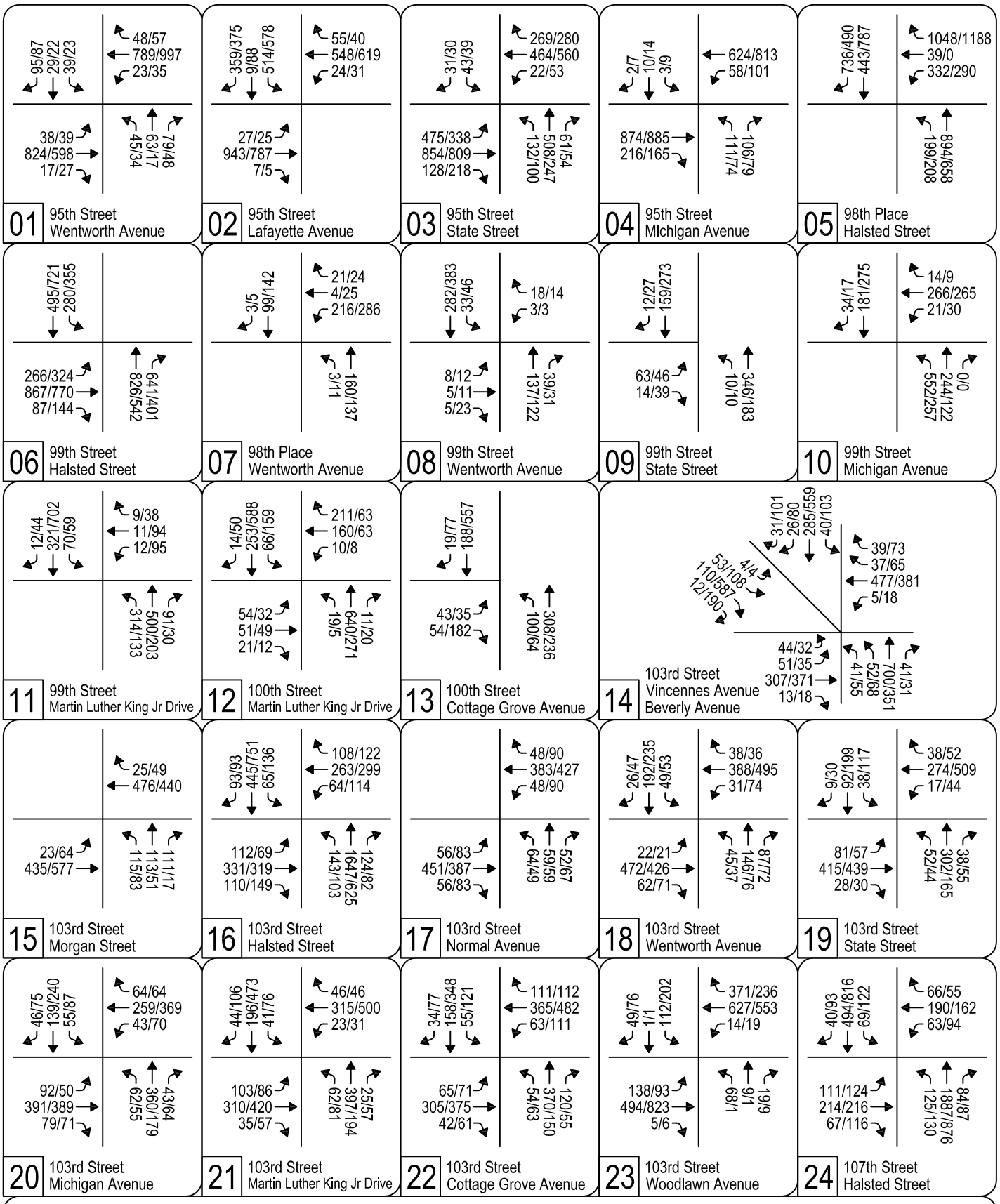
No Build (2026) Intersection Lane Geometry

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No Build (2026) Intersection Lane Geometry

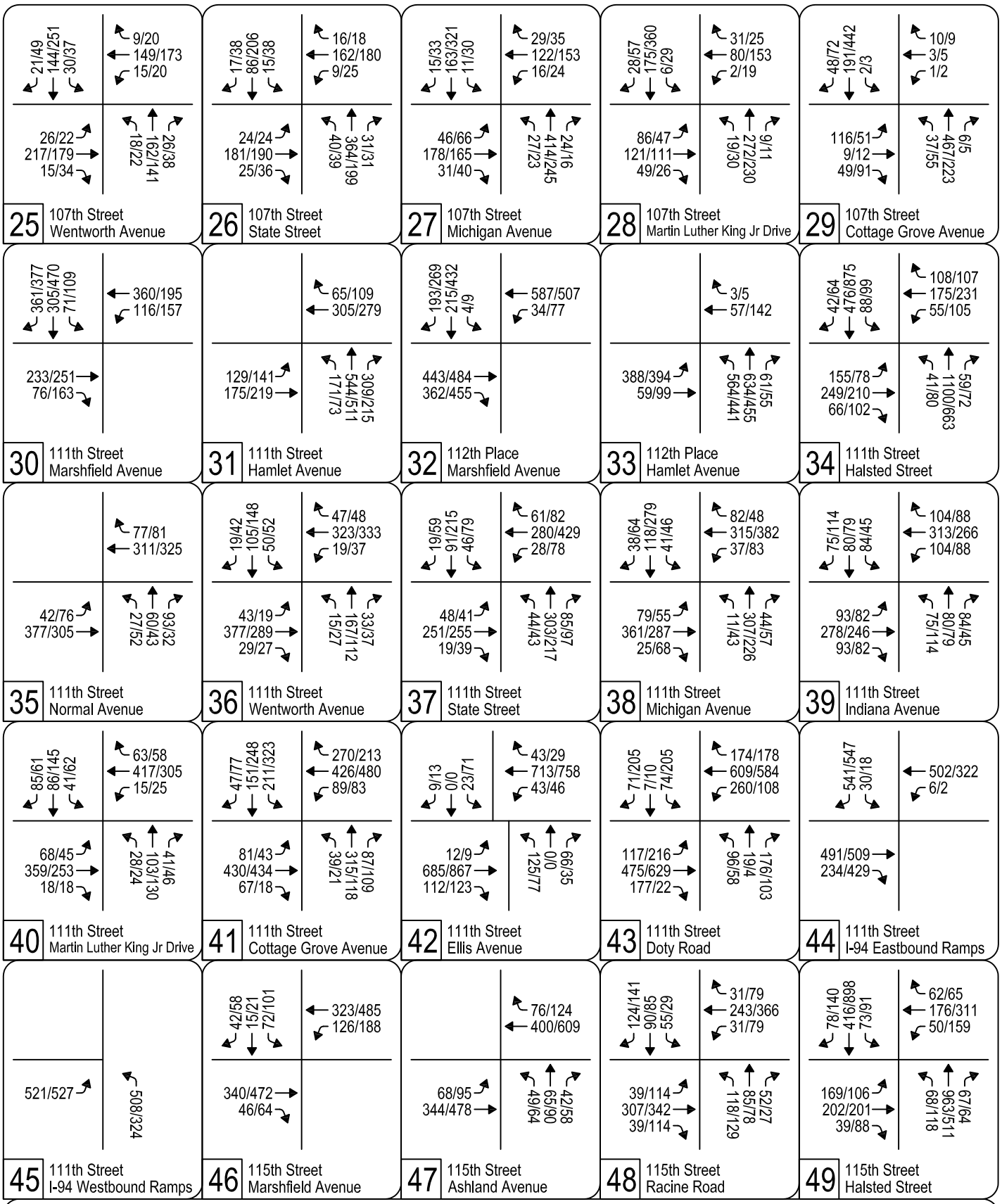
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No Build (2026) Intersection Traffic Volumes

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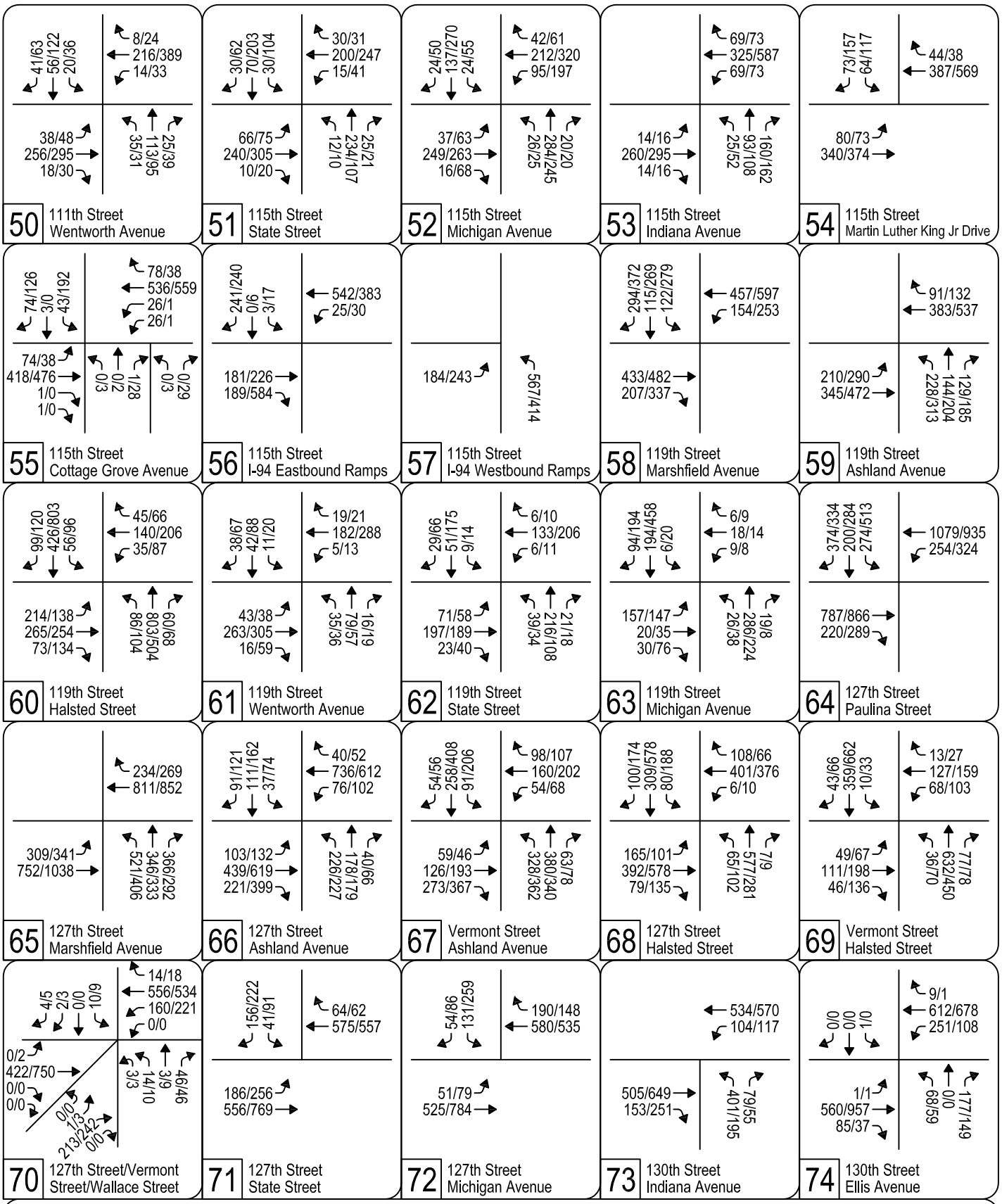
Legend: AM/PM Peak Hour Volumes



No Build (2026) Intersection Traffic Volumes

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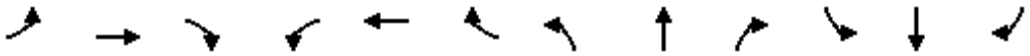
Legend: AM/PM Peak Hour Volumes



No Build (2026) Intersection Traffic Volumes

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Legend: AM/PM Peak Hour Volumes



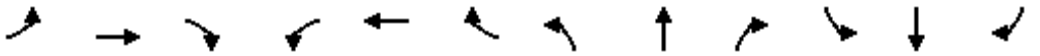
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	38	824	17	23	789	48	45	63	79	39	29	95
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	16	10	10	16	8	15	8	8	14	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			0.99			0.99	
Flpb, ped/bikes	0.98	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	0.99			0.94			0.92	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1416	2976		1592	2978			1752			1663	
Flt Permitted	0.26	1.00		0.26	1.00			0.90			0.90	
Satd. Flow (perm)	384	2976		430	2978			1598			1515	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	40	867	18	24	831	51	47	66	83	41	31	100
RTOR Reduction (vph)	0	2	0	0	7	0	0	41	0	0	63	0
Lane Group Flow (vph)	40	883	0	24	875	0	0	155	0	0	109	0
Confl. Peds. (#/hr)	61		11	11		61	3		5	5		3
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	11%	7%	0%	0%	6%	2%	2%	7%	4%	5%	7%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			22.0			22.0	
Effective Green, g (s)	34.0	34.0		34.0	34.0			23.0			23.0	
Actuated g/C Ratio	0.52	0.52		0.52	0.52			0.35			0.35	
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0			5.0	
Lane Grp Cap (vph)	201	1557		225	1558			565			536	
v/s Ratio Prot		c0.30			0.29							
v/s Ratio Perm	0.10			0.06				c0.10			0.07	
v/c Ratio	0.20	0.57		0.11	0.56			0.27			0.20	
Uniform Delay, d1	8.3	10.5		7.8	10.5			15.0			14.6	
Progression Factor	1.00	1.00		0.81	1.13			1.00			1.00	
Incremental Delay, d2	2.2	1.5		0.8	1.3			1.2			0.9	
Delay (s)	10.5	12.0		7.2	13.1			16.2			15.5	
Level of Service	B	B		A	B			B			B	
Approach Delay (s)		11.9			12.9			16.2			15.5	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	27	943	7	24	548	55	0	0	0	514	9	359
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00				0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.67				1.00	1.00	0.96
Flpb, ped/bikes	0.91	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	776	3285		1710	3138	512				3100	1440	1399
Flt Permitted	0.43	1.00		0.14	1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	355	3285		248	3138	512				3100	1440	1399
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	28	993	7	25	577	58	0	0	0	541	9	378
RTOR Reduction (vph)	0	1	0	0	0	25	0	0	0	0	0	172
Lane Group Flow (vph)	28	999	0	25	577	33	0	0	0	541	9	206
Confl. Peds. (#/hr)	354		13	13		354	22		22	22		22
Confl. Bikes (#/hr)	4					4			1	1		
Heavy Vehicles (%)	100%	4%	0%	0%	9%	100%	0%	0%	0%	7%	25%	5%
Turn Type	pm+pt			pm+pt		Perm				Split		Perm
Protected Phases	7	4		3	8					6	6	
Permitted Phases	4			8		8						6
Actuated Green, G (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Effective Green, g (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Actuated g/C Ratio	0.33	0.33		0.56	0.56	0.56				0.23	0.23	0.23
Clearance Time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Grp Cap (vph)	163	1087		634	1762	288				715	332	323
v/s Ratio Prot	0.02	c0.30		0.01	c0.18					c0.17	0.01	
v/s Ratio Perm	0.04			0.01		0.06						0.15
v/c Ratio	0.17	0.92		0.04	0.33	0.11				0.76	0.03	0.64
Uniform Delay, d1	31.6	41.8		15.1	15.3	13.3				46.6	38.7	45.1
Progression Factor	0.80	0.82		0.30	0.63	1.55				1.00	1.00	1.00
Incremental Delay, d2	2.0	12.2		0.1	0.3	0.5				7.3	0.2	9.2
Delay (s)	27.3	46.7		4.6	10.0	21.2				53.9	38.9	54.3
Level of Service	C	D		A	A	C				D	D	D
Approach Delay (s)		46.2			10.8			0.0			54.0	
Approach LOS		D			B			A			D	

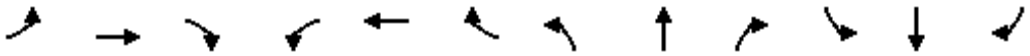
Intersection Summary			
HCM Average Control Delay	40.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	51.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	475	854	128	22	464	269	132	508	61	43	0	31
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.65		1.00	0.94	1.00		0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.98		1.00	1.00	0.85		1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (prot)	3190	3107		1555	2923	944		3300	1417	855		734
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (perm)	3190	3107		1555	2923	944		3300	1417	855		734
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	500	899	135	23	488	283	139	535	64	45	0	33
RTOR Reduction (vph)	0	9	0	0	0	161	0	0	25	0	0	31
Lane Group Flow (vph)	500	1026	0	23	488	122	0	674	39	45	0	2
Confl. Peds. (#/hr)	425		21	21		425	6		34	34		6
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	4%	8%	3%	10%	17%	5%	1%	3%	2%	100%	0%	100%
Turn Type	Prot			Prot		Perm	Split		Perm	Prot		custom
Protected Phases	7	4		3	8		2	2		6		
Permitted Phases						8			2			6
Actuated Green, G (s)	43.0	65.0		9.0	31.0	31.0		30.0	30.0	8.0		8.0
Effective Green, g (s)	43.0	65.0		9.0	31.0	31.0		30.0	30.0	8.0		8.0
Actuated g/C Ratio	0.33	0.50		0.07	0.24	0.24		0.23	0.23	0.06		0.06
Clearance Time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	1055	1554		108	697	225		762	327	53		45
v/s Ratio Prot	0.16	c0.33		0.01	c0.17			c0.20		c0.05		
v/s Ratio Perm						0.13			0.03			0.00
v/c Ratio	0.47	0.66		0.21	0.70	0.54		0.88	0.12	0.85		0.05
Uniform Delay, d1	34.5	24.3		57.2	45.3	43.3		48.3	39.5	60.4		57.4
Progression Factor	0.75	0.19		1.00	1.00	1.00		0.95	0.90	1.00		1.00
Incremental Delay, d2	0.7	1.1		4.5	5.8	9.0		14.1	0.7	70.0		0.4
Delay (s)	26.6	5.7		61.6	51.0	52.3		59.8	36.2	130.4		57.8
Level of Service	C	A		E	D	D		E	D	F		E
Approach Delay (s)		12.5			51.8			57.7			99.7	
Approach LOS		B			D			E			F	

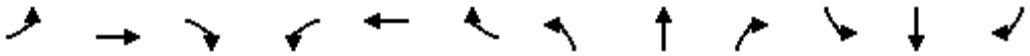
Intersection Summary			
HCM Average Control Delay	35.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	71.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	874	216	58	624	0	111	0	106	3	10	2
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	11	11	8	12	12	12	14	15	12
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes		0.99		1.00	1.00		1.00		0.98	1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00		1.00		1.00	0.99	1.00	
Frt		0.97		1.00	1.00		1.00		0.85	1.00	0.98	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		2860		1650	3005		1390		1465	1803	1934	
Flt Permitted		1.00		0.16	1.00		0.75		1.00	0.95	1.00	
Satd. Flow (perm)		2860		283	3005		1096		1465	1803	1934	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	971	240	64	693	0	123	0	118	3	11	2
RTOR Reduction (vph)	0	22	0	0	0	0	0	0	80	0	1	0
Lane Group Flow (vph)	0	1189	0	64	693	0	123	0	38	3	12	0
Confl. Peds. (#/hr)	49		15	15		49			12	12		
Heavy Vehicles (%)	0%	6%	14%	0%	10%	0%	23%	0%	2%	0%	0%	0%
Turn Type				Perm			custom		custom	Perm		
Protected Phases		4			8						6	
Permitted Phases				8			2		2	6		
Actuated Green, G (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Effective Green, g (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Actuated g/C Ratio		0.60		0.60	0.60		0.32		0.32	0.32	0.32	
Clearance Time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)		1716		170	1803		351		469	577	619	
v/s Ratio Prot		c0.42			0.23						0.01	
v/s Ratio Perm				0.23			c0.11		0.03	0.00		
v/c Ratio		0.69		0.38	0.38		0.35		0.08	0.01	0.02	
Uniform Delay, d1		13.7		10.3	10.4		26.0		23.7	23.2	23.3	
Progression Factor		1.00		1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		2.3		6.3	0.6		2.7		0.3	0.0	0.1	
Delay (s)		16.0		16.6	11.0		28.8		24.1	23.2	23.3	
Level of Service		B		B	B		C		C	C	C	
Approach Delay (s)		16.0			11.5			26.5			23.3	
Approach LOS		B			B			C			C	

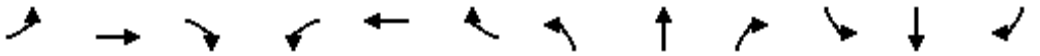
Intersection Summary			
HCM Average Control Delay	15.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	332	39	1048	199	894	0	0	443	736
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	12	10	10	12	12	11	12
Total Lost time (s)				4.0	4.0	5.0	3.0	4.0			4.0	
Lane Util. Factor				0.95	0.95	1.00	1.00	0.91			0.91	
Frpb, ped/bikes				1.00	1.00	0.99	1.00	1.00			0.98	
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00			1.00	
Frt				1.00	1.00	0.85	1.00	1.00			0.91	
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (prot)				1525	1629	1479	1550	4368			3928	
Flt Permitted				0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (perm)				1525	1629	1479	1550	4368			3928	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	339	40	1069	203	912	0	0	452	751
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	339	40	1069	203	912	0	0	1203	0
Confl. Peds. (#/hr)	2					2	12		8	8		12
Heavy Vehicles (%)	0%	0%	0%	3%	5%	2%	3%	5%	0%	0%	5%	8%
Turn Type				Perm		Perm	Prot					
Protected Phases					8		5	2			6	
Permitted Phases				8		8						
Actuated Green, G (s)				30.0	30.0	30.0	32.0	66.0			31.0	
Effective Green, g (s)				31.0	31.0	30.0	32.0	66.0			31.0	
Actuated g/C Ratio				0.30	0.30	0.29	0.30	0.63			0.30	
Clearance Time (s)				5.0	5.0	5.0	3.0	4.0			4.0	
Lane Grp Cap (vph)				450	481	423	472	2746			1160	
v/s Ratio Prot							c0.13	0.21			c0.31	
v/s Ratio Perm				0.22	0.02	c0.72						
v/c Ratio				0.75	0.08	2.53	0.43	0.33			1.87dr	
Uniform Delay, d1				33.5	26.7	37.5	29.2	9.2			37.0	
Progression Factor				1.00	1.00	1.00	0.65	2.37			1.00	
Incremental Delay, d2				11.1	0.3	694.2	2.0	0.2			36.5	
Delay (s)				44.6	27.1	731.7	21.2	21.9			73.5	
Level of Service				D	C	F	C	C			E	
Approach Delay (s)		0.0			551.4			21.8			73.5	
Approach LOS		A			F			C			E	

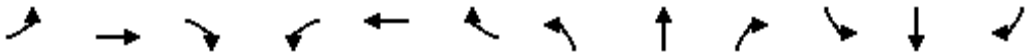
Intersection Summary			
HCM Average Control Delay	241.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.31		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.4%	ICU Level of Service	F
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group



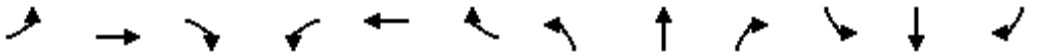
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	266	867	87	0	0	0	0	826	641	280	495	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	13	12	12	12	12	12	10	10	8	12	12	12
Total Lost time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Util. Factor	0.91	0.91						0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00						1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00						1.00	1.00	1.00	1.00	
Frt	1.00	0.99						1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1497	3186						4368	2187	1583	4636	
Flt Permitted	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1497	3186						4368	2187	1583	4636	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	274	894	90	0	0	0	0	852	661	289	510	0
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	247	1004	0	0	0	0	0	852	661	289	510	0
Confl. Peds. (#/hr)	4		14	14		4	4		3	3		4
Heavy Vehicles (%)	7%	1%	0%	0%	0%	0%	0%	5%	4%	8%	6%	0%
Turn Type	Perm								Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Actuated Green, G (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Effective Green, g (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Actuated g/C Ratio	0.32	0.32						0.27	0.27	0.30	0.59	
Clearance Time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Grp Cap (vph)	485	1032						1165	583	467	2737	
v/s Ratio Prot								0.20		c0.18	0.11	
v/s Ratio Perm	0.16	0.32							c0.30			
v/c Ratio	0.51	0.97						0.73	1.13	0.62	0.19	
Uniform Delay, d1	28.7	35.0						35.1	38.5	31.9	9.9	
Progression Factor	1.00	1.00						0.44	0.47	1.06	0.44	
Incremental Delay, d2	3.8	22.2						0.4	62.5	2.5	0.1	
Delay (s)	32.5	57.3						15.7	80.4	36.4	4.4	
Level of Service	C	E						B	F	D	A	
Approach Delay (s)		52.4			0.0			44.0			16.0	
Approach LOS		D			A			D			B	

Intersection Summary			
HCM Average Control Delay	40.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



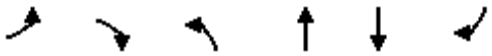
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	216	4	21	3	160	0	0	99	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	14	12	12	16	12
Total Lost time (s)				4.0	4.0		4.0	4.0			-3.0	
Lane Util. Factor				1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes				1.00	0.98		1.00	1.00			1.00	
Flpb, ped/bikes				1.00	1.00		1.00	1.00			1.00	
Frt				1.00	0.87		1.00	1.00			1.00	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1578	2709		1285	1882			1958	
Flt Permitted				0.95	1.00		0.59	1.00			1.00	
Satd. Flow (perm)				1578	2709		805	1882			1958	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	240	4	23	3	178	0	0	110	3
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	240	9	0	3	178	0	0	112	0
Confl. Peds. (#/hr)	2		2	2		2	3					3
Heavy Vehicles (%)	0%	0%	0%	8%	25%	5%	33%	2%	0%	0%	3%	33%
Turn Type				Perm			pm+pt					
Protected Phases					8		7	2			6	
Permitted Phases				8			2					
Actuated Green, G (s)				27.0	27.0		50.0	50.0			40.0	
Effective Green, g (s)				27.0	27.0		50.0	50.0			46.0	
Actuated g/C Ratio				0.32	0.32		0.59	0.59			0.54	
Clearance Time (s)				4.0	4.0		4.0	4.0			3.0	
Lane Grp Cap (vph)				501	861		513	1107			1060	
v/s Ratio Prot					0.00		0.00	c0.09			0.06	
v/s Ratio Perm				c0.15			0.00					
v/c Ratio				0.48	0.01		0.01	0.16			0.11	
Uniform Delay, d1				23.3	19.9		9.7	8.0			9.5	
Progression Factor				1.00	1.00		1.04	1.18			1.00	
Incremental Delay, d2				3.3	0.0		0.0	0.3			0.2	
Delay (s)				26.6	19.9		10.1	9.7			9.7	
Level of Service				C	B		B	A			A	
Approach Delay (s)		0.0			25.9			9.7			9.7	
Approach LOS		A			C			A			A	

Intersection Summary			
HCM Average Control Delay	17.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



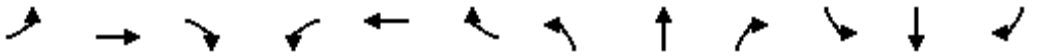
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	8	5	5	3	0	18	0	137	39	33	282	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	16	15	12	8	12	8	12	12	12	10	13	12
Total Lost time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99			1.00			1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00			1.00		1.00	1.00	
Frt	1.00	0.93			0.88			0.97		1.00	1.00	
Flt Protected	0.95	1.00			0.99			1.00		0.95	1.00	
Satd. Flow (prot)	1938	1809			1578			1687		1595	1755	
Flt Permitted	0.74	1.00			0.98			1.00		0.61	1.00	
Satd. Flow (perm)	1516	1809			1565			1687		1022	1755	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	8	5	5	3	0	19	0	144	41	35	297	0
RTOR Reduction (vph)	0	3	0	0	13	0	0	12	0	0	0	0
Lane Group Flow (vph)	8	7	0	0	9	0	0	173	0	35	297	0
Confl. Peds. (#/hr)			3	3			5		2	2		5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	3%	0%	6%	0%
Turn Type	Perm			Perm						pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Effective Green, g (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Actuated g/C Ratio	0.32	0.32			0.32			0.47		0.59	0.59	
Clearance Time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Grp Cap (vph)	482	575			497			794		648	1032	
v/s Ratio Prot		0.00						0.10		0.00	c0.17	
v/s Ratio Perm	0.01				c0.01					0.03		
v/c Ratio	0.02	0.01			0.02			0.22		0.05	0.29	
Uniform Delay, d1	19.9	19.9			19.9			13.3		8.4	8.7	
Progression Factor	1.00	1.00			1.00			1.00		0.92	0.84	
Incremental Delay, d2	0.1	0.0			0.1			0.6		0.2	0.7	
Delay (s)	20.0	19.9			20.0			13.9		7.9	7.9	
Level of Service	B	B			B			B		A	A	
Approach Delay (s)		19.9			20.0			13.9			7.9	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	10.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.19		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



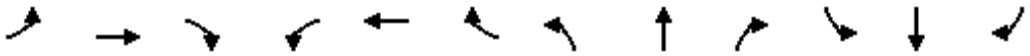
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	63	14	10	346	159	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	14	12	13	12	10	12
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.97		1.00	1.00	0.99	
Flt Protected	0.96		0.95	1.00	1.00	
Satd. Flow (prot)	1791		1767	1765	1634	
Flt Permitted	0.96		0.64	1.00	1.00	
Satd. Flow (perm)	1791		1187	1765	1634	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	70	16	11	384	177	13
RTOR Reduction (vph)	11	0	0	0	4	0
Lane Group Flow (vph)	75	0	11	384	186	0
Confl. Peds. (#/hr)		2				
Heavy Vehicles (%)	0%	0%	0%	2%	2%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.0		36.0	36.0	36.0	
Effective Green, g (s)	21.0		36.0	36.0	36.0	
Actuated g/C Ratio	0.32		0.55	0.55	0.55	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	579		657	978	905	
v/s Ratio Prot	c0.04			c0.22	0.11	
v/s Ratio Perm			0.01			
v/c Ratio	0.13		0.02	0.39	0.21	
Uniform Delay, d1	15.5		6.5	8.3	7.3	
Progression Factor	1.00		0.32	0.51	1.17	
Incremental Delay, d2	0.5		0.0	1.1	0.5	
Delay (s)	16.0		2.1	5.3	9.0	
Level of Service	B		A	A	A	
Approach Delay (s)	16.0			5.2	9.0	
Approach LOS	B			A	A	

Intersection Summary			
HCM Average Control Delay	7.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	39.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	21	266	14	552	244	0	0	181	34
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	14	16	12	12	15	12	12	13	10
Total Lost time (s)					4.0		4.0	4.0			3.0	3.0
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Frt					0.99		1.00	1.00			1.00	0.85
Flt Protected					1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3741		1660	1752			1603	1298
Flt Permitted					1.00		0.59	1.00			1.00	1.00
Satd. Flow (perm)					3741		1025	1752			1603	1298
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	23	296	16	613	271	0	0	201	38
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	0	0	0	21
Lane Group Flow (vph)	0	0	0	0	331	0	613	271	0	0	201	17
Confl. Peds. (#/hr)									30	30		
Heavy Vehicles (%)	0%	0%	0%	11%	2%	0%	3%	13%	0%	0%	16%	10%
Turn Type				Split			pm+pt					Perm
Protected Phases				8	8		7	2			6	
Permitted Phases							2					6
Actuated Green, G (s)					26.0		51.0	51.0			38.0	38.0
Effective Green, g (s)					26.0		51.0	51.0			38.0	38.0
Actuated g/C Ratio					0.31		0.60	0.60			0.45	0.45
Clearance Time (s)					4.0		4.0	4.0			3.0	3.0
Lane Grp Cap (vph)					1144		690	1051			717	580
v/s Ratio Prot					c0.09		c0.10	0.15			0.13	
v/s Ratio Perm							c0.43					0.01
v/c Ratio					0.29		0.89	0.26			0.28	0.03
Uniform Delay, d1					22.5		16.6	8.0			14.9	13.2
Progression Factor					1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2					0.6		15.8	0.6			1.0	0.1
Delay (s)					23.1		32.4	8.6			15.8	13.3
Level of Service					C		C	A			B	B
Approach Delay (s)		0.0			23.1			25.1			15.4	
Approach LOS		A			C			C			B	

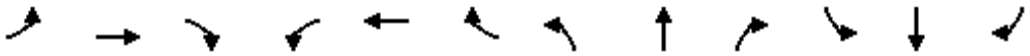
Intersection Summary			
HCM Average Control Delay	23.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	12	11	9	314	500	91	70	321	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	15	12	12	12	12	12	13	12
Total Lost time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.96		1.00	0.98		1.00	0.99	
Flt Protected					0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1794		1691	3237		1707	3352	
Flt Permitted					0.98		0.52	1.00		0.33	1.00	
Satd. Flow (perm)					1794		919	3237		600	3352	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	13	12	10	349	556	101	78	357	13
RTOR Reduction (vph)	0	0	0	0	7	0	0	20	0	0	3	0
Lane Group Flow (vph)	0	0	0	0	28	0	349	637	0	78	367	0
Confl. Peds. (#/hr)	2					2	6		20	20		6
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	0%	0%	0%	11%	0%	1%	3%	0%	0%	5%	0%
Turn Type				Split			pm+pt			pm+pt		
Protected Phases				8	8		5	2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)					23.0		41.0	34.0		41.0	34.0	
Effective Green, g (s)					23.0		41.0	34.0		41.0	34.0	
Actuated g/C Ratio					0.31		0.55	0.45		0.55	0.45	
Clearance Time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Grp Cap (vph)					550		574	1467		431	1520	
v/s Ratio Prot					c0.02		c0.06	0.20		0.02	0.11	
v/s Ratio Perm							c0.28			0.08		
v/c Ratio					0.05		0.61	0.43		0.18	0.24	
Uniform Delay, d1					18.3		12.9	14.0		11.8	12.6	
Progression Factor					1.00		0.71	0.73		1.00	1.00	
Incremental Delay, d2					0.2		4.4	0.9		0.9	0.4	
Delay (s)					18.5		13.6	11.0		12.7	13.0	
Level of Service					B		B	B		B	B	
Approach Delay (s)		0.0			18.5			11.9			12.9	
Approach LOS		A			B			B			B	

Intersection Summary			
HCM Average Control Delay	12.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	55.0%	ICU Level of Service	B
Analysis Period (min)	15		

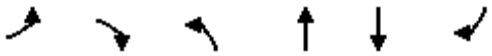
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	54	51	21	10	160	211	19	640	11	66	253	14
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	16	12	12	10	11	12	12	11	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.93		1.00	1.00		1.00	0.99	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1949			1626		1596	3232		1641	3131	
Flt Permitted		0.71			0.99		0.58	1.00		0.35	1.00	
Satd. Flow (perm)		1411			1617		973	3232		606	3131	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	57	54	22	11	168	222	20	674	12	69	266	15
RTOR Reduction (vph)	0	9	0	0	59	0	0	2	0	0	5	0
Lane Group Flow (vph)	0	124	0	0	342	0	20	684	0	69	276	0
Confl. Peds. (#/hr)									6	6		
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	0%	0%	12%	2%	2%	0%	2%	0%	4%	5%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Effective Green, g (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Actuated g/C Ratio		0.33			0.33		0.56	0.56		0.56	0.56	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		470			539		545	1810		339	1753	
v/s Ratio Prot								c0.21			0.09	
v/s Ratio Perm		0.09			c0.21		0.02			0.11		
v/c Ratio		0.26			0.63		0.04	0.38		0.20	0.16	
Uniform Delay, d1		18.3			21.1		7.4	9.2		8.2	8.0	
Progression Factor		1.00			1.00		1.00	1.00		0.15	0.05	
Incremental Delay, d2		1.4			5.6		0.1	0.6		1.3	0.2	
Delay (s)		19.6			26.7		7.5	9.8		2.5	0.6	
Level of Service		B			C		A	A		A	A	
Approach Delay (s)		19.6			26.7			9.7			1.0	
Approach LOS		B			C			A			A	

Intersection Summary			
HCM Average Control Delay	12.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.7%	ICU Level of Service	C
Analysis Period (min)	15		

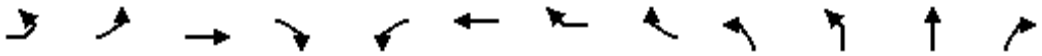
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	43	54	100	308	188	19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	48	60	111	342	209	21

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	108	225	228	139	91
Volume Left (vph)	48	111	0	0	0
Volume Right (vph)	60	0	0	0	21
Hadj (s)	-0.16	0.33	0.09	0.09	-0.08
Departure Headway (s)	5.2	5.4	5.1	5.3	5.2
Degree Utilization, x	0.16	0.34	0.32	0.21	0.13
Capacity (veh/h)	635	657	688	648	668
Control Delay (s)	9.2	9.8	9.3	8.5	7.8
Approach Delay (s)	9.2	9.6		8.2	
Approach LOS	A	A		A	

Intersection Summary			
Delay	9.1		
HCM Level of Service	A		
Intersection Capacity Utilization	34.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	44	51	307	13	5	477	37	39	41	52	700	41
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	0.95	
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.97			1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Frt		1.00	1.00	0.85	1.00	1.00	0.85			1.00	0.99	
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	
Satd. Flow (prot)		1575	1731	1530	1710	1731	1487			1710	3292	
Flt Permitted		0.11	1.00	1.00	0.56	1.00	1.00			0.41	1.00	
Satd. Flow (perm)		187	1731	1530	1000	1731	1487			737	3292	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	49	57	341	14	6	530	41	43	46	58	778	46
RTOR Reduction (vph)	0	0	0	7	0	0	30	0	0	0	4	0
Lane Group Flow (vph)	0	106	341	7	6	530	54	0	0	104	820	0
Confl. Peds. (#/hr)		5					5					6
Heavy Vehicles (%)	8%	9%	4%	0%	0%	4%	0%	0%	0%	0%	3%	0%
Turn Type	Perm	pm+pt		Perm	Perm		Perm		Perm	Perm		
Protected Phases		7	4			8					2	
Permitted Phases	4	4		4	8		8		2	2		
Actuated Green, G (s)		50.0	50.0	50.0	32.0	32.0	32.0			25.0	25.0	
Effective Green, g (s)		50.0	50.0	50.0	32.0	32.0	32.0			25.0	25.0	
Actuated g/C Ratio		0.48	0.48	0.48	0.30	0.30	0.30			0.24	0.24	
Clearance Time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Grp Cap (vph)		281	824	729	305	528	453			175	784	
v/s Ratio Prot		0.05	c0.20			c0.31					c0.25	
v/s Ratio Perm		0.13		0.00	0.01		0.04			0.14		
v/c Ratio		0.38	0.41	0.01	0.02	1.00	0.12			0.59	1.05	
Uniform Delay, d1		20.1	17.9	14.5	25.5	36.5	26.3			35.5	40.0	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Incremental Delay, d2		3.8	1.5	0.0	0.1	40.1	0.5			14.0	44.9	
Delay (s)		24.0	19.5	14.5	25.6	76.6	26.9			49.5	84.9	
Level of Service		C	B	B	C	E	C			D	F	
Approach Delay (s)			20.4			69.4					80.9	
Approach LOS			C			E					F	

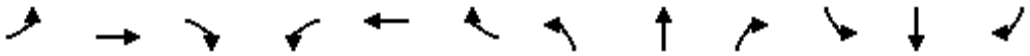
Intersection Summary			
HCM Average Control Delay	58.1	HCM Level of Service	E
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	78.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations								
Volume (vph)	40	285	26	31	4	53	110	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5				4.5	4.5	
Lane Util. Factor	1.00	0.95				1.00	0.88	
Frpb, ped/bikes	1.00	1.00				1.00	1.00	
Flpb, ped/bikes	1.00	1.00				1.00	1.00	
Frt	1.00	0.98				1.00	0.85	
Flt Protected	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1706	3280				1710	2622	
Flt Permitted	0.16	1.00				0.95	1.00	
Satd. Flow (perm)	293	3280				1710	2622	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	44	317	29	34	4	59	122	13
RTOR Reduction (vph)	0	7	0	0	0	0	7	0
Lane Group Flow (vph)	44	373	0	0	0	63	128	0
Confl. Peds. (#/hr)	6							
Heavy Vehicles (%)	0%	2%	0%	0%	0%	0%	3%	0%
Turn Type	Perm				Split		Perm	
Protected Phases		6			9	9		
Permitted Phases	6						9	
Actuated Green, G (s)	24.5	24.5				17.5	17.5	
Effective Green, g (s)	24.5	24.5				17.5	17.5	
Actuated g/C Ratio	0.23	0.23				0.17	0.17	
Clearance Time (s)	4.5	4.5				4.5	4.5	
Lane Grp Cap (vph)	68	765				285	437	
v/s Ratio Prot		0.11				0.04		
v/s Ratio Perm	0.15						c0.05	
v/c Ratio	0.65	0.49				0.22	0.29	
Uniform Delay, d1	36.3	34.8				37.9	38.3	
Progression Factor	1.00	1.00				1.00	1.00	
Incremental Delay, d2	39.0	2.2				1.8	1.7	
Delay (s)	75.3	37.0				39.6	40.0	
Level of Service	E	D				D	D	
Approach Delay (s)		41.0				39.9		
Approach LOS		D				D		

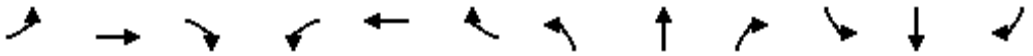
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	435	0	0	476	25	115	113	111	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	11	11	16	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.99			0.96				
Flt Protected		1.00			1.00			0.98				
Satd. Flow (prot)		1653			1930			1773				
Flt Permitted		0.96			1.00			0.98				
Satd. Flow (perm)		1596			1930			1773				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	26	483	0	0	529	28	128	126	123	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	509	0	0	557	0	0	377	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		31.0			31.0			26.0				
Effective Green, g (s)		31.0			31.0			26.0				
Actuated g/C Ratio		0.48			0.48			0.40				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		761			920			709				
v/s Ratio Prot					0.29							
v/s Ratio Perm		c0.32						0.21				
v/c Ratio		0.67			0.61			0.53				
Uniform Delay, d1		13.1			12.5			14.9				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		4.6			3.0			2.8				
Delay (s)		17.7			15.5			17.7				
Level of Service		B			B			B				
Approach Delay (s)		17.7			15.5			17.7			0.0	
Approach LOS		B			B			B			A	

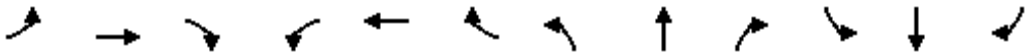
Intersection Summary			
HCM Average Control Delay	16.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	70.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	112	331	110	64	263	108	143	1647	124	65	445	93
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	9	9	10	9
Total Lost time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.96	1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1919	1426		1923	1396	1500	3099	1284	1425	2956	1265
Flt Permitted		0.67	1.00		0.65	1.00	0.40	1.00	1.00	0.09	1.00	1.00
Satd. Flow (perm)		1293	1426		1267	1396	625	3099	1284	142	2956	1265
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	118	348	116	67	277	114	151	1734	131	68	468	98
RTOR Reduction (vph)	0	0	68	0	0	67	0	0	29	0	0	59
Lane Group Flow (vph)	0	466	48	0	344	47	151	1734	102	68	468	39
Confl. Peds. (#/hr)	42		39	39		42	20		8	8		20
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	6%	4%	3%	0%	6%	5%	6%	3%	4%	8%	8%	4%
Turn Type	pm+pt		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		43.0	43.0		43.0	43.0	53.1	44.4	44.4	48.9	42.3	42.3
Effective Green, g (s)		43.0	43.0		43.0	43.0	53.1	44.4	44.4	48.9	42.3	42.3
Actuated g/C Ratio		0.41	0.41		0.41	0.41	0.51	0.42	0.42	0.47	0.40	0.40
Clearance Time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		530	584		519	572	389	1310	543	147	1191	510
v/s Ratio Prot							c0.03	c0.56		c0.03	0.16	
v/s Ratio Perm		c0.36	0.03		0.27	0.03	0.16		0.08	0.19		0.03
v/c Ratio		0.88	0.08		0.66	0.08	0.39	1.32	0.19	0.46	0.39	0.08
Uniform Delay, d1		28.6	18.9		25.1	18.9	14.6	30.3	19.0	23.1	22.2	19.3
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.09	0.78	0.45
Incremental Delay, d2		15.3	0.3		6.5	0.3	0.6	151.1	0.8	2.2	0.9	0.3
Delay (s)		43.9	19.2		31.7	19.2	15.3	181.4	19.8	27.3	18.3	9.0
Level of Service		D	B		C	B	B	F	B	C	B	A
Approach Delay (s)		39.0			28.6			158.4			17.8	
Approach LOS		D			C			F			B	

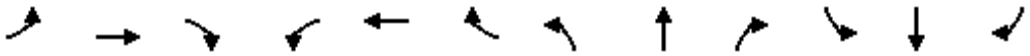
Intersection Summary			
HCM Average Control Delay	99.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	108.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	56	451	56	48	383	48	64	59	52	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		0.99			0.99			0.96				
Flt Protected		1.00			1.00			0.98				
Satd. Flow (prot)		1627			1627			1778				
Flt Permitted		0.92			0.91			0.98				
Satd. Flow (perm)		1496			1484			1778				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	62	501	62	53	426	53	71	66	58	0	0	0
RTOR Reduction (vph)	0	6	0	0	6	0	0	23	0	0	0	0
Lane Group Flow (vph)	0	619	0	0	526	0	0	172	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		38.0			38.0			19.0				
Effective Green, g (s)		38.0			38.0			19.0				
Actuated g/C Ratio		0.58			0.58			0.29				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		875			868			520				
v/s Ratio Prot												
v/s Ratio Perm		c0.41			0.35			0.10				
v/c Ratio		0.71			0.61			0.33				
Uniform Delay, d1		9.6			8.7			18.0				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		4.8			3.1			1.7				
Delay (s)		14.4			11.8			19.7				
Level of Service		B			B			B				
Approach Delay (s)		14.4			11.8			19.7			0.0	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	14.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.1%	ICU Level of Service	B
Analysis Period (min)	15		

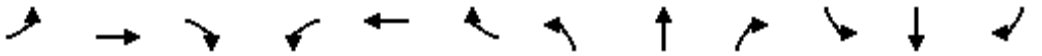
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	22	472	62	31	388	38	45	146	87	49	192	26
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	11	12	12	15	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.97		1.00	0.95		1.00	0.98		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		0.99	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.99	
Flt Protected		1.00	1.00		1.00	1.00		0.99	1.00		0.99	
Satd. Flow (prot)		1656	1255		1634	1288		1663	1490		1776	
Flt Permitted		0.97	1.00		0.95	1.00		0.89	1.00		0.91	
Satd. Flow (perm)		1618	1255		1552	1288		1499	1490		1636	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	23	497	65	33	408	40	47	154	92	52	202	27
RTOR Reduction (vph)	0	0	28	0	0	17	0	0	63	0	5	0
Lane Group Flow (vph)	0	520	37	0	441	23	0	201	29	0	276	0
Confl. Peds. (#/hr)	33		15	15		33	68		5	5		68
Confl. Bikes (#/hr)	4					4						
Heavy Vehicles (%)	0%	5%	14%	19%	5%	9%	2%	2%	1%	10%	7%	8%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Effective Green, g (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.32	0.32		0.32	
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Grp Cap (vph)		928	720		890	738		480	477		524	
v/s Ratio Prot												
v/s Ratio Perm		c0.32	0.03		0.28	0.02		0.13	0.02		c0.17	
v/c Ratio		0.56	0.05		0.50	0.03		0.42	0.06		0.53	
Uniform Delay, d1		10.1	7.0		9.5	7.0		20.0	17.7		20.8	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		2.4	0.1		2.0	0.1		2.7	0.2		3.7	
Delay (s)		12.5	7.2		11.5	7.0		22.7	17.9		24.6	
Level of Service		B	A		B	A		C	B		C	
Approach Delay (s)		11.9			11.1			21.2			24.6	
Approach LOS		B			B			C			C	

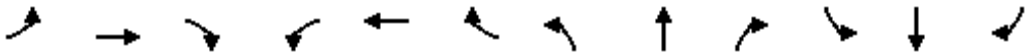
Intersection Summary			
HCM Average Control Delay	15.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	87.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	81	415	28	17	274	38	52	302	38	38	92	9
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	11	16	8	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.98	1.00	1.00	0.99
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1462	2990		1459	3528		1534	1647	1301	1517	1541	1156
Flt Permitted	0.54	1.00		0.45	1.00		0.69	1.00	1.00	0.45	1.00	1.00
Satd. Flow (perm)	838	2990		685	3528		1116	1647	1301	722	1541	1156
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	90	461	31	19	304	42	58	336	42	42	102	10
RTOR Reduction (vph)	0	7	0	0	17	0	0	0	22	0	0	6
Lane Group Flow (vph)	90	485	0	19	329	0	58	336	20	42	102	4
Confl. Peds. (#/hr)	16		9	9		16	1		5	5		1
Heavy Vehicles (%)	8%	6%	0%	13%	8%	3%	4%	2%	8%	5%	9%	22%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Effective Green, g (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	400	1426		327	1683		446	659	520	289	616	462
v/s Ratio Prot		c0.16			0.09			c0.20			0.07	
v/s Ratio Perm	0.11			0.03			0.05		0.02	0.06		0.00
v/c Ratio	0.23	0.34		0.06	0.20		0.13	0.51	0.04	0.15	0.17	0.01
Uniform Delay, d1	10.0	10.6		9.1	9.8		12.3	14.7	11.9	12.4	12.5	11.7
Progression Factor	1.00	1.00		1.00	1.00		0.64	0.78	0.37	0.52	0.52	0.28
Incremental Delay, d2	1.3	0.6		0.3	0.3		0.6	2.8	0.1	1.0	0.6	0.0
Delay (s)	11.3	11.3		9.5	10.1		8.5	14.2	4.5	7.5	7.1	3.4
Level of Service	B	B		A	B		A	B	A	A	A	A
Approach Delay (s)		11.3			10.0			12.5			7.0	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	10.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

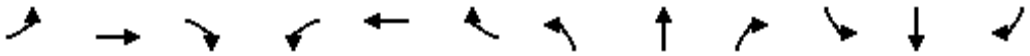


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	92	391	79	43	259	64	62	360	43	55	139	46
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	11	10	11	11	10	11	11	10	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.96	1.00		0.99	1.00		0.98	1.00		0.97	1.00	
Frt	1.00	0.97		1.00	0.97		1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1462	3059		1588	3001		1540	3021		1402	2789	
Flt Permitted	0.54	1.00		0.44	1.00		0.63	1.00		0.47	1.00	
Satd. Flow (perm)	835	3059		730	3001		1021	3021		691	2789	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	97	412	83	45	273	67	65	379	45	58	146	48
RTOR Reduction (vph)	0	0	0	0	0	0	0	12	0	0	28	0
Lane Group Flow (vph)	97	495	0	45	340	0	65	412	0	58	166	0
Confl. Peds. (#/hr)	98		10	10		98	28		52	52		28
Heavy Vehicles (%)	5%	5%	4%	0%	5%	7%	2%	6%	13%	10%	11%	20%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.41	0.41		0.41	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	401	1468		350	1440		422	1249		286	1153	
v/s Ratio Prot		c0.16			0.11			c0.14			0.06	
v/s Ratio Perm	0.12			0.06			0.06			0.08		
v/c Ratio	0.24	0.34		0.13	0.24		0.15	0.33		0.20	0.14	
Uniform Delay, d1	11.5	12.1		10.8	11.4		13.8	14.9		14.1	13.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.4	0.6		0.8	0.4		0.8	0.7		1.6	0.3	
Delay (s)	12.9	12.7		11.6	11.8		14.6	15.6		15.7	14.0	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		12.7			11.8			15.5			14.4	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	49.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	103	310	35	23	315	46	62	397	25	41	196	44
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	8	16	12	9	10	10	9	10	10
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1533	1576		1473	1841		1533	3073		1372	2892	
Flt Permitted	0.46	1.00		0.48	1.00		0.60	1.00		0.43	1.00	
Satd. Flow (perm)	742	1576		748	1841		961	3073		622	2892	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	108	326	37	24	332	48	65	418	26	43	206	46
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	108	363	0	24	380	0	65	444	0	43	252	0
Confl. Peds. (#/hr)	7		23	23		7	10		8	8		10
Confl. Bikes (#/hr)	1		2	2		1	1		1	1		1
Heavy Vehicles (%)	4%	8%	10%	0%	9%	5%	0%	3%	0%	12%	7%	6%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	47.0	41.8		40.6	38.6		26.8	22.2		23.6	20.6	
Effective Green, g (s)	47.0	39.8		40.6	36.6		26.8	20.2		23.6	18.6	
Actuated g/C Ratio	0.55	0.47		0.48	0.43		0.32	0.24		0.28	0.22	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	459	738		374	793		334	730		199	633	
v/s Ratio Prot	c0.01	c0.23		0.00	0.21		c0.01	c0.14		0.01	0.09	
v/s Ratio Perm	0.12			0.03			0.05			0.05		
v/c Ratio	0.24	0.49		0.06	0.48		0.19	0.61		0.22	0.40	
Uniform Delay, d1	13.0	15.6		14.4	17.4		21.4	28.9		25.7	28.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	2.3		0.1	2.1		0.3	3.7		0.5	1.9	
Delay (s)	13.2	18.0		14.5	19.4		21.7	32.6		26.2	30.3	
Level of Service	B	B		B	B		C	C		C	C	
Approach Delay (s)		16.9			19.1			31.2			29.7	
Approach LOS		B			B			C			C	

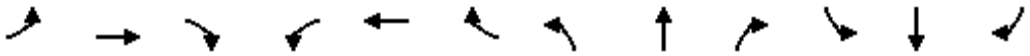
Intersection Summary			
HCM Average Control Delay	24.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	65	305	42	63	365	111	54	370	120	55	158	34
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	11	11	11	11	12	12	10	10	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		0.99	1.00	
Frt		0.98			0.97		1.00	0.96		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3493			2911		1614	3156		1580	2926	
Flt Permitted		0.79			0.85		0.62	1.00		0.40	1.00	
Satd. Flow (perm)		2786			2478		1049	3156		658	2926	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	72	339	47	70	406	123	60	411	133	61	176	38
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	458	0	0	599	0	60	544	0	61	214	0
Confl. Peds. (#/hr)	20		16	16		20	5		33	33		5
Confl. Bikes (#/hr)	2					2			2	2		
Heavy Vehicles (%)	9%	9%	0%	24%	7%	6%	2%	4%	2%	0%	5%	9%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.0			33.0		32.0	32.0		32.0	32.0	
Effective Green, g (s)		34.0			34.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio		0.45			0.45		0.44	0.44		0.44	0.44	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		1263			1123		462	1389		290	1287	
v/s Ratio Prot								c0.17			0.07	
v/s Ratio Perm		0.16			c0.24		0.06			0.09		
v/c Ratio		0.36			0.53		0.13	0.39		0.21	0.17	
Uniform Delay, d1		13.4			14.8		12.5	14.2		13.0	12.7	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.8			1.8		0.6	0.8		1.6	0.3	
Delay (s)		14.2			16.6		13.1	15.0		14.6	13.0	
Level of Service		B			B		B	B		B	B	
Approach Delay (s)		14.2			16.6			14.8			13.3	
Approach LOS		B			B			B			B	

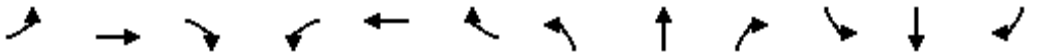
Intersection Summary			
HCM Average Control Delay	15.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	138	494	5	14	627	371	68	9	19	112	1	49
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	12	12	12	12	12	13	13	13
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	1.00		1.00	1.00	0.85		0.97			0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97			0.97	
Satd. Flow (prot)	1574	3143		1629	3257	1457		1612			3106	
Flt Permitted	0.37	1.00		0.44	1.00	1.00		0.70			0.75	
Satd. Flow (perm)	609	3143		749	3257	1457		1174			2411	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	153	549	6	16	697	412	76	10	21	124	1	54
RTOR Reduction (vph)	0	1	0	0	0	143	0	12	0	0	41	0
Lane Group Flow (vph)	153	554	0	16	697	269	0	95	0	0	138	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	46.0	46.0		46.0	46.0	46.0		16.4			16.4	
Effective Green, g (s)	46.0	46.0		46.0	46.0	46.0		16.4			16.4	
Actuated g/C Ratio	0.65	0.65		0.65	0.65	0.65		0.23			0.23	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		8.0			8.0	
Lane Grp Cap (vph)	398	2054		489	2128	952		273			562	
v/s Ratio Prot		0.18			0.21							
v/s Ratio Perm	c0.25			0.02		0.18		c0.08			0.06	
v/c Ratio	0.38	0.27		0.03	0.33	0.28		0.35			0.24	
Uniform Delay, d1	5.6	5.1		4.3	5.4	5.2		22.5			22.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	2.8	0.3		0.1	0.4	0.7		3.3			1.0	
Delay (s)	8.4	5.5		4.4	5.8	5.9		25.8			22.9	
Level of Service	A	A		A	A	A		C			C	
Approach Delay (s)		6.1			5.8			25.8			22.9	
Approach LOS		A			A			C			C	

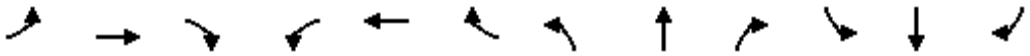
Intersection Summary			
HCM Average Control Delay	8.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	70.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	111	214	67	63	190	66	125	1887	84	69	494	40
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	9	12	10	10	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.96	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.96		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1548	1505		1547	1589		1493	3069	1271	1452	2983	1301
Flt Permitted	0.38	1.00		0.34	1.00		0.39	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	625	1505		547	1589		617	3069	1271	180	2983	1301
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	117	225	71	66	200	69	132	1986	88	73	520	42
RTOR Reduction (vph)	0	13	0	0	15	0	0	0	18	0	0	25
Lane Group Flow (vph)	117	283	0	66	254	0	132	1986	70	73	520	17
Confl. Peds. (#/hr)	4		9	9		4	6		16	16		6
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	3%	3%	4%	3%	1%	2%	3%	4%	4%	6%	7%	3%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	28.0	21.0		28.0	21.0		42.0	35.0	35.0	42.0	35.0	35.0
Effective Green, g (s)	26.0	22.0		26.0	22.0		40.0	35.0	35.0	40.0	35.0	35.0
Actuated g/C Ratio	0.31	0.26		0.31	0.26		0.47	0.41	0.41	0.47	0.41	0.41
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	256	390		238	411		352	1264	523	174	1228	536
v/s Ratio Prot	c0.03	c0.19		0.02	0.16		0.03	c0.65		c0.03	0.17	
v/s Ratio Perm	0.11			0.07			0.15		0.06	0.17		0.01
v/c Ratio	0.46	0.72		0.28	0.62		0.38	1.57	0.13	0.42	0.42	0.03
Uniform Delay, d1	22.5	28.7		21.8	27.8		13.2	25.0	15.6	18.1	17.8	14.9
Progression Factor	1.00	1.00		1.00	1.00		0.61	0.70	0.48	1.00	1.00	1.00
Incremental Delay, d2	5.8	11.1		2.9	6.8		2.6	260.3	0.4	7.3	1.1	0.1
Delay (s)	28.3	39.9		24.7	34.6		10.7	277.7	7.9	25.4	18.9	15.0
Level of Service	C	D		C	C		B	F	A	C	B	B
Approach Delay (s)		36.6			32.7			250.9			19.4	
Approach LOS		D			C			F			B	

Intersection Summary			
HCM Average Control Delay	164.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	93.8%	ICU Level of Service	F
Analysis Period (min)	15		

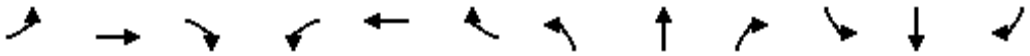
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	26	217	15	15	149	9	18	162	26	30	144	21
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	14	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.99			0.98			0.99	
Flt Protected		0.99			1.00			1.00			0.99	
Satd. Flow (prot)		1852			1848			1902			1931	
Flt Permitted		0.96			0.97			0.97			0.94	
Satd. Flow (perm)		1795			1800			1856			1832	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	27	224	15	15	154	9	19	167	27	31	148	22
RTOR Reduction (vph)	0	4	0	0	3	0	0	8	0	0	7	0
Lane Group Flow (vph)	0	262	0	0	175	0	0	205	0	0	194	0
Confl. Peds. (#/hr)	5		11	11		5	7		34	34		7
Confl. Bikes (#/hr)			3	3								
Heavy Vehicles (%)	4%	2%	0%	20%	1%	0%	12%	3%	8%	0%	3%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.42			0.42			0.46			0.46	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		746			748			857			846	
v/s Ratio Prot												
v/s Ratio Perm		c0.15			0.10			c0.11			0.11	
v/c Ratio		0.35			0.23			0.24			0.23	
Uniform Delay, d1		13.0			12.3			10.6			10.5	
Progression Factor		1.00			0.59			1.07			1.00	
Incremental Delay, d2		1.3			0.7			0.6			0.6	
Delay (s)		14.3			8.0			12.0			11.2	
Level of Service		B			A			B			B	
Approach Delay (s)		14.3			8.0			12.0			11.2	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	11.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	44.5%	ICU Level of Service	A
Analysis Period (min)	15		

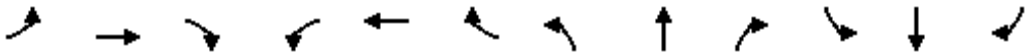
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	181	25	9	162	16	40	364	31	15	86	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.95	1.00		1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1465	3012		1302	3049		1529	3094		1492	2868	
Flt Permitted	0.63	1.00		0.61	1.00		0.68	1.00		0.50	1.00	
Satd. Flow (perm)	967	3012		835	3049		1093	3094		781	2868	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	201	28	10	180	18	44	404	34	17	96	19
RTOR Reduction (vph)	0	17	0	0	11	0	0	10	0	0	8	0
Lane Group Flow (vph)	27	212	0	10	187	0	44	428	0	17	107	0
Confl. Peds. (#/hr)	35		6	6		35	18					18
Confl. Bikes (#/hr)	14		32	32		14	23		7	7		23
Heavy Vehicles (%)	4%	4%	0%	22%	2%	6%	3%	2%	0%	7%	8%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0		39.0	39.0		39.0	39.0	
Effective Green, g (s)	19.0	19.0		19.0	19.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.58	0.58		0.58	0.58	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	283	880		244	891		639	1809		457	1677	
v/s Ratio Prot		c0.07			0.06			c0.14			0.04	
v/s Ratio Perm	0.03			0.01			0.04			0.02		
v/c Ratio	0.10	0.24		0.04	0.21		0.07	0.24		0.04	0.06	
Uniform Delay, d1	16.7	17.5		16.5	17.3		5.8	6.5		5.7	5.8	
Progression Factor	0.71	0.72		0.74	0.72		0.89	0.94		0.50	0.46	
Incremental Delay, d2	0.6	0.6		0.3	0.5		0.2	0.3		0.2	0.1	
Delay (s)	12.6	13.2		12.5	13.0		5.4	6.4		3.0	2.7	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		13.2			13.0			6.3			2.8	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	8.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.0%	ICU Level of Service	A
Analysis Period (min)	15		

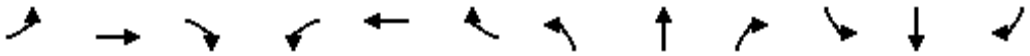
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	46	178	31	16	122	29	27	414	24	11	163	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	9	9	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.98		1.00	0.97			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1555	2962		1515	2886			1878			1805	
Flt Permitted	0.65	1.00		0.61	1.00			0.98			0.97	
Satd. Flow (perm)	1057	2962		968	2886			1840			1758	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	51	198	34	18	136	32	30	460	27	12	181	17
RTOR Reduction (vph)	0	20	0	0	19	0	0	3	0	0	5	0
Lane Group Flow (vph)	51	212	0	18	149	0	0	514	0	0	205	0
Confl. Peds. (#/hr)	10		29	29		10	17		10	10		17
Confl. Bikes (#/hr)									2	2		
Heavy Vehicles (%)	2%	4%	10%	0%	4%	0%	0%	8%	4%	0%	13%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Effective Green, g (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40			0.48			0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	423	1185		387	1154			878			838	
v/s Ratio Prot		c0.07			0.05							
v/s Ratio Perm	0.05			0.02				c0.28			0.12	
v/c Ratio	0.12	0.18		0.05	0.13			0.59			0.24	
Uniform Delay, d1	12.3	12.6		11.9	12.3			12.3			10.1	
Progression Factor	1.00	0.91		0.87	0.88			1.02			1.00	
Incremental Delay, d2	0.6	0.3		0.2	0.2			2.8			0.7	
Delay (s)	12.9	11.7		10.6	11.1			15.4			10.8	
Level of Service	B	B		B	B			B			B	
Approach Delay (s)		11.9			11.1			15.4			10.8	
Approach LOS		B			B			B			B	

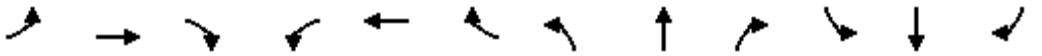
Intersection Summary			
HCM Average Control Delay	13.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



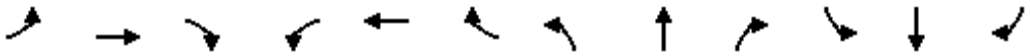
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	86	121	49	2	80	31	19	272	9	6	175	28
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	16	12	10	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.96		1.00	0.96			1.00			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1605	1890		1587	1874			1971			1932	
Flt Permitted	0.68	1.00		0.60	1.00			0.98			0.99	
Satd. Flow (perm)	1145	1890		1001	1874			1934			1918	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	96	134	54	2	89	34	21	302	10	7	194	31
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	96	188	0	2	123	0	0	333	0	0	232	0
Confl. Peds. (#/hr)			8	8			1		8	8		1
Heavy Vehicles (%)	3%	3%	2%	0%	6%	0%	0%	3%	0%	0%	4%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Effective Green, g (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Actuated g/C Ratio	0.31	0.31		0.31	0.31			0.57			0.57	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	352	582		308	577			1101			1092	
v/s Ratio Prot		c0.10			0.07							
v/s Ratio Perm	0.08			0.00				c0.17			0.12	
v/c Ratio	0.27	0.32		0.01	0.21			0.30			0.21	
Uniform Delay, d1	17.0	17.3		15.6	16.7			7.3			6.9	
Progression Factor	0.89	0.88		0.87	0.92			0.92			1.00	
Incremental Delay, d2	1.9	1.5		0.0	0.8			0.7			0.4	
Delay (s)	17.0	16.6		13.6	16.2			7.4			7.3	
Level of Service	B	B		B	B			A			A	
Approach Delay (s)		16.7			16.1			7.4			7.3	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	44.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	116	9	49	1	3	10	37	467	6	2	191	48
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	10	11	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.97		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	0.98	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.87		1.00	0.88		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1603	1675		1710	1413		1491	1631	1392	1649	1907	1427
Flt Permitted	0.75	1.00		0.72	1.00		0.63	1.00	1.00	0.39	1.00	1.00
Satd. Flow (perm)	1262	1675		1288	1413		981	1631	1392	682	1907	1427
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	129	10	54	1	3	11	41	519	7	2	212	53
RTOR Reduction (vph)	0	39	0	0	8	0	0	0	3	0	0	21
Lane Group Flow (vph)	129	25	0	1	6	0	41	519	4	2	212	32
Confl. Peds. (#/hr)	9					9	1		6	6		1
Heavy Vehicles (%)	5%	14%	5%	0%	67%	12%	7%	3%	0%	0%	7%	5%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	17.0	17.0		17.0	17.0		39.0	39.0	39.0	39.0	39.0	39.0
Effective Green, g (s)	18.0	18.0		18.0	18.0		39.0	39.0	39.0	39.0	39.0	39.0
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.60	0.60	0.60	0.60	0.60	0.60
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	349	464		357	391		589	979	835	409	1144	856
v/s Ratio Prot		0.01			0.00			c0.32			0.11	
v/s Ratio Perm	c0.10			0.00			0.04		0.00	0.00		0.02
v/c Ratio	0.37	0.05		0.00	0.02		0.07	0.53	0.01	0.00	0.19	0.04
Uniform Delay, d1	18.9	17.2		17.0	17.1		5.4	7.6	5.2	5.2	5.9	5.3
Progression Factor	1.49	2.40		1.00	1.00		1.12	1.05	1.29	1.00	1.00	1.00
Incremental Delay, d2	2.9	0.2		0.0	0.1		0.2	1.6	0.0	0.0	0.4	0.1
Delay (s)	31.1	41.6		17.0	17.1		6.2	9.7	6.8	5.2	6.2	5.4
Level of Service	C	D		B	B		A	A	A	A	A	A
Approach Delay (s)		34.6			17.1			9.4			6.0	
Approach LOS		C			B			A			A	

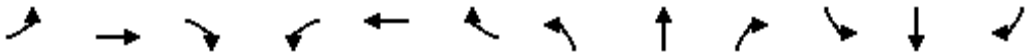
Intersection Summary			
HCM Average Control Delay	13.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	233	76	116	360	0	0	0	0	71	305	361
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)		4.0		3.0	3.0					5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	
Frpb, ped/bikes		0.99		1.00	1.00					1.00	0.99	
Flpb, ped/bikes		1.00		0.99	1.00					1.00	1.00	
Frt		0.96		1.00	1.00					1.00	0.92	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		2824		1620	3288					1574	2907	
Flt Permitted		1.00		0.50	1.00					0.95	1.00	
Satd. Flow (perm)		2824		860	3288					1574	2907	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	245	80	122	379	0	0	0	0	75	321	380
RTOR Reduction (vph)	0	31	0	0	0	0	0	0	0	0	214	0
Lane Group Flow (vph)	0	294	0	122	379	0	0	0	0	75	487	0
Confl. Peds. (#/hr)	14		32	32		14	14					14
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	9%	4%	5%	4%	0%	0%	0%	0%	5%	2%	4%
Turn Type				D.P+P						custom		
Protected Phases		8		7	7 8					6	6	
Permitted Phases				8						6		
Actuated Green, G (s)		33.0		56.0	59.0					32.0	32.0	
Effective Green, g (s)		33.0		56.0	59.0					32.0	32.0	
Actuated g/C Ratio		0.33		0.56	0.59					0.32	0.32	
Clearance Time (s)		4.0		3.0						5.0	5.0	
Lane Grp Cap (vph)		932		656	1940					504	930	
v/s Ratio Prot		c0.10		0.04	c0.12					0.05	c0.17	
v/s Ratio Perm				0.06								
v/c Ratio		0.31		0.19	0.20					0.15	0.52	
Uniform Delay, d1		25.0		10.5	9.5					24.3	27.8	
Progression Factor		1.00		1.94	2.05					1.00	1.00	
Incremental Delay, d2		0.9		0.5	0.2					0.6	2.1	
Delay (s)		25.9		20.9	19.6					24.9	29.9	
Level of Service		C		C	B					C	C	
Approach Delay (s)		25.9			19.9			0.0			29.4	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM Average Control Delay	25.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		

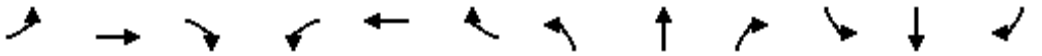
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	129	175	0	0	305	65	171	544	309	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	9	12	13	12	13	12	12	12
Total Lost time (s)	4.0	4.0			4.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.97		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1672	3054			2832		1750	1782	1514			
Flt Permitted	0.37	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	650	3054			2832		1750	1782	1514			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	136	184	0	0	321	68	180	573	325	0	0	0
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	218	0	0	0
Lane Group Flow (vph)	136	184	0	0	371	0	180	573	107	0	0	0
Confl. Peds. (#/hr)	14		16	16		14			1	1		
Confl. Bikes (#/hr)	1					1			1	1		
Heavy Vehicles (%)	2%	12%	0%	0%	5%	4%	1%	1%	3%	0%	0%	0%
Turn Type	pm+pt						custom		Perm			
Protected Phases	4	1 4			1		2	2				
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	54.0	58.0			21.0		33.0	33.0	33.0			
Effective Green, g (s)	54.0	58.0			21.0		33.0	33.0	33.0			
Actuated g/C Ratio	0.54	0.58			0.21		0.33	0.33	0.33			
Clearance Time (s)	4.0				4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	688	1771			595		578	588	500			
v/s Ratio Prot	c0.07	0.06			c0.13		0.10	c0.32				
v/s Ratio Perm	0.04								0.07			
v/c Ratio	0.20	0.10			0.62		0.31	0.97	0.21			
Uniform Delay, d1	11.7	9.4			35.9		25.0	33.1	24.2			
Progression Factor	0.25	0.25			1.00		0.74	0.78	1.91			
Incremental Delay, d2	0.6	0.1			4.9		0.9	24.4	0.6			
Delay (s)	3.6	2.5			40.8		19.4	50.3	46.8			
Level of Service	A	A			D		B	D	D			
Approach Delay (s)		3.0			40.8			44.1			0.0	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM Average Control Delay	36.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		

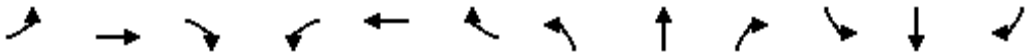
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	443	362	34	587	0	0	0	0	4	215	193
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	11	12	12	12	12	10	10	12
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	1.00
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.93		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3106		1613	3273					1596	3160	1443
Flt Permitted		1.00		0.18	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3106		305	3273					1596	3160	1443
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	461	377	35	611	0	0	0	0	4	224	201
RTOR Reduction (vph)	0	148	0	0	0	0	0	0	0	0	0	133
Lane Group Flow (vph)	0	690	0	35	611	0	0	0	0	4	224	68
Confl. Peds. (#/hr)	22		3	3		22						
Confl. Bikes (#/hr)	4					4			32	32		
Heavy Vehicles (%)	0%	2%	2%	6%	1%	0%	0%	0%	0%	0%	1%	6%
Turn Type				pm+pt						Split		Prot
Protected Phases		8		7	7 8					6	6	6
Permitted Phases				7 8								
Actuated Green, G (s)		36.0		54.0	58.0					34.0	34.0	34.0
Effective Green, g (s)		36.0		54.0	58.0					34.0	34.0	34.0
Actuated g/C Ratio		0.36		0.54	0.58					0.34	0.34	0.34
Clearance Time (s)		4.0		4.0						4.0	4.0	4.0
Lane Grp Cap (vph)		1118		400	1898					543	1074	491
v/s Ratio Prot		c0.22		0.02	c0.19					0.00	c0.07	0.05
v/s Ratio Perm				0.03								
v/c Ratio		0.62		0.09	0.32					0.01	0.21	0.14
Uniform Delay, d1		26.3		12.3	10.8					21.8	23.4	22.9
Progression Factor		1.00		0.55	0.69					0.74	0.80	0.95
Incremental Delay, d2		2.6		0.2	0.2					0.0	0.4	0.5
Delay (s)		28.9		6.9	7.6					16.2	19.1	22.2
Level of Service		C		A	A					B	B	C
Approach Delay (s)		28.9			7.6			0.0			20.5	
Approach LOS		C			A			A			C	

Intersection Summary			
HCM Average Control Delay	19.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.0%	ICU Level of Service	E
Analysis Period (min)	15		

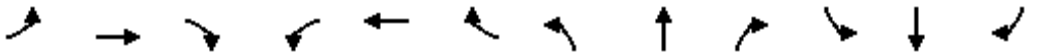
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	388	59	0	0	57	3	564	634	61	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	10	12	11	11	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	0.91	0.91			0.95		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Flpb, ped/bikes	0.99	0.99			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.99		1.00	1.00	0.85			
Flt Protected	0.95	0.96			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1444	3042			3098		1555	1637	1500			
Flt Permitted	0.71	0.74			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	1086	2344			3098		1555	1637	1500			
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	400	61	0	0	59	3	581	654	63	0	0	0
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	38	0	0	0
Lane Group Flow (vph)	200	261	0	0	59	0	581	654	25	0	0	0
Confl. Peds. (#/hr)	30		2	2		30			4	4		
Confl. Bikes (#/hr)	3					3			2	2		
Heavy Vehicles (%)	3%	2%	0%	0%	2%	0%	1%	1%	2%	0%	0%	0%
Turn Type	pm+pt						custom		custom			
Protected Phases	4	1 4			1		2	2	2			
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Effective Green, g (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Actuated g/C Ratio	0.51	0.51			0.15		0.37	0.37	0.37			
Clearance Time (s)	4.0				4.0		4.0	4.0	4.0			
Lane Grp Cap (vph)	683	1447			465		575	606	555			
v/s Ratio Prot	c0.11	0.06			0.02		0.37	c0.40	0.02			
v/s Ratio Perm	c0.04	0.03										
v/c Ratio	0.29	0.18			0.13		1.01	1.08	0.04			
Uniform Delay, d1	13.9	13.2			36.8		31.5	31.5	20.2			
Progression Factor	0.25	0.26			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.8	0.2			0.6		40.1	59.8	0.2			
Delay (s)	4.2	3.6			37.4		71.6	91.3	20.3			
Level of Service	A	A			D		E	F	C			
Approach Delay (s)		3.9			37.4			79.0			0.0	
Approach LOS		A			D			E			A	

Intersection Summary			
HCM Average Control Delay	58.6	HCM Level of Service	E
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.0%	ICU Level of Service	E
Analysis Period (min)	15		

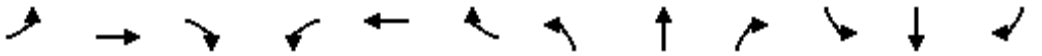
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	155	249	66	55	175	108	41	1100	59	88	476	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	9	10	9	9	10	9
Total Lost time (s)		4.0			4.0		4.0	3.5	4.0	4.0	3.5	4.0
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00			0.98		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.98			0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.98			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		2835			2770		1447	3069	1336	1494	2956	1270
Flt Permitted		0.67			0.81		0.39	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)		1945			2269		600	3069	1336	197	2956	1270
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	161	259	69	57	182	112	43	1146	61	92	496	44
RTOR Reduction (vph)	0	16	0	0	65	0	0	0	24	0	0	27
Lane Group Flow (vph)	0	473	0	0	286	0	43	1146	37	92	496	17
Confl. Peds. (#/hr)	49		20	20		49	26		8	8		26
Confl. Bikes (#/hr)	2					2						
Heavy Vehicles (%)	10%	7%	4%	9%	7%	5%	6%	4%	0%	3%	8%	5%
Turn Type	pm+pt			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		35.0			27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)		36.0			28.0		36.0	33.5	33.0	36.0	33.5	33.0
Actuated g/C Ratio		0.42			0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)		5.0			5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)		887			747		294	1210	519	144	1165	493
v/s Ratio Prot		c0.04					0.01	c0.37		c0.03	0.17	
v/s Ratio Perm		0.19			0.13		0.06		0.03	0.24		0.01
v/c Ratio		0.53			0.38		0.15	0.95	0.07	0.64	0.43	0.03
Uniform Delay, d1		18.2			21.9		14.7	24.9	16.4	18.5	18.7	16.1
Progression Factor		1.00			1.00		1.31	0.84	1.39	1.85	1.66	3.22
Incremental Delay, d2		2.3			1.5		0.6	11.2	0.2	18.2	1.0	0.1
Delay (s)		20.5			23.4		19.9	32.2	22.9	52.3	32.2	52.0
Level of Service		C			C		B	C	C	D	C	D
Approach Delay (s)		20.5			23.4			31.3			36.5	
Approach LOS		C			C			C			D	

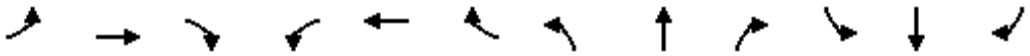
Intersection Summary			
HCM Average Control Delay	29.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	78.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	42	377	0	0	311	77	27	60	93	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.97			0.93				
Flt Protected		0.99			1.00			0.99				
Satd. Flow (prot)		1706			1668			1583				
Flt Permitted		0.93			1.00			0.99				
Satd. Flow (perm)		1597			1668			1583				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	47	419	0	0	346	86	30	67	103	0	0	0
RTOR Reduction (vph)	0	0	0	0	14	0	0	59	0	0	0	0
Lane Group Flow (vph)	0	466	0	0	418	0	0	141	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		34.0			34.0			23.0				
Effective Green, g (s)		34.0			34.0			23.0				
Actuated g/C Ratio		0.52			0.52			0.35				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		835			872			560				
v/s Ratio Prot					0.25							
v/s Ratio Perm		c0.29						0.09				
v/c Ratio		0.56			0.48			0.25				
Uniform Delay, d1		10.4			9.9			14.9				
Progression Factor		1.00			0.47			1.00				
Incremental Delay, d2		2.7			1.7			1.1				
Delay (s)		13.1			6.4			16.0				
Level of Service		B			A			B				
Approach Delay (s)		13.1			6.4			16.0			0.0	
Approach LOS		B			A			B			A	

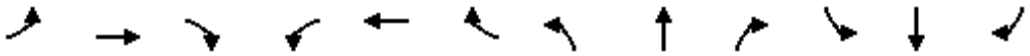
Intersection Summary			
HCM Average Control Delay	11.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	43	377	29	19	323	47	15	167	33	50	105	19
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.98			0.98			0.98	
Flt Protected		1.00			1.00			1.00			0.99	
Satd. Flow (prot)		1887			1833			3186			3153	
Flt Permitted		0.93			0.97			0.93			0.83	
Satd. Flow (perm)		1768			1782			2985			2659	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	48	419	32	21	359	52	17	186	37	56	117	21
RTOR Reduction (vph)	0	4	0	0	8	0	0	22	0	0	12	0
Lane Group Flow (vph)	0	495	0	0	424	0	0	218	0	0	182	0
Confl. Peds. (#/hr)	29		16	16		29	28		14	14		28
Confl. Bikes (#/hr)	1					1	1					1
Heavy Vehicles (%)	3%	7%	4%	12%	8%	13%	0%	4%	4%	4%	4%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0			27.0			27.0	
Effective Green, g (s)		30.0			30.0			27.0			27.0	
Actuated g/C Ratio		0.46			0.46			0.42			0.42	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		816			822			1240			1105	
v/s Ratio Prot												
v/s Ratio Perm		c0.28			0.24			c0.07			0.07	
v/c Ratio		0.61			0.52			0.18			0.16	
Uniform Delay, d1		13.1			12.4			12.0			11.9	
Progression Factor		0.60			0.54			0.88			0.55	
Incremental Delay, d2		2.9			2.3			0.3			0.3	
Delay (s)		10.8			9.0			10.9			6.9	
Level of Service		B			A			B			A	
Approach Delay (s)		10.8			9.0			10.9			6.9	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM Average Control Delay	9.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	75.9%	ICU Level of Service	D
Analysis Period (min)	15		

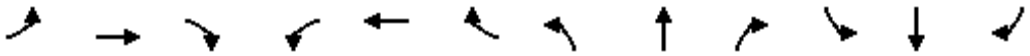
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	48	251	19	28	280	61	44	303	85	46	91	19
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	9	10	10	9	10	10	12	10	10	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.97		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1501	2937		1583	2932		1497	3034		1594	2941	
Flt Permitted	0.49	1.00		0.57	1.00		0.67	1.00		0.50	1.00	
Satd. Flow (perm)	781	2937		942	2932		1063	3034		833	2941	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	53	279	21	31	311	68	49	337	94	51	101	21
RTOR Reduction (vph)	0	9	0	0	28	0	0	39	0	0	10	0
Lane Group Flow (vph)	53	291	0	31	351	0	49	392	0	51	112	0
Confl. Peds. (#/hr)	25		14	14		25	12		4	4		12
Confl. Bikes (#/hr)	1					1			1	1		
Heavy Vehicles (%)	5%	7%	12%	0%	6%	2%	6%	1%	3%	0%	4%	12%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	264	994		319	992		572	1634		449	1584	
v/s Ratio Prot		0.10			c0.12			c0.13			0.04	
v/s Ratio Perm	0.07			0.03			0.05			0.06		
v/c Ratio	0.20	0.29		0.10	0.35		0.09	0.24		0.11	0.07	
Uniform Delay, d1	15.3	15.8		14.7	16.2		7.3	7.9		7.4	7.2	
Progression Factor	0.61	0.59		0.77	0.78		0.65	0.69		1.22	1.22	
Incremental Delay, d2	1.5	0.6		0.6	1.0		0.3	0.3		0.5	0.1	
Delay (s)	10.8	10.0		12.0	13.5		5.0	5.8		9.5	8.8	
Level of Service	B	A		B	B		A	A		A	A	
Approach Delay (s)		10.1			13.4			5.7			9.0	
Approach LOS		B			B			A			A	

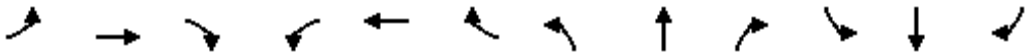
Intersection Summary					
HCM Average Control Delay	9.4	HCM Level of Service		A	
HCM Volume to Capacity ratio	0.28				
Actuated Cycle Length (s)	65.0	Sum of lost time (s)		8.0	
Intersection Capacity Utilization	46.7%	ICU Level of Service		A	
Analysis Period (min)	15				

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	79	361	25	37	315	82	11	307	44	41	118	38
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	9	10	9	9	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.98			1.00			0.99	
Flpb, ped/bikes	0.97	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.97			0.98			0.97	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1381	3014		1334	3524			3435			3308	
Flt Permitted	0.50	1.00		0.50	1.00			0.95			0.84	
Satd. Flow (perm)	720	3014		707	3524			3255			2815	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	83	380	26	39	332	86	12	323	46	43	124	40
RTOR Reduction (vph)	0	8	0	0	36	0	0	16	0	0	24	0
Lane Group Flow (vph)	83	398	0	39	382	0	0	365	0	0	183	0
Confl. Peds. (#/hr)	53		34	34		53	67		28	28		67
Heavy Vehicles (%)	8%	5%	0%	14%	6%	1%	0%	9%	20%	5%	15%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Effective Green, g (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48			0.40			0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	343	1437		337	1681			1302			1126	
v/s Ratio Prot		c0.13			0.11							
v/s Ratio Perm	0.12			0.06				c0.11			0.07	
v/c Ratio	0.24	0.28		0.12	0.23			0.28			0.16	
Uniform Delay, d1	10.1	10.2		9.4	10.0			13.2			12.5	
Progression Factor	1.59	1.63		0.81	0.79			0.52			0.64	
Incremental Delay, d2	1.6	0.5		0.6	0.3			0.5			0.3	
Delay (s)	17.6	17.2		8.2	8.1			7.4			8.3	
Level of Service	B	B		A	A			A			A	
Approach Delay (s)		17.2			8.1			7.4			8.3	
Approach LOS		B			A			A			A	

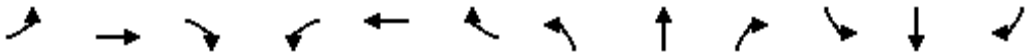
Intersection Summary			
HCM Average Control Delay	10.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	93	278	93	104	313	104	75	80	84	84	80	75
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	16	12	12	16	12
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		0.95			1.00			1.00	
Frt		1.00	0.85		0.97			0.95			0.96	
Flt Protected		0.99	1.00		0.99			0.98			0.98	
Satd. Flow (prot)		1637	1409		3024			1822			1829	
Flt Permitted		0.76	1.00		0.77			0.82			0.79	
Satd. Flow (perm)		1254	1409		2353			1523			1476	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	103	309	103	116	348	116	83	89	93	93	89	83
RTOR Reduction (vph)	0	0	49	0	34	0	0	30	0	0	25	0
Lane Group Flow (vph)	0	412	54	0	546	0	0	235	0	0	240	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		34.0	34.0		34.0			21.0			21.0	
Effective Green, g (s)		34.0	34.0		34.0			21.0			21.0	
Actuated g/C Ratio		0.52	0.52		0.52			0.32			0.32	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Grp Cap (vph)		656	737		1231			492			477	
v/s Ratio Prot												
v/s Ratio Perm		c0.33	0.04		0.23			0.15			c0.16	
v/c Ratio		0.63	0.07		0.44			0.48			0.50	
Uniform Delay, d1		11.0	7.7		9.6			17.6			17.8	
Progression Factor		2.04	5.53		0.37			1.00			1.00	
Incremental Delay, d2		4.4	0.2		1.1			3.3			3.8	
Delay (s)		26.9	42.7		4.7			20.9			21.5	
Level of Service		C	D		A			C			C	
Approach Delay (s)		30.0			4.7			20.9			21.5	
Approach LOS		C			A			C			C	

Intersection Summary			
HCM Average Control Delay	18.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	68.7%	ICU Level of Service	C
Analysis Period (min)	15		

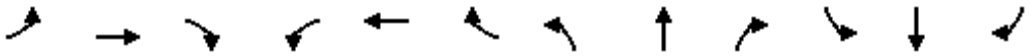
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	68	359	18	15	417	63	28	103	41	41	86	85
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	15	8	16	8	8	16	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00			0.99	
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.98			0.96			0.94	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1474	3019		1572	2999			3444			3422	
Flt Permitted	0.41	1.00		0.49	1.00			0.89			0.88	
Satd. Flow (perm)	633	3019		804	2999			3102			3035	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	76	399	20	17	463	70	31	114	46	46	96	94
RTOR Reduction (vph)	0	6	0	0	18	0	0	25	0	0	52	0
Lane Group Flow (vph)	76	413	0	17	515	0	0	166	0	0	184	0
Confl. Peds. (#/hr)	22		40	40		22	18		3	3		18
Confl. Bikes (#/hr)			2	2			1					1
Heavy Vehicles (%)	7%	5%	0%	0%	4%	2%	0%	3%	22%	0%	3%	8%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	28.0	28.0		28.0	28.0			29.0			29.0	
Effective Green, g (s)	28.0	28.0		28.0	28.0			29.0			29.0	
Actuated g/C Ratio	0.43	0.43		0.43	0.43			0.45			0.45	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	273	1300		346	1292			1384			1354	
v/s Ratio Prot		0.14			c0.17							
v/s Ratio Perm	0.12			0.02				0.05			c0.06	
v/c Ratio	0.28	0.32		0.05	0.40			0.12			0.14	
Uniform Delay, d1	12.0	12.2		10.8	12.7			10.5			10.6	
Progression Factor	1.02	1.04		1.10	0.92			1.01			0.72	
Incremental Delay, d2	2.1	0.5		0.2	0.5			0.2			0.2	
Delay (s)	14.3	13.2		12.0	12.2			10.8			7.9	
Level of Service	B	B		B	B			B			A	
Approach Delay (s)		13.4			12.2			10.8			7.9	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	11.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

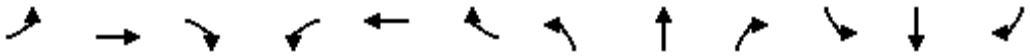


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	81	430	67	89	426	270	39	315	87	211	151	47
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.98			0.95			0.97			0.98	
Flt Protected		0.99			0.99			1.00			0.97	
Satd. Flow (prot)		3179			3072			3147			3121	
Flt Permitted		0.66			0.76			0.90			0.64	
Satd. Flow (perm)		2125			2352			2831			2036	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	90	478	74	99	473	300	43	350	97	234	168	52
RTOR Reduction (vph)	0	16	0	0	104	0	0	33	0	0	15	0
Lane Group Flow (vph)	0	626	0	0	768	0	0	457	0	0	439	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		26.0			26.0			29.0			20.0	
Effective Green, g (s)		26.0			26.0			29.0			20.0	
Actuated g/C Ratio		0.40			0.40			0.45			0.31	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		850			941			1292			626	
v/s Ratio Prot								c0.03				
v/s Ratio Perm		0.29			c0.33			0.13			c0.22	
v/c Ratio		0.74			0.82			0.35			0.88dl	
Uniform Delay, d1		16.6			17.4			11.8			19.9	
Progression Factor		1.76			1.00			1.00			0.89	
Incremental Delay, d2		5.6			7.7			0.8			6.4	
Delay (s)		34.7			25.1			12.6			24.1	
Level of Service		C			C			B			C	
Approach Delay (s)		34.7			25.1			12.6			24.1	
Approach LOS		C			C			B			C	

Intersection Summary			
HCM Average Control Delay	24.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	84.0%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

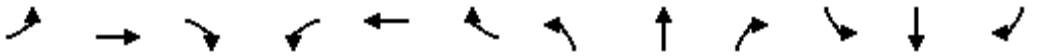
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	685	112	43	713	0	125	0	66	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	10	10	12	12	12	12	10	10	10
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			1.00				
Frt		0.98			1.00			0.95				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		2976			3031			1583				
Flt Permitted		1.00			0.84			0.80				
Satd. Flow (perm)		2976			2566			1311				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	761	124	48	792	0	139	0	73	0	0	0
RTOR Reduction (vph)	0	18	0	0	0	0	0	21	0	0	0	0
Lane Group Flow (vph)	0	867	0	0	840	0	0	191	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	custom			Perm			Perm			Perm		
Protected Phases		4 5 6 11			8			2			2	
Permitted Phases	4 6 11			8			2			2		
Actuated Green, G (s)		65.0			33.0			16.0				
Effective Green, g (s)		58.0			33.0			16.0				
Actuated g/C Ratio		0.64			0.37			0.18				
Clearance Time (s)					5.0			5.0				
Lane Grp Cap (vph)		1918			941			233				
v/s Ratio Prot		c0.29										
v/s Ratio Perm					c0.33			c0.15				
v/c Ratio		0.45			0.89			0.82				
Uniform Delay, d1		8.0			26.8			35.6				
Progression Factor		0.00			1.57			1.00				
Incremental Delay, d2		0.4			11.4			26.3				
Delay (s)		0.5			53.6			61.9				
Level of Service		A			D			E				
Approach Delay (s)		0.5			53.6			61.9			0.0	
Approach LOS		A			D			E			A	

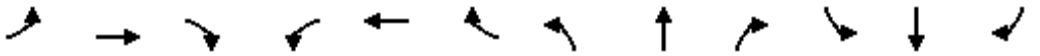
Intersection Summary			
HCM Average Control Delay	30.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	69.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	117	475	177	260	609	174	96	19	176	74	7	71
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	10	12	12	12	12	16	12	12	12	12
Total Lost time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	1.00
Frt	1.00	0.96		1.00	1.00	0.85		0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (prot)	1520	3020		1629	3257	1457		1755		1629	1714	1457
Flt Permitted	0.34	1.00		0.23	1.00	1.00		0.89		0.40	1.00	1.00
Satd. Flow (perm)	536	3020		402	3257	1457		1582		692	1714	1457
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	130	528	197	289	677	193	107	21	196	82	8	79
RTOR Reduction (vph)	0	40	0	0	0	97	0	75	0	0	0	43
Lane Group Flow (vph)	130	685	0	289	677	96	0	249	0	82	8	36
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	42.0	32.7		48.4	36.1	44.7		20.0		31.6	31.6	40.9
Effective Green, g (s)	42.0	32.7		48.4	36.1	44.7		20.0		31.6	31.6	40.9
Actuated g/C Ratio	0.47	0.36		0.54	0.40	0.50		0.22		0.35	0.35	0.45
Clearance Time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Vehicle Extension (s)	4.0	3.0		4.0	3.0	3.0		4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	352	1097		389	1306	724		352		333	602	662
v/s Ratio Prot	0.04	0.23		c0.10	0.21	0.01				c0.02	0.00	0.01
v/s Ratio Perm	0.13			c0.29		0.05		c0.16		0.06		0.02
v/c Ratio	0.37	0.62		0.74	0.52	0.13		0.71		0.25	0.01	0.05
Uniform Delay, d1	14.2	23.6		13.5	20.4	12.2		32.3		21.5	19.0	13.7
Progression Factor	1.92	1.62		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	0.8	2.5		8.0	1.5	0.1		6.8		0.4	0.0	0.0
Delay (s)	28.0	40.7		21.5	21.9	12.3		39.1		21.9	19.0	13.8
Level of Service	C	D		C	C	B		D		C	B	B
Approach Delay (s)		38.7			20.2			39.1			18.0	
Approach LOS		D			C			D			B	

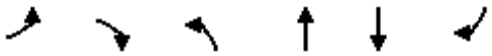
Intersection Summary					
HCM Average Control Delay	28.8	HCM Level of Service		C	
HCM Volume to Capacity ratio	0.66				
Actuated Cycle Length (s)	90.0	Sum of lost time (s)		11.0	
Intersection Capacity Utilization	71.4%	ICU Level of Service		C	
Analysis Period (min)	15				
c Critical Lane Group					



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	491	234	6	502	0	0	0	0	30	0	541
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	546	260	7	558	0	0	0	0	33	0	601
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		498										
pX, platoon unblocked												
vC, conflicting volume	558			546			838	1117	273	844	1117	279
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	558			546			838	1117	273	844	1117	279
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	100	100	87	100	15
cM capacity (veh/h)	989			999			39	200	716	250	200	709

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	273	273	260	193	372	33	601
Volume Left	0	0	0	7	0	33	0
Volume Right	0	0	260	0	0	0	601
cSH	1700	1700	1700	999	1700	250	709
Volume to Capacity	0.16	0.16	0.15	0.01	0.22	0.13	0.85
Queue Length 95th (ft)	0	0	0	1	0	11	243
Control Delay (s)	0.0	0.0	0.0	0.4	0.0	21.6	31.5
Lane LOS				A		C	D
Approach Delay (s)	0.0			0.1		31.0	
Approach LOS						D	

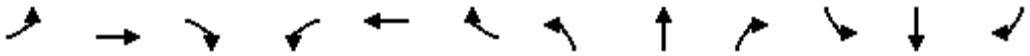
Intersection Summary				
Average Delay	9.9			
Intersection Capacity Utilization	56.9%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	521	0	508	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	579	0	564	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	289	289	564
Volume Left (vph)	289	289	564
Volume Right (vph)	0	0	0
Hadj (s)	0.58	0.58	0.29
Departure Headway (s)	6.8	6.8	5.7
Degree Utilization, x	0.55	0.55	0.89
Capacity (veh/h)	515	505	627
Control Delay (s)	16.6	16.6	38.0
Approach Delay (s)	16.6		38.0
Approach LOS	C		E

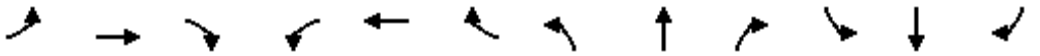
Intersection Summary			
Delay	27.2		
HCM Level of Service	D		
Intersection Capacity Utilization	52.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	340	46	126	323	0	0	0	0	72	15	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)		3.0		4.0	4.0						5.0	
Lane Util. Factor		0.95		1.00	0.95						0.95	
Frt		0.98		1.00	1.00						0.95	
Flt Protected		1.00		0.95	1.00						0.97	
Satd. Flow (prot)		3092		1574	3149						3014	
Flt Permitted		1.00		0.45	1.00						0.97	
Satd. Flow (perm)		3092		746	3149						3014	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	378	51	140	359	0	0	0	0	80	17	47
RTOR Reduction (vph)	0	12	0	0	0	0	0	0	0	0	32	0
Lane Group Flow (vph)	0	417	0	140	359	0	0	0	0	0	112	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type				pm+pt						Split		
Protected Phases		4		3	8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		36.0		49.0	49.0						27.0	
Effective Green, g (s)		36.0		49.0	49.0						27.0	
Actuated g/C Ratio		0.42		0.58	0.58						0.32	
Clearance Time (s)		3.0		4.0	4.0						5.0	
Lane Grp Cap (vph)		1310		527	1815						957	
v/s Ratio Prot		c0.13		c0.03	0.11						c0.04	
v/s Ratio Perm				0.12								
v/c Ratio		0.32		0.27	0.20						0.12	
Uniform Delay, d1		16.3		11.3	8.6						20.6	
Progression Factor		1.00		0.27	0.25						1.00	
Incremental Delay, d2		0.6		1.2	0.2						0.2	
Delay (s)		17.0		4.2	2.4						20.8	
Level of Service		B		A	A						C	
Approach Delay (s)		17.0			2.9			0.0			20.8	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	10.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.7%	ICU Level of Service	A
Analysis Period (min)	15		

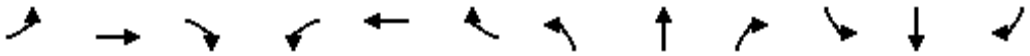
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	68	344	0	0	400	76	49	65	42	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	11	11	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0			3.0			5.0				
Lane Util. Factor	1.00	0.95			0.95			0.91				
Frt	1.00	1.00			0.98			0.96				
Flt Protected	0.95	1.00			1.00			0.98				
Satd. Flow (prot)	1629	3257			3073			4420				
Flt Permitted	0.38	1.00			1.00			0.98				
Satd. Flow (perm)	656	3257			3073			4420				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	76	382	0	0	444	84	54	72	47	0	0	0
RTOR Reduction (vph)	0	0	0	0	18	0	0	32	0	0	0	0
Lane Group Flow (vph)	76	382	0	0	510	0	0	141	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	pm+pt						Split					
Protected Phases	7	4			8		2	2				
Permitted Phases	4											
Actuated Green, G (s)	48.0	48.0			35.0			27.0				
Effective Green, g (s)	48.0	48.0			35.0			27.0				
Actuated g/C Ratio	0.56	0.56			0.41			0.32				
Clearance Time (s)	5.0	5.0			3.0			5.0				
Lane Grp Cap (vph)	485	1839			1265			1404				
v/s Ratio Prot	0.02	c0.12			c0.17			c0.03				
v/s Ratio Perm	0.07											
v/c Ratio	0.16	0.21			0.40			0.10				
Uniform Delay, d1	12.1	9.1			17.6			20.4				
Progression Factor	0.34	0.33			1.00			1.00				
Incremental Delay, d2	0.7	0.2			1.0			0.1				
Delay (s)	4.7	3.3			18.6			20.6				
Level of Service	A	A			B			C				
Approach Delay (s)		3.5			18.6			20.6			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM Average Control Delay	12.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.7%	ICU Level of Service	A
Analysis Period (min)	15		

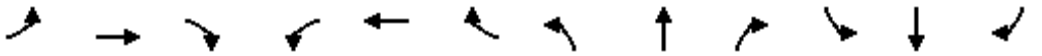
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	307	39	31	243	31	118	85	52	55	90	124
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	12	15	12	12	15	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		0.98			0.98			0.97			0.94	
Flt Protected		0.99			0.99			0.98			0.99	
Satd. Flow (prot)		2979			2979			1792			1750	
Flt Permitted		0.89			0.88			0.75			0.89	
Satd. Flow (perm)		2659			2645			1376			1571	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	43	341	43	34	270	34	131	94	58	61	100	138
RTOR Reduction (vph)	0	13	0	0	13	0	0	14	0	0	48	0
Lane Group Flow (vph)	0	414	0	0	325	0	0	269	0	0	251	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		23.0			23.0			32.0			32.0	
Effective Green, g (s)		23.0			23.0			32.0			32.0	
Actuated g/C Ratio		0.35			0.35			0.49			0.49	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		941			936			677			773	
v/s Ratio Prot												
v/s Ratio Perm		c0.16			0.12			c0.20			0.16	
v/c Ratio		0.44			0.35			0.40			0.33	
Uniform Delay, d1		16.1			15.5			10.4			10.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.5			1.0			1.7			1.1	
Delay (s)		17.6			16.5			12.2			11.1	
Level of Service		B			B			B			B	
Approach Delay (s)		17.6			16.5			12.2			11.1	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	14.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	63.1%	ICU Level of Service	B
Analysis Period (min)	15		

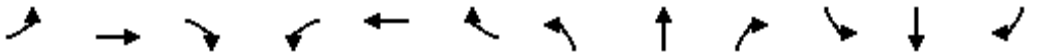
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	169	202	39	50	176	62	68	963	67	73	416	78
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	12	10	16	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.96
Flpb, ped/bikes	0.99	1.00		1.00	1.00		0.99	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1548	3005		1592	3512		1486	3040	1347	1494	3011	1271
Flt Permitted	0.59	1.00		0.58	1.00		0.44	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	954	3005		975	3512		690	3040	1347	197	3011	1271
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	178	213	41	53	185	65	72	1014	71	77	438	82
RTOR Reduction (vph)	0	19	0	0	41	0	0	0	43	0	0	50
Lane Group Flow (vph)	178	235	0	53	209	0	72	1014	28	77	438	32
Confl. Peds. (#/hr)	31		7	7		31	37		12	12		37
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	2%	4%	0%	0%	6%	2%	3%	5%	0%	3%	6%	4%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	32.0	27.0		32.0	27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)	30.0	28.0		30.0	28.0		36.0	33.0	33.0	36.0	33.0	33.0
Actuated g/C Ratio	0.35	0.33		0.35	0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	365	990		373	1157		330	1180	523	144	1169	493
v/s Ratio Prot	c0.02	0.08		0.01	0.06		0.01	c0.33		c0.03	0.15	
v/s Ratio Perm	c0.15			0.04			0.08		0.02	0.20		0.03
v/c Ratio	0.49	0.24		0.14	0.18		0.22	0.86	0.05	0.53	0.37	0.06
Uniform Delay, d1	20.6	20.7		18.4	20.3		14.9	23.9	16.2	17.2	18.6	16.3
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	2.06	0.61	0.84
Incremental Delay, d2	4.6	0.6		0.8	0.3		1.5	8.2	0.2	12.4	0.8	0.2
Delay (s)	25.2	21.3		19.2	20.7		16.4	32.1	16.4	47.8	12.2	13.9
Level of Service	C	C		B	C		B	C	B	D	B	B
Approach Delay (s)		22.9			20.4			30.2			17.0	
Approach LOS		C			C			C			B	

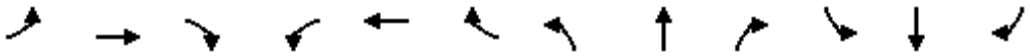
Intersection Summary			
HCM Average Control Delay	24.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	68.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	38	256	18	14	216	8	35	113	25	20	56	41
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	16	12	12	16	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00	0.99		1.00	0.98
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		0.99	1.00
Satd. Flow (prot)		1929	1382		1950	1331		1970	1452		1928	1430
Flt Permitted		0.94	1.00		0.98	1.00		0.93	1.00		0.93	1.00
Satd. Flow (perm)		1829	1382		1910	1331		1860	1452		1810	1430
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	40	269	19	15	227	8	37	119	26	21	59	43
RTOR Reduction (vph)	0	0	10	0	0	4	0	0	15	0	0	25
Lane Group Flow (vph)	0	309	9	0	242	4	0	156	11	0	80	18
Confl. Peds. (#/hr)	5		21	21		5	9		1	1		9
Heavy Vehicles (%)	5%	5%	6%	7%	4%	12%	6%	1%	4%	0%	6%	5%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Effective Green, g (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Actuated g/C Ratio		0.46	0.46		0.46	0.46		0.42	0.42		0.42	0.42
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		844	638		882	614		773	603		752	594
v/s Ratio Prot												
v/s Ratio Perm		c0.17	0.01		0.13	0.00		c0.08	0.01		0.04	0.01
v/c Ratio		0.37	0.01		0.27	0.01		0.20	0.02		0.11	0.03
Uniform Delay, d1		11.3	9.5		10.8	9.4		12.1	11.2		11.6	11.2
Progression Factor		1.00	1.00		0.47	0.37		1.38	1.86		0.93	0.82
Incremental Delay, d2		1.2	0.0		0.8	0.0		0.6	0.1		0.3	0.1
Delay (s)		12.6	9.5		5.8	3.5		17.3	20.9		11.0	9.3
Level of Service		B	A		A	A		B	C		B	A
Approach Delay (s)		12.4			5.7			17.8			10.4	
Approach LOS		B			A			B			B	

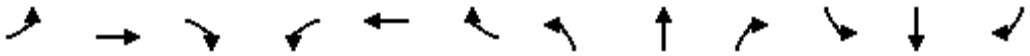
Intersection Summary			
HCM Average Control Delay	11.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	66	240	10	15	200	30	12	234	25	30	70	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.98		1.00	0.99		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1520	3022		1520	2981		1520	2996		1520	2904	
Flt Permitted	0.95	1.00		0.58	1.00		0.68	1.00		0.56	1.00	
Satd. Flow (perm)	1520	3022		929	2981		1091	2996		904	2904	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	73	267	11	17	222	33	13	260	28	33	78	33
RTOR Reduction (vph)	0	5	0	0	18	0	0	12	0	0	19	0
Lane Group Flow (vph)	73	273	0	17	237	0	13	276	0	33	92	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Prot			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Effective Green, g (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.11	0.49		0.34	0.34		0.42	0.42		0.42	0.42	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	164	1488		314	1009		453	1244		376	1206	
v/s Ratio Prot	c0.05	0.09			c0.08			c0.09			0.03	
v/s Ratio Perm				0.02			0.01			0.04		
v/c Ratio	0.45	0.18		0.05	0.24		0.03	0.22		0.09	0.08	
Uniform Delay, d1	27.2	9.2		14.5	15.5		11.2	12.2		11.5	11.5	
Progression Factor	0.83	0.41		0.82	0.75		0.59	0.66		1.09	1.13	
Incremental Delay, d2	8.3	0.3		0.3	0.5		0.1	0.4		0.5	0.1	
Delay (s)	30.8	4.1		12.3	12.2		6.7	8.5		13.1	13.1	
Level of Service	C	A		B	B		A	A		B	B	
Approach Delay (s)		9.6			12.2			8.4			13.1	
Approach LOS		A			B			A			B	

Intersection Summary			
HCM Average Control Delay	10.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	35.0%	ICU Level of Service	A
Analysis Period (min)	15		

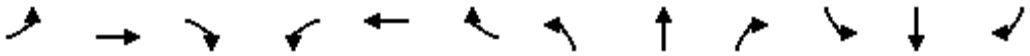
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	37	249	16	95	212	42	26	284	20	24	137	24
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.99		1.00	0.98			0.99			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1520	3012		1520	2964			3215			3172	
Flt Permitted	0.58	1.00		0.95	1.00			0.92			0.89	
Satd. Flow (perm)	925	3012		1520	2964			2981			2842	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	41	277	18	106	236	47	29	316	22	27	152	27
RTOR Reduction (vph)	0	8	0	0	25	0	0	7	0	0	17	0
Lane Group Flow (vph)	41	287	0	106	258	0	0	360	0	0	189	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Prot			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4						2			6		
Actuated Green, G (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Effective Green, g (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Actuated g/C Ratio	0.31	0.31		0.09	0.45			0.38			0.38	
Clearance Time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	285	927		140	1322			1147			1093	
v/s Ratio Prot		c0.10		c0.07	0.09							
v/s Ratio Perm	0.04							c0.12			0.07	
v/c Ratio	0.14	0.31		0.76	0.19			0.31			0.17	
Uniform Delay, d1	16.3	17.2		28.8	10.9			14.0			13.2	
Progression Factor	0.61	0.60		1.35	0.97			0.70			0.76	
Incremental Delay, d2	1.1	0.9		27.5	0.3			0.7			0.3	
Delay (s)	11.0	11.2		66.3	10.8			10.4			10.4	
Level of Service	B	B		E	B			B			B	
Approach Delay (s)		11.1			25.9			10.4			10.4	
Approach LOS		B			C			B			B	

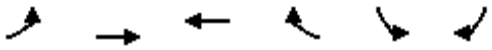
Intersection Summary			
HCM Average Control Delay	15.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	42.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	14	260	14	69	325	69	25	93	160	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	14	12	10	15	10
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			0.95				
Frt		0.99			0.98			0.91				
Flt Protected		1.00			0.99			1.00				
Satd. Flow (prot)		1585			1556			3160				
Flt Permitted		0.97			0.91			1.00				
Satd. Flow (perm)		1548			1426			3160				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	16	289	16	77	361	77	28	103	178	0	0	0
RTOR Reduction (vph)	0	2	0	0	8	0	0	139	0	0	0	0
Lane Group Flow (vph)	0	319	0	0	507	0	0	170	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		42.6			42.6			14.4				
Effective Green, g (s)		42.6			42.6			14.4				
Actuated g/C Ratio		0.66			0.66			0.22				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		3.0			3.0			8.0				
Lane Grp Cap (vph)		1015			935			700				
v/s Ratio Prot												
v/s Ratio Perm		0.21			c0.36			0.05				
v/c Ratio		0.31			0.54			0.24				
Uniform Delay, d1		4.9			6.0			20.8				
Progression Factor		2.05			1.00			1.00				
Incremental Delay, d2		0.8			2.3			0.8				
Delay (s)		10.8			8.2			21.6				
Level of Service		B			A			C				
Approach Delay (s)		10.8			8.2			21.6			0.0	
Approach LOS		B			A			C			A	

Intersection Summary			
HCM Average Control Delay	12.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	80	340	387	44	64	73
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	84	358	407	46	67	77
Pedestrians		3	5		21	
Lane Width (ft)		16.0	16.0		10.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1319	491			
pX, platoon unblocked	0.87				0.87	0.87
vC, conflicting volume	475				983	455
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	323				906	300
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	92				72	88
cM capacity (veh/h)	1015				240	633

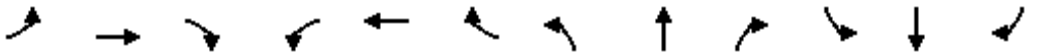
Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	442	454	67	77
Volume Left	84	0	67	0
Volume Right	0	46	0	77
cSH	1015	1700	240	633
Volume to Capacity	0.08	0.27	0.28	0.12
Queue Length 95th (ft)	7	0	28	10
Control Delay (s)	2.4	0.0	25.8	11.5
Lane LOS	A		D	B
Approach Delay (s)	2.4	0.0	18.2	
Approach LOS			C	

Intersection Summary			
Average Delay	3.6		
Intersection Capacity Utilization	62.7%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	461	1	16	630	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0			4.0		
Lane Util. Factor	1.00			1.00		
Frt	1.00			1.00		
Flt Protected	1.00			1.00		
Satd. Flow (prot)	1714			1712		
Flt Permitted	1.00			0.98		
Satd. Flow (perm)	1714			1685		
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	512	1	18	700	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	513	0	0	718	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type			Perm			
Protected Phases	1 2 4			4	3	
Permitted Phases			4			
Actuated Green, G (s)	63.0			31.0		
Effective Green, g (s)	59.0			31.0		
Actuated g/C Ratio	0.69			0.36		
Clearance Time (s)				4.0		
Lane Grp Cap (vph)	1190			615		
v/s Ratio Prot	c0.30					
v/s Ratio Perm				c0.43		
v/c Ratio	0.43			1.17		
Uniform Delay, d1	5.7			27.0		
Progression Factor	0.04			1.00		
Incremental Delay, d2	0.3			92.1		
Delay (s)	0.5			119.1		
Level of Service	A			F		
Approach Delay (s)	0.5			119.1	0.0	
Approach LOS	A			F	A	

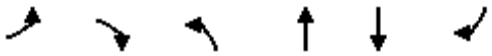
Intersection Summary			
HCM Average Control Delay	69.7	HCM Level of Service	E
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	51.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	181	189	25	542	0	0	0	0	3	0	241
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	201	210	28	602	0	0	0	0	3	0	268
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	602			201			964	964	206	758	859	602
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	602			201			964	964	206	758	859	602
tC, single (s)	4.1			5.5			7.5	6.5	6.9	7.5	6.5	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.9			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			100	100	100	99	100	39
cM capacity (veh/h)	985			989			81	250	807	293	288	438

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	134	277	630	3	268
Volume Left	0	0	28	3	0
Volume Right	0	210	0	0	268
cSH	1700	1700	989	293	438
Volume to Capacity	0.08	0.16	0.03	0.01	0.61
Queue Length 95th (ft)	0	0	2	1	100
Control Delay (s)	0.0	0.0	0.7	17.4	25.3
Lane LOS			A	C	D
Approach Delay (s)	0.0		0.7	25.3	
Approach LOS				D	

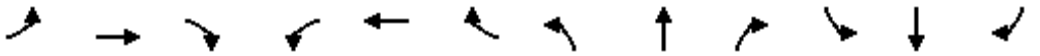
Intersection Summary			
Average Delay	5.6		
Intersection Capacity Utilization	56.6%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	184	0	567	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	204	0	630	0	0	0

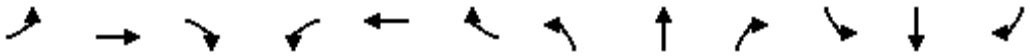
Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	102	102	630
Volume Left (vph)	102	102	630
Volume Right (vph)	0	0	0
Hadj (s)	0.58	0.58	0.29
Departure Headway (s)	6.7	6.7	4.8
Degree Utilization, x	0.19	0.19	0.85
Capacity (veh/h)	511	511	735
Control Delay (s)	10.1	10.1	28.3
Approach Delay (s)	10.1		28.3
Approach LOS	B		D

Intersection Summary			
Delay	23.8		
HCM Level of Service	C		
Intersection Capacity Utilization	45.4%	ICU Level of Service	A
Analysis Period (min)	15		



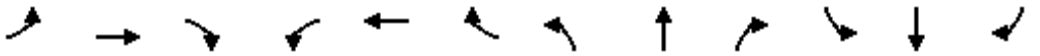
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	433	207	154	457	0	0	0	0	122	115	294
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	13	12	12	12	12	10	10	11
Total Lost time (s)		6.0	6.0		6.0					6.0	6.0	6.0
Lane Util. Factor		0.95	1.00		0.95					0.86	0.81	0.86
Frpb, ped/bikes		1.00	0.98		1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	0.93	0.85
Flt Protected		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (prot)		2978	1202		3372					1346	3692	1122
Flt Permitted		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (perm)		2978	1202		3372					1346	3692	1122
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	456	218	162	481	0	0	0	0	128	121	309
RTOR Reduction (vph)	0	0	159	0	0	0	0	0	0	0	102	92
Lane Group Flow (vph)	0	456	59	0	643	0	0	0	0	70	232	62
Confl. Peds. (#/hr)	5		3	3		5						
Heavy Vehicles (%)	0%	11%	9%	2%	4%	0%	0%	0%	0%	2%	2%	2%
Parking (#/hr)			0									0
Turn Type			Perm	Split						Split		custom
Protected Phases		2		10 12 14	10 12 14					4	4	
Permitted Phases			2									4 2
Actuated Green, G (s)		39.2	39.2		73.6					19.3	19.3	64.5
Effective Green, g (s)		39.2	39.2		73.6					19.3	19.3	64.5
Actuated g/C Ratio		0.25	0.25		0.46					0.12	0.12	0.40
Clearance Time (s)		6.0	6.0							6.0	6.0	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		730	294		1551					162	445	452
v/s Ratio Prot		c0.15			c0.19					0.05	c0.06	
v/s Ratio Perm			0.05									0.06
v/c Ratio		0.62	0.20		0.41					0.43	0.52	0.14
Uniform Delay, d1		53.8	47.9		28.8					65.3	66.0	30.2
Progression Factor		1.00	1.00		0.02					1.00	1.00	1.00
Incremental Delay, d2		4.0	1.5		0.1					1.8	1.1	0.1
Delay (s)		57.9	49.5		0.6					67.1	67.1	30.3
Level of Service		E	D		A					E	E	C
Approach Delay (s)		55.1			0.6			0.0			57.0	
Approach LOS		E			A			A			E	

Intersection Summary			
HCM Average Control Delay	37.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	29.9
Intersection Capacity Utilization	52.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



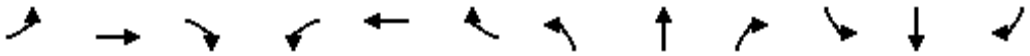
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	210	345	0	0	383	91	228	144	129	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	13	12	12	11	12	13	13	14	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0				
Lane Util. Factor	1.00	0.95			0.95	1.00	0.91	0.91				
Frt	1.00	1.00			1.00	0.85	1.00	0.94				
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (prot)	1574	3366			3149	1457	1531	3009				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (perm)	1574	3366			3149	1457	1531	3009				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	233	383	0	0	426	101	253	160	143	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	81	0	52	0	0	0	0
Lane Group Flow (vph)	233	383	0	0	426	20	190	314	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Split					Perm	Split					
Protected Phases	2 4 8	2 4 8			10		12	12				
Permitted Phases						10						
Actuated Green, G (s)	78.4	78.4			32.2	32.2	22.6	22.6				
Effective Green, g (s)	78.4	78.4			32.2	32.2	22.6	22.6				
Actuated g/C Ratio	0.49	0.49			0.20	0.20	0.14	0.14				
Clearance Time (s)					6.0	6.0	6.0	6.0				
Vehicle Extension (s)					3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	771	1649			634	293	216	425				
v/s Ratio Prot	c0.15	0.11			c0.14		c0.12	0.10				
v/s Ratio Perm						0.01						
v/c Ratio	0.30	0.23			0.67	0.07	0.88	0.74				
Uniform Delay, d1	24.4	23.5			59.0	51.8	67.4	65.9				
Progression Factor	0.07	0.08			1.00	1.00	1.00	1.00				
Incremental Delay, d2	0.2	0.1			2.8	0.1	30.8	6.6				
Delay (s)	2.0	1.9			61.8	51.9	98.1	72.5				
Level of Service	A	A			E	D	F	E				
Approach Delay (s)		1.9			59.9			81.3			0.0	
Approach LOS		A			E			F			A	

Intersection Summary			
HCM Average Control Delay	45.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	28.8
Intersection Capacity Utilization	48.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	214	265	73	35	140	45	86	803	60	56	426	99
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	14	12	10	10	12	9	10	12
Total Lost time (s)	4.0	4.0	5.0	4.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.99	1.00	1.00	1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1536	1556	1328	1595	1719		1524	2990		1508	2869	
Flt Permitted	0.52	1.00	1.00	0.51	1.00		0.35	1.00		0.16	1.00	
Satd. Flow (perm)	846	1556	1328	854	1719		569	2990		255	2869	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	225	279	77	37	147	47	91	845	63	59	448	104
RTOR Reduction (vph)	0	0	50	0	12	0	0	6	0	0	22	0
Lane Group Flow (vph)	225	279	27	37	182	0	91	902	0	59	530	0
Confl. Peds. (#/hr)	33		3	3		33	42		8	8		42
Confl. Bikes (#/hr)							1					1
Heavy Vehicles (%)	3%	8%	6%	0%	7%	5%	4%	5%	11%	2%	6%	9%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	38.2	31.2	31.2	32.4	28.3		39.6	34.1		39.6	34.1	
Effective Green, g (s)	36.2	32.2	31.2	30.4	28.3		37.6	34.1		37.6	34.1	
Actuated g/C Ratio	0.40	0.36	0.35	0.34	0.31		0.42	0.38		0.42	0.38	
Clearance Time (s)	3.0	5.0	5.0	3.0	5.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	387	557	461	314	541		286	1134		169	1088	
v/s Ratio Prot	c0.04	0.18		0.00	0.11		0.02	c0.30		c0.02	0.18	
v/s Ratio Perm	c0.20		0.02	0.04			0.12			0.13		
v/c Ratio	0.58	0.50	0.06	0.12	0.34		0.32	0.80		0.35	0.49	
Uniform Delay, d1	20.6	22.6	19.6	20.2	23.6		16.5	24.8		17.5	21.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.2	3.2	0.2	0.2	1.7		0.6	5.8		1.3	1.6	
Delay (s)	22.9	25.8	19.8	20.4	25.3		17.1	30.6		18.7	22.8	
Level of Service	C	C	B	C	C		B	C		B	C	
Approach Delay (s)		23.8			24.5			29.4			22.4	
Approach LOS		C			C			C			C	

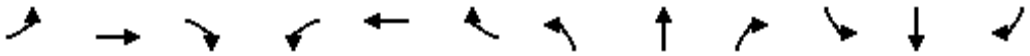
Intersection Summary			
HCM Average Control Delay	25.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	89.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	71.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	43	263	16	5	182	19	35	79	16	11	42	38
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	10	10	10	12	15	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Frpb, ped/bikes		1.00	0.97		1.00	0.97		1.00			0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.98			0.94	
Flt Protected		0.99	1.00		1.00	1.00		0.99			0.99	
Satd. Flow (prot)		1910	1482		1600	1198		1912			1846	
Flt Permitted		0.94	1.00		0.99	1.00		0.93			0.97	
Satd. Flow (perm)		1817	1482		1592	1198		1794			1807	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	45	277	17	5	192	20	37	83	17	12	44	40
RTOR Reduction (vph)	0	0	9	0	0	10	0	8	0	0	23	0
Lane Group Flow (vph)	0	322	8	0	197	10	0	129	0	0	73	0
Confl. Peds. (#/hr)	6		11	11		6	4		8	8		4
Confl. Bikes (#/hr)	1		1	1		1			1	1		
Heavy Vehicles (%)	0%	7%	0%	0%	5%	16%	0%	0%	0%	10%	0%	3%
Turn Type	Perm		Perm	Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Effective Green, g (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Actuated g/C Ratio		0.49	0.49		0.49	0.49		0.42			0.42	
Clearance Time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		895	730		784	590		745			751	
v/s Ratio Prot												
v/s Ratio Perm		c0.18	0.01		0.12	0.01		c0.07			0.04	
v/c Ratio		0.36	0.01		0.25	0.02		0.17			0.10	
Uniform Delay, d1		10.2	8.4		9.6	8.4		12.0			11.6	
Progression Factor		1.00	1.00		2.02	2.97		1.00			1.55	
Incremental Delay, d2		1.1	0.0		0.8	0.1		0.5			0.3	
Delay (s)		11.3	8.5		20.0	25.1		12.5			18.2	
Level of Service		B	A		C	C		B			B	
Approach Delay (s)		11.2			20.5			12.5			18.2	
Approach LOS		B			C			B			B	

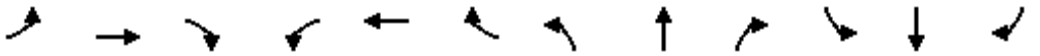
Intersection Summary			
HCM Average Control Delay	14.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	54.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	71	197	23	6	133	6	39	216	21	9	51	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.98		1.00	0.96		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.96	
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		1.00	
Satd. Flow (prot)		1663	1392		1604	1497		1754	1390		1652	
Flt Permitted		0.88	1.00		0.99	1.00		0.95	1.00		0.97	
Satd. Flow (perm)		1483	1392		1585	1497		1681	1390		1612	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	75	207	24	6	140	6	41	227	22	9	54	31
RTOR Reduction (vph)	0	0	16	0	0	4	0	0	11	0	16	0
Lane Group Flow (vph)	0	282	8	0	146	2	0	268	11	0	78	0
Confl. Peds. (#/hr)	11		17	17		11	4		17	17		4
Confl. Bikes (#/hr)	1		1	1		1	1					1
Heavy Vehicles (%)	0%	9%	5%	33%	11%	0%	6%	1%	6%	0%	0%	8%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Effective Green, g (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Actuated g/C Ratio		0.35	0.35		0.35	0.35		0.49	0.49		0.49	
Clearance Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Grp Cap (vph)		525	493		561	530		828	684		794	
v/s Ratio Prot												
v/s Ratio Perm		c0.19	0.01		0.09	0.00		c0.16	0.01		0.05	
v/c Ratio		0.54	0.02		0.26	0.00		0.32	0.02		0.10	
Uniform Delay, d1		16.8	13.7		14.9	13.6		10.0	8.4		8.8	
Progression Factor		1.94	3.17		0.92	0.92		0.32	0.32		1.03	
Incremental Delay, d2		3.7	0.1		1.1	0.0		0.9	0.0		0.2	
Delay (s)		36.3	43.3		14.8	12.6		4.1	2.7		9.3	
Level of Service		D	D		B	B		A	A		A	
Approach Delay (s)		36.9			14.7			4.0			9.3	
Approach LOS		D			B			A			A	

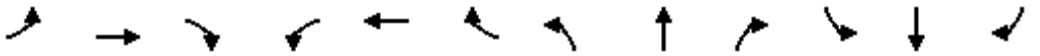
Intersection Summary			
HCM Average Control Delay	18.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	157	20	30	9	18	6	26	286	19	6	194	94
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.97		0.99			1.00			1.00	0.95
Flpb, ped/bikes		0.98	1.00		0.99			1.00			1.00	1.00
Frt		1.00	0.85		0.97			0.99			1.00	0.85
Flt Protected		0.96	1.00		0.99			1.00			1.00	1.00
Satd. Flow (prot)		1768	1390		1813			1974			1873	1328
Flt Permitted		0.80	1.00		0.93			0.97			0.99	1.00
Satd. Flow (perm)		1474	1390		1713			1924			1858	1328
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	174	22	33	10	20	7	29	318	21	7	216	104
RTOR Reduction (vph)	0	0	19	0	5	0	0	4	0	0	0	53
Lane Group Flow (vph)	0	196	14	0	32	0	0	364	0	0	223	51
Confl. Peds. (#/hr)	49		22	22		49	34		17	17		34
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	9%	0%	7%	0%	0%	0%	0%	2%	0%	0%	9%	9%
Turn Type	pm+pt		Perm	Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		27.0	27.0		17.0			32.0			32.0	32.0
Effective Green, g (s)		27.0	27.0		17.0			32.0			32.0	32.0
Actuated g/C Ratio		0.42	0.42		0.26			0.49			0.49	0.49
Clearance Time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		648	577		448			947			915	654
v/s Ratio Prot		c0.04										
v/s Ratio Perm		0.09	0.01		0.02			c0.19			0.12	0.04
v/c Ratio		0.30	0.02		0.07			0.38			0.24	0.08
Uniform Delay, d1		12.7	11.2		18.1			10.3			9.5	8.7
Progression Factor		0.70	1.15		1.00			0.55			0.49	0.34
Incremental Delay, d2		1.1	0.1		0.3			1.1			0.6	0.2
Delay (s)		9.9	13.0		18.4			6.8			5.3	3.2
Level of Service		A	B		B			A			A	A
Approach Delay (s)		10.4			18.4			6.8			4.6	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	7.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	59.0%	ICU Level of Service	B
Analysis Period (min)	15		

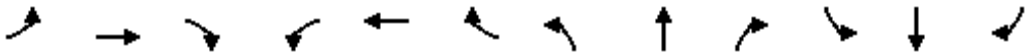
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	787	220	254	1079	0	0	0	0	274	200	374
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	11	8	8	8	11	12	14
Total Lost time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Lane Util. Factor		0.91		1.00	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00		1.00	1.00					1.00	0.99	0.99
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.97		1.00	1.00					1.00	0.94	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.99	1.00
Satd. Flow (prot)		4302		1589	3226					1419	2711	1355
Flt Permitted		1.00		0.20	1.00					0.95	0.99	1.00
Satd. Flow (perm)		4302		327	3226					1419	2711	1355
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	828	232	267	1136	0	0	0	0	288	211	394
RTOR Reduction (vph)	0	40	0	0	0	0	0	0	0	0	69	69
Lane Group Flow (vph)	0	1020	0	267	1136	0	0	0	0	233	382	140
Confl. Peds. (#/hr)	6		4	4		6	2					2
Heavy Vehicles (%)	0%	11%	7%	4%	6%	0%	0%	0%	0%	6%	4%	8%
Turn Type				pm+pt						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Actuated Green, G (s)		50.9		69.3	69.3					23.7	23.7	23.7
Effective Green, g (s)		50.9		69.3	69.3					23.7	23.7	23.7
Actuated g/C Ratio		0.48		0.66	0.66					0.23	0.23	0.23
Clearance Time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Vehicle Extension (s)		7.0		3.5	7.0					3.5	3.5	3.5
Lane Grp Cap (vph)		2085		383	2129					320	612	306
v/s Ratio Prot		0.24		c0.09	0.35							
v/s Ratio Perm				c0.37						c0.16	0.14	0.10
v/c Ratio		0.49		0.70	0.53					0.73	0.62	0.46
Uniform Delay, d1		18.3		9.5	9.4					37.7	36.6	35.1
Progression Factor		1.00		1.38	1.53					1.00	1.00	1.00
Incremental Delay, d2		0.8		3.6	0.6					8.3	2.1	1.3
Delay (s)		19.1		16.7	14.9					46.0	38.7	36.4
Level of Service		B		B	B					D	D	D
Approach Delay (s)		19.1			15.3			0.0			40.1	
Approach LOS		B			B			A			D	

Intersection Summary			
HCM Average Control Delay	23.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	96.2%	ICU Level of Service	F
Analysis Period (min)	15		

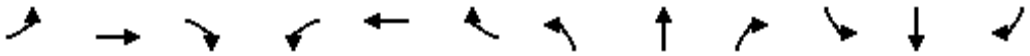
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	309	752	0	0	811	234	521	346	366	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	11	12	12	12	12	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0		6.0				
Lane Util. Factor	0.97	0.95			0.95	1.00		0.91				
Frpb, ped/bikes	1.00	1.00			1.00	0.99		1.00				
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00				
Frt	1.00	1.00			1.00	0.85		0.96				
Flt Protected	0.95	1.00			1.00	1.00		0.98				
Satd. Flow (prot)	2915	3138			3119	1449		4421				
Flt Permitted	0.20	1.00			1.00	1.00		0.98				
Satd. Flow (perm)	617	3138			3119	1449		4421				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	325	792	0	0	854	246	548	364	385	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	111	0	71	0	0	0	0
Lane Group Flow (vph)	325	792	0	0	854	135	0	1226	0	0	0	0
Confl. Peds. (#/hr)	4					4						
Heavy Vehicles (%)	10%	9%	0%	0%	6%	4%	4%	3%	5%	0%	0%	0%
Turn Type	pm+pt					Perm	Perm					
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8					
Actuated Green, G (s)	62.2	62.2			44.9	44.9		30.8				
Effective Green, g (s)	62.2	62.2			44.9	44.9		30.8				
Actuated g/C Ratio	0.59	0.59			0.43	0.43		0.29				
Clearance Time (s)	6.0	6.0			6.0	6.0		6.0				
Vehicle Extension (s)	3.5	7.0			7.0	7.0		5.0				
Lane Grp Cap (vph)	613	1859			1334	620		1297				
v/s Ratio Prot	c0.06	0.25			c0.27							
v/s Ratio Perm	0.26					0.09		0.28				
v/c Ratio	0.53	0.43			0.64	0.22		0.99dl				
Uniform Delay, d1	12.6	11.7			23.7	19.0		36.3				
Progression Factor	0.74	0.87			0.93	1.37		1.00				
Incremental Delay, d2	0.9	0.6			1.6	0.5		14.3				
Delay (s)	10.3	10.8			23.7	26.5		50.6				
Level of Service	B	B			C	C		D				
Approach Delay (s)		10.6			24.3			50.6			0.0	
Approach LOS		B			C			D			A	

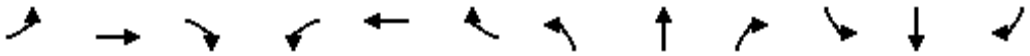
Intersection Summary			
HCM Average Control Delay	29.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	96.2%	ICU Level of Service	F
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	103	439	221	76	736	40	226	178	40	37	111	91
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	11	12	12	10	10	13	10	10	10
Total Lost time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.97		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1565	3061	1291	1601	3233		1446	3008		1544	2782	
Flt Permitted	0.15	1.00	1.00	0.49	1.00		0.52	1.00		0.61	1.00	
Satd. Flow (perm)	250	3061	1291	820	3233		789	3008		990	2782	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	108	462	233	80	775	42	238	187	42	39	117	96
RTOR Reduction (vph)	0	0	97	0	4	0	0	20	0	0	79	0
Lane Group Flow (vph)	108	462	136	80	813	0	238	209	0	39	134	0
Confl. Peds. (#/hr)	3		12	12		3	9		6	6		9
Heavy Vehicles (%)	2%	8%	5%	3%	5%	3%	10%	3%	2%	3%	7%	4%
Parking (#/hr)			0									
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	61.9	52.0	61.5	39.1	32.7		31.1	22.6		23.1	18.1	
Effective Green, g (s)	61.9	52.0	61.5	39.1	32.7		31.1	22.6		23.1	18.1	
Actuated g/C Ratio	0.59	0.50	0.59	0.37	0.31		0.30	0.22		0.22	0.17	
Clearance Time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0		3.0	7.0		3.0	7.0	
Lane Grp Cap (vph)	469	1516	756	353	1007		293	647		244	480	
v/s Ratio Prot	c0.06	c0.15	0.02	0.01	c0.25		c0.07	0.07		0.01	0.05	
v/s Ratio Perm	0.08		0.09	0.07			c0.17			0.03		
v/c Ratio	0.23	0.30	0.18	0.23	0.81		0.81	0.32		0.16	0.28	
Uniform Delay, d1	11.9	15.8	10.1	21.8	33.3		32.8	34.7		32.8	37.8	
Progression Factor	0.92	1.00	2.24	1.00	1.00		0.91	0.85		1.00	1.00	
Incremental Delay, d2	0.9	0.4	0.1	0.3	6.9		15.1	1.0		0.3	1.1	
Delay (s)	11.9	16.2	22.7	22.1	40.2		45.1	30.7		33.1	38.9	
Level of Service	B	B	C	C	D		D	C		C	D	
Approach Delay (s)		17.5			38.6			38.0			38.0	
Approach LOS		B			D			D			D	

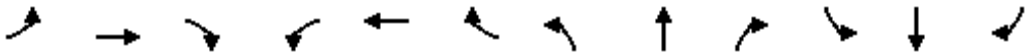
Intersection Summary			
HCM Average Control Delay	31.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	71.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	126	273	54	160	98	328	380	63	91	258	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	12	11	12	12	11	13	12	10	11	12
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.90		1.00	0.94		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1633	2808		1463	3015		1589	3257		1549	3135	
Flt Permitted	0.57	1.00		0.42	1.00		0.46	1.00		0.48	1.00	
Satd. Flow (perm)	986	2808		653	3015		772	3257		790	3135	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	62	133	287	57	168	103	345	400	66	96	272	57
RTOR Reduction (vph)	0	208	0	0	75	0	0	13	0	0	17	0
Lane Group Flow (vph)	62	212	0	57	196	0	345	453	0	96	312	0
Confl. Peds. (#/hr)	20					20	1		2	2		1
Heavy Vehicles (%)	4%	5%	6%	13%	6%	5%	4%	6%	5%	3%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	35.8	28.8		35.8	28.8		53.2	41.9		38.6	31.3	
Effective Green, g (s)	35.8	28.8		35.8	28.8		53.2	41.9		38.6	31.3	
Actuated g/C Ratio	0.34	0.27		0.34	0.27		0.51	0.40		0.37	0.30	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.5	7.0		3.5	7.0		3.5	7.0		3.5	7.0	
Lane Grp Cap (vph)	379	770		277	827		530	1300		343	935	
v/s Ratio Prot	0.01	c0.08		c0.01	0.07		c0.11	0.14		0.02	0.10	
v/s Ratio Perm	0.04			0.06			c0.22			0.08		
v/c Ratio	0.16	0.27		0.21	0.24		0.65	0.35		0.28	0.33	
Uniform Delay, d1	23.7	29.9		23.8	29.6		16.6	22.0		22.4	28.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.99	0.87	
Incremental Delay, d2	0.2	0.9		0.4	0.7		3.0	0.7		0.5	0.9	
Delay (s)	23.9	30.8		24.3	30.3		19.6	22.8		22.8	26.0	
Level of Service	C	C		C	C		B	C		C	C	
Approach Delay (s)		29.9			29.2			21.4			25.3	
Approach LOS		C			C			C			C	

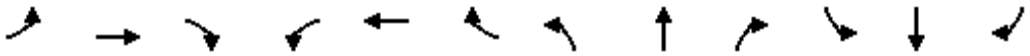
Intersection Summary			
HCM Average Control Delay	25.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	66.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	165	392	79	6	401	108	65	577	7	80	309	100
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	9	11	12	9	9	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.97		1.00	1.00		1.00	0.96	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		2890			2887		1436	3185		1450	2788	
Flt Permitted		0.58			0.95		0.43	1.00		0.29	1.00	
Satd. Flow (perm)		1703			2733		654	3185		448	2788	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	183	436	88	7	446	120	72	641	8	89	343	111
RTOR Reduction (vph)	0	17	0	0	37	0	0	1	0	0	48	0
Lane Group Flow (vph)	0	690	0	0	536	0	72	648	0	89	406	0
Confl. Peds. (#/hr)	9		11	11		9	11		14	14		11
Heavy Vehicles (%)	3%	6%	18%	50%	6%	6%	7%	3%	50%	6%	7%	2%
Turn Type	pm+pt			Perm			pm+pt			pm+pt		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			19.0		26.0	22.0		26.0	22.0	
Effective Green, g (s)		27.0			19.0		26.0	22.0		26.0	22.0	
Actuated g/C Ratio		0.42			0.29		0.40	0.34		0.40	0.34	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		780			799		310	1078		241	944	
v/s Ratio Prot		c0.05					0.01	c0.20		c0.02	0.15	
v/s Ratio Perm		c0.31			0.20		0.08			0.13		
v/c Ratio		0.88			0.67		0.23	0.60		0.37	0.43	
Uniform Delay, d1		17.6			20.2		12.4	17.9		12.8	16.6	
Progression Factor		1.00			1.58		0.88	0.69		1.00	1.00	
Incremental Delay, d2		14.0			2.3		1.6	2.3		4.3	1.4	
Delay (s)		31.5			34.4		12.5	14.6		17.1	18.1	
Level of Service		C			C		B	B		B	B	
Approach Delay (s)		31.5			34.4			14.4			17.9	
Approach LOS		C			C			B			B	

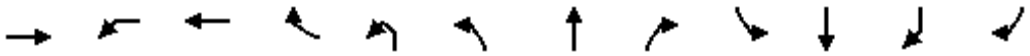
Intersection Summary			
HCM Average Control Delay	24.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	70.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	49	111	46	68	127	13	36	632	77	10	359	43
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	0.99		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1665	1856		1612	1938		1658	3213		1138	3197	
Flt Permitted	0.67	1.00		0.66	1.00		0.51	1.00		0.32	1.00	
Satd. Flow (perm)	1166	1856		1111	1938		889	3213		386	3197	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	51	114	47	70	131	13	37	652	79	10	370	44
RTOR Reduction (vph)	0	23	0	0	6	0	0	14	0	0	14	0
Lane Group Flow (vph)	51	138	0	70	138	0	37	717	0	10	400	0
Confl. Peds. (#/hr)	10		16	16		10	4		6	6		4
Confl. Bikes (#/hr)			4	4								
Heavy Vehicles (%)	2%	4%	5%	5%	4%	0%	3%	4%	8%	50%	5%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.48	0.48		0.48	0.48	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	431	685		410	716		424	1532		184	1525	
v/s Ratio Prot		c0.07			0.07			c0.22			0.13	
v/s Ratio Perm	0.04			0.06			0.04			0.03		
v/c Ratio	0.12	0.20		0.17	0.19		0.09	0.47		0.05	0.26	
Uniform Delay, d1	13.5	14.0		13.8	13.9		9.3	11.4		9.1	10.2	
Progression Factor	1.00	1.00		1.73	1.80		1.00	1.00		0.50	0.51	
Incremental Delay, d2	0.6	0.7		0.7	0.4		0.4	1.0		0.5	0.4	
Delay (s)	14.1	14.6		24.5	25.4		9.7	12.5		5.1	5.6	
Level of Service	B	B		C	C		A	B		A	A	
Approach Delay (s)		14.5			25.1			12.3			5.5	
Approach LOS		B			C			B			A	

Intersection Summary			
HCM Average Control Delay	12.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	58.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR	SBR2
Lane Configurations												
Volume (vph)	422	160	556	14	3	14	3	46	10	0	2	4
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	12	12	16	12	12	16	12	12
Total Lost time (s)	5.0		5.0				4.0			4.0		
Lane Util. Factor	0.95		0.95				1.00			1.00		
Frpb, ped/bikes	1.00		1.00				1.00			0.99		
Flpb, ped/bikes	1.00		1.00				1.00			1.00		
Frt	1.00		1.00				0.91			0.95		
Flt Protected	1.00		0.99				0.99			0.97		
Satd. Flow (prot)	2956		2958				1732			1864		
Flt Permitted	1.00		0.67				0.94			0.87		
Satd. Flow (perm)	2956		2007				1650			1672		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	444	168	585	15	3	15	3	48	11	0	2	4
RTOR Reduction (vph)	0	0	2	0	0	0	38	0	0	3	0	0
Lane Group Flow (vph)	444	0	766	0	0	0	31	0	0	14	0	0
Confl. Peds. (#/hr)		7		6		3					3	
Confl. Bikes (#/hr)		1										
Heavy Vehicles (%)	8%	8%	6%	0%	0%	8%	0%	5%	0%	0%	0%	0%
Turn Type		custom			Perm	Perm			Perm			
Protected Phases	8	7	4				2			6		
Permitted Phases		4 7			2	2			6			
Actuated Green, G (s)	18.0		27.0				14.0			14.0		
Effective Green, g (s)	18.0		27.0				14.0			14.0		
Actuated g/C Ratio	0.28		0.42				0.22			0.22		
Clearance Time (s)	5.0		5.0				4.0			4.0		
Lane Grp Cap (vph)	819		921				355			360		
v/s Ratio Prot	0.15		c0.08									
v/s Ratio Perm			c0.27				c0.02			0.01		
v/c Ratio	0.54		0.83				0.09			0.04		
Uniform Delay, d1	20.0		17.0				20.4			20.2		
Progression Factor	1.33		0.76				1.00			1.00		
Incremental Delay, d2	1.5		8.3				0.5			0.2		
Delay (s)	28.1		21.2				20.9			20.4		
Level of Service	C		C				C			C		
Approach Delay (s)	28.1		21.2				20.9			20.4		
Approach LOS	C		C				C			C		

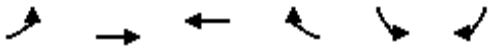
Intersection Summary			
HCM Average Control Delay	34.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	78.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



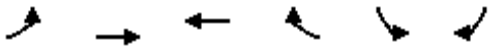
Movement	NEL	NER
Lane Configurations		
Volume (vph)	1	213
Ideal Flow (vphpl)	1800	1800
Lane Width	12	12
Total Lost time (s)	5.0	
Lane Util. Factor	1.00	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Frt	0.87	
Flt Protected	1.00	
Satd. Flow (prot)	1430	
Flt Permitted	1.00	
Satd. Flow (perm)	1430	
Peak-hour factor, PHF	0.95	0.95
Adj. Flow (vph)	1	224
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	225	0
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Heavy Vehicles (%)	0%	9%
Turn Type		
Protected Phases	3	
Permitted Phases		
Actuated Green, G (s)	10.0	
Effective Green, g (s)	10.0	
Actuated g/C Ratio	0.15	
Clearance Time (s)	5.0	
Lane Grp Cap (vph)	220	
v/s Ratio Prot	c0.16	
v/s Ratio Perm		
v/c Ratio	1.02	
Uniform Delay, d1	27.5	
Progression Factor	1.08	
Incremental Delay, d2	65.9	
Delay (s)	95.6	
Level of Service	F	
Approach Delay (s)	95.6	
Approach LOS	F	

Intersection Summary



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	186	556	575	64	41	156
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frt		1.00	0.98		1.00	0.85
Flt Protected		0.99	1.00		0.95	1.00
Satd. Flow (prot)		3217	3208		1629	1457
Flt Permitted		0.64	1.00		0.95	1.00
Satd. Flow (perm)		2071	3208		1629	1457
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	207	618	639	71	46	173
RTOR Reduction (vph)	0	0	13	0	0	128
Lane Group Flow (vph)	0	825	697	0	46	45
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		40.0	40.0		17.0	17.0
Effective Green, g (s)		40.0	40.0		17.0	17.0
Actuated g/C Ratio		0.62	0.62		0.26	0.26
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1274	1974		426	381
v/s Ratio Prot			0.22		0.03	
v/s Ratio Perm		c0.40				c0.03
v/c Ratio		0.65	0.35		0.11	0.12
Uniform Delay, d1		8.0	6.1		18.2	18.3
Progression Factor		1.40	1.25		0.93	0.86
Incremental Delay, d2		2.1	0.5		0.5	0.6
Delay (s)		13.3	8.2		17.5	16.3
Level of Service		B	A		B	B
Approach Delay (s)		13.3	8.2		16.6	
Approach LOS		B	A		B	

Intersection Summary			
HCM Average Control Delay	11.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	51	525	580	190	131	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	12	10	11	12	10	10
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frpb, ped/bikes		1.00	0.99		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.96		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2927	2906		1464	1373
Flt Permitted		0.84	1.00		0.95	1.00
Satd. Flow (perm)		2467	2906		1464	1373
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	54	553	611	200	138	57
RTOR Reduction (vph)	0	0	49	0	0	40
Lane Group Flow (vph)	0	607	762	0	138	17
Confl. Peds. (#/hr)	1			1		
Confl. Bikes (#/hr)	1			1		
Heavy Vehicles (%)	4%	9%	8%	12%	9%	4%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		38.0	38.0		19.0	19.0
Effective Green, g (s)		38.0	38.0		19.0	19.0
Actuated g/C Ratio		0.58	0.58		0.29	0.29
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1442	1699		428	401
v/s Ratio Prot			c0.26		c0.09	
v/s Ratio Perm		0.25				0.01
v/c Ratio		0.42	0.45		0.32	0.04
Uniform Delay, d1		7.4	7.6		18.0	16.5
Progression Factor		0.49	0.53		0.94	1.18
Incremental Delay, d2		0.7	0.7		2.0	0.2
Delay (s)		4.4	4.7		18.9	19.6
Level of Service		A	A		B	B
Approach Delay (s)		4.4	4.7		19.1	
Approach LOS		A	A		B	

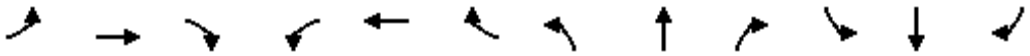
Intersection Summary			
HCM Average Control Delay	6.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



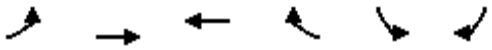
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	505	153	104	534	401	79
Ideal Flow (vphpl)	2300	1800	1800	2300	1800	1800
Lane Width	15	12	14	16	15	12
Total Lost time (s)	5.0		5.0	5.0	5.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	0.99		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.97		1.00	1.00	0.98	
Flt Protected	1.00		0.95	1.00	0.96	
Satd. Flow (prot)	2214		1769	2436	1816	
Flt Permitted	1.00		0.16	1.00	0.96	
Satd. Flow (perm)	2214		297	2436	1816	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	561	170	116	593	446	88
RTOR Reduction (vph)	17	0	0	0	11	0
Lane Group Flow (vph)	714	0	116	593	523	0
Confl. Peds. (#/hr)		4	4			8
Heavy Vehicles (%)	11%	7%	3%	7%	2%	2%
Turn Type			Perm			
Protected Phases	4			8	2	
Permitted Phases			8			
Actuated Green, G (s)	31.0		31.0	31.0	24.0	
Effective Green, g (s)	31.0		31.0	31.0	24.0	
Actuated g/C Ratio	0.48		0.48	0.48	0.37	
Clearance Time (s)	5.0		5.0	5.0	5.0	
Lane Grp Cap (vph)	1056		142	1162	671	
v/s Ratio Prot	0.32			0.24	c0.29	
v/s Ratio Perm			c0.39			
v/c Ratio	0.68		0.82	0.51	0.78	
Uniform Delay, d1	13.1		14.6	11.8	18.2	
Progression Factor	1.23		1.00	1.00	1.00	
Incremental Delay, d2	3.3		38.5	1.6	8.7	
Delay (s)	19.4		53.1	13.4	26.9	
Level of Service	B		D	B	C	
Approach Delay (s)	19.4			19.9	26.9	
Approach LOS	B			B	C	

Intersection Summary			
HCM Average Control Delay	21.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	77.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	560	85	251	612	9	68	0	177	1	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	15	13	11	11	12	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0	4.0	3.0	3.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00		0.95	
Satd. Flow (prot)	1881	3213	1422	1589	3138	1366		1642	1443		969	
Flt Permitted	0.39	1.00	1.00	0.37	1.00	1.00		0.76	1.00		0.71	
Satd. Flow (perm)	778	3213	1422	614	3138	1366		1309	1443		722	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	622	94	279	680	10	76	0	197	1	0	0
RTOR Reduction (vph)	0	0	37	0	0	2	0	0	173	0	0	0
Lane Group Flow (vph)	1	622	57	279	680	8	0	76	24	0	1	0
Heavy Vehicles (%)	0%	10%	4%	4%	9%	12%	18%	0%	6%	100%	0%	0%
Turn Type	Perm		Perm	custom		custom	Perm		Perm	Perm		
Protected Phases		4		3	3 8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)	51.5	51.5	51.5	66.6	66.6	66.6		10.4	10.4		10.4	
Effective Green, g (s)	51.5	51.5	51.5	66.6	66.6	66.6		10.4	10.4		10.4	
Actuated g/C Ratio	0.61	0.61	0.61	0.78	0.78	0.78		0.12	0.12		0.12	
Clearance Time (s)	4.0	4.0	4.0	3.0		4.0		4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0		3.0	
Lane Grp Cap (vph)	471	1947	862	620	2459	1070		160	177		88	
v/s Ratio Prot		0.19		c0.06	0.22							
v/s Ratio Perm	0.00		0.04	c0.29		0.01		c0.06	0.02		0.00	
v/c Ratio	0.00	0.32	0.07	0.45	0.28	0.01		0.47	0.14		0.01	
Uniform Delay, d1	6.6	8.2	6.9	2.8	2.5	2.0		34.8	33.3		32.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	0.0	0.4	0.1	0.5	0.1	0.0		2.2	0.4		0.1	
Delay (s)	6.6	8.6	7.0	3.3	2.6	2.0		37.0	33.6		32.8	
Level of Service	A	A	A	A	A	A		D	C		C	
Approach Delay (s)		8.4			2.8			34.6			32.8	
Approach LOS		A			A			C			C	

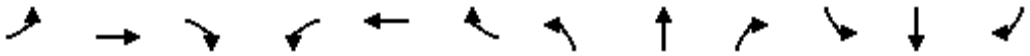
Intersection Summary			
HCM Average Control Delay	9.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	46.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	12	774	795	43	23	9
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	12	10	10
Total Lost time (s)		5.0	5.0		3.0	
Lane Util. Factor		0.95	0.95		1.00	
Frt		1.00	0.99		0.96	
Flt Protected		1.00	1.00		0.97	
Satd. Flow (prot)		3038	3016		1486	
Flt Permitted		0.94	1.00		0.97	
Satd. Flow (perm)		2843	3016		1486	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	13	860	883	48	26	10
RTOR Reduction (vph)	0	0	4	0	9	0
Lane Group Flow (vph)	0	873	927	0	27	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type	Perm					
Protected Phases		4	8 2 11		5	
Permitted Phases	4					
Actuated Green, G (s)		33.0	64.0		7.0	
Effective Green, g (s)		33.0	64.0		7.0	
Actuated g/C Ratio		0.37	0.71		0.08	
Clearance Time (s)		5.0			3.0	
Lane Grp Cap (vph)		1042	2145		116	
v/s Ratio Prot			c0.31		c0.02	
v/s Ratio Perm		c0.31				
v/c Ratio		0.84	0.43		0.23	
Uniform Delay, d1		26.1	5.4		39.0	
Progression Factor		1.00	0.00		1.00	
Incremental Delay, d2		8.0	0.3		4.6	
Delay (s)		34.1	0.3		43.6	
Level of Service		C	A		D	
Approach Delay (s)		34.1	0.3		43.6	
Approach LOS		C	A		D	

Intersection Summary			
HCM Average Control Delay	17.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	42.4%	ICU Level of Service	A
Analysis Period (min)	15		

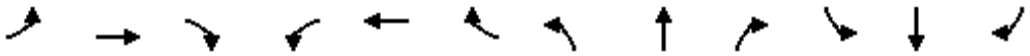
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	74	418	1	16	536	78	0	0	1	43	3	74
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12	12	11	12	11
Total Lost time (s)		4.0			4.0			3.0			3.0	3.0
Lane Util. Factor		1.00			0.95			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			0.92			1.00	0.96
Flpb, ped/bikes		1.00			1.00			1.00			0.98	1.00
Frt		1.00			0.98			0.86			1.00	0.85
Flt Protected		0.99			1.00			1.00			0.96	1.00
Satd. Flow (prot)		1729			3229			1432			1610	1282
Flt Permitted		0.81			0.95			1.00			0.94	1.00
Satd. Flow (perm)		1411			3063			1432			1581	1282
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	82	464	1	18	596	87	0	0	1	48	3	82
RTOR Reduction (vph)	0	0	0	0	13	0	0	1	0	0	0	55
Lane Group Flow (vph)	0	547	0	0	688	0	0	0	0	0	51	27
Confl. Peds. (#/hr)	33		13	13		33	29		13	13		29
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	4%	3%	0%	0%	4%	0%	0%	0%	0%	5%	0%	11%
Turn Type	Perm			Prot			Perm			pm+pt		Perm
Protected Phases		4		3	3 4			1		2	1 2	
Permitted Phases	4				3		1	1		1 2		1 2
Actuated Green, G (s)		31.0			45.0			9.0			25.0	28.0
Effective Green, g (s)		31.0			45.0			9.0			25.0	28.0
Actuated g/C Ratio		0.36			0.53			0.11			0.29	0.33
Clearance Time (s)		4.0						3.0				
Lane Grp Cap (vph)		515			1649			152			470	422
v/s Ratio Prot					c0.07			0.00			c0.02	
v/s Ratio Perm		c0.39			0.15						c0.01	0.02
v/c Ratio		1.06			0.42			0.00			0.11	0.06
Uniform Delay, d1		27.0			12.1			34.0			21.9	19.5
Progression Factor		1.00			1.67			1.00			1.00	1.00
Incremental Delay, d2		57.2			0.1			0.0			0.5	0.3
Delay (s)		84.2			20.2			34.0			22.3	19.8
Level of Service		F			C			C			C	B
Approach Delay (s)		84.2			20.2			34.0			20.8	
Approach LOS		F			C			C			C	

Intersection Summary			
HCM Average Control Delay	45.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	70.1%	ICU Level of Service	C
Analysis Period (min)	15		

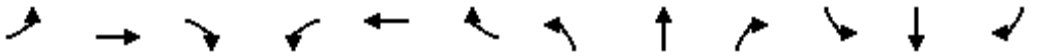
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	598	27	35	997	57	34	17	48	23	22	87
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	16	10	10	16	8	15	8	8	14	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			0.98	
Flpb, ped/bikes	0.97	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.99			0.93			0.91	
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.99	
Satd. Flow (prot)	1555	3022		1587	3022			1787			1700	
Flt Permitted	0.18	1.00		0.37	1.00			0.89			0.95	
Satd. Flow (perm)	292	3022		610	3022			1613			1628	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	41	623	28	36	1039	59	35	18	50	24	23	91
RTOR Reduction (vph)	0	5	0	0	6	0	0	32	0	0	23	0
Lane Group Flow (vph)	41	646	0	36	1092	0	0	71	0	0	115	0
Confl. Peds. (#/hr)	145		16	16		145	17		19	19		17
Confl. Bikes (#/hr)	5					5			2	2		
Heavy Vehicles (%)	0%	5%	0%	0%	4%	2%	0%	0%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			22.0			22.0	
Effective Green, g (s)	34.0	34.0		34.0	34.0			23.0			23.0	
Actuated g/C Ratio	0.52	0.52		0.52	0.52			0.35			0.35	
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0			5.0	
Lane Grp Cap (vph)	153	1581		319	1581			571			576	
v/s Ratio Prot		0.21			c0.36							
v/s Ratio Perm	0.14			0.06				0.04			c0.07	
v/c Ratio	0.27	0.41		0.11	0.69			0.12			0.20	
Uniform Delay, d1	8.6	9.4		7.9	11.6			14.2			14.6	
Progression Factor	1.00	1.00		0.70	1.37			1.00			1.00	
Incremental Delay, d2	4.3	0.8		0.6	2.2			0.4			0.8	
Delay (s)	12.8	10.2		6.1	18.1			14.6			15.4	
Level of Service	B	B		A	B			B			B	
Approach Delay (s)		10.3			17.7			14.6			15.4	
Approach LOS		B			B			B			B	

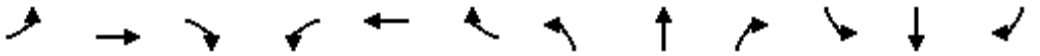
Intersection Summary			
HCM Average Control Delay	15.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	787	5	31	619	40	0	0	0	578	88	375
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00				0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.67				1.00	1.00	0.98
Flpb, ped/bikes	0.92	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	790	3379		1710	3226	514				3285	1731	1481
Flt Permitted	0.40	1.00		0.14	1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	336	3379		248	3226	514				3285	1731	1481
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	26	828	5	33	652	42	0	0	0	608	93	395
RTOR Reduction (vph)	0	0	0	0	0	18	0	0	0	0	0	168
Lane Group Flow (vph)	26	833	0	33	652	24	0	0	0	608	93	227
Confl. Peds. (#/hr)	350		4	4		350	8		6	6		8
Confl. Bikes (#/hr)	7		1	1		7						
Heavy Vehicles (%)	100%	1%	20%	0%	6%	100%	0%	0%	0%	1%	4%	1%
Turn Type	pm+pt			pm+pt		Perm				Split		Perm
Protected Phases	7	4		3	8					6	6	
Permitted Phases	4			8		8						6
Actuated Green, G (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Effective Green, g (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Actuated g/C Ratio	0.33	0.33		0.56	0.56	0.56				0.23	0.23	0.23
Clearance Time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Grp Cap (vph)	160	1118		634	1812	289				758	399	342
v/s Ratio Prot	0.02	c0.25		0.02	c0.20					c0.19	0.05	
v/s Ratio Perm	0.04			0.01		0.05						0.15
v/c Ratio	0.16	0.75		0.05	0.36	0.08				0.80	0.23	0.66
Uniform Delay, d1	31.6	38.6		15.2	15.7	13.1				47.2	40.6	45.4
Progression Factor	0.84	0.86		0.34	0.75	1.27				1.00	1.00	1.00
Incremental Delay, d2	2.1	4.4		0.1	0.4	0.4				8.8	1.4	9.8
Delay (s)	28.6	37.4		5.2	12.2	17.0				56.0	42.0	55.2
Level of Service	C	D		A	B	B				E	D	E
Approach Delay (s)		37.2			12.1			0.0			54.5	
Approach LOS		D			B			A			D	

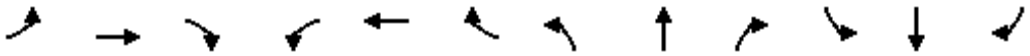
Intersection Summary			
HCM Average Control Delay	37.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	52.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	338	809	218	53	560	280	100	247	54	39	0	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.67		1.00	0.91	1.00		0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.97		1.00	1.00	0.85		1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (prot)	3285	3263		1710	3138	1018		3301	1359	855		734
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (perm)	3285	3263		1710	3138	1018		3301	1359	855		734
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	356	852	229	56	589	295	105	260	57	41	0	32
RTOR Reduction (vph)	0	18	0	0	0	222	0	0	42	0	0	30
Lane Group Flow (vph)	356	1063	0	56	589	73	0	365	15	41	0	2
Confl. Peds. (#/hr)	327		13	13		327	6		60	60		6
Confl. Bikes (#/hr)	6					6						
Heavy Vehicles (%)	1%	1%	0%	0%	9%	1%	0%	3%	2%	100%	0%	100%
Turn Type	Prot			Prot		Perm	Split		Perm	Prot		custom
Protected Phases	7	4		3	8		2	2		6		
Permitted Phases						8			2			6
Actuated Green, G (s)	44.0	68.0		8.0	32.0	32.0		28.0	28.0	8.0		8.0
Effective Green, g (s)	44.0	68.0		8.0	32.0	32.0		28.0	28.0	8.0		8.0
Actuated g/C Ratio	0.34	0.52		0.06	0.25	0.25		0.22	0.22	0.06		0.06
Clearance Time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	1112	1707		105	772	251		711	293	53		45
v/s Ratio Prot	0.11	c0.33		0.03	c0.19			c0.11		c0.05		
v/s Ratio Perm						0.07			0.01			0.00
v/c Ratio	0.32	0.62		0.53	0.76	0.29		0.51	0.05	0.77		0.04
Uniform Delay, d1	31.9	21.9		59.2	45.5	39.8		45.0	40.5	60.1		57.4
Progression Factor	0.94	0.17		1.00	1.00	1.00		0.94	1.00	1.00		1.00
Incremental Delay, d2	0.5	1.1		18.0	7.0	2.9		2.6	0.3	49.7		0.4
Delay (s)	30.5	4.7		77.2	52.5	42.7		45.1	40.7	109.9		57.8
Level of Service	C	A		E	D	D		D	D	F		E
Approach Delay (s)		11.1			50.9			44.5			87.0	
Approach LOS		B			D			D			F	

Intersection Summary			
HCM Average Control Delay	31.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	68.0%	ICU Level of Service	C
Analysis Period (min)	15		

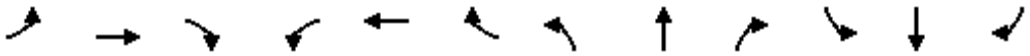
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	885	165	101	813	0	74	0	79	9	14	7
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	11	11	8	12	12	12	14	15	12
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes		0.99		1.00	1.00		1.00		0.98	1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00		0.97		1.00	0.99	1.00	
Frt		0.98		1.00	1.00		1.00		0.85	1.00	0.95	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		2997		1648	3149		1387		1451	1803	1857	
Flt Permitted		1.00		0.20	1.00		0.74		1.00	0.95	1.00	
Satd. Flow (perm)		2997		341	3149		1085		1451	1803	1857	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	922	172	105	847	0	77	0	82	9	15	7
RTOR Reduction (vph)	0	15	0	0	0	0	0	0	56	0	5	0
Lane Group Flow (vph)	0	1079	0	105	847	0	77	0	26	9	17	0
Confl. Peds. (#/hr)	67		19	19		67	38		12	12		38
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	2%	11%	0%	5%	0%	19%	0%	3%	0%	0%	0%
Turn Type				Perm			custom		custom	Perm		
Protected Phases		4			8						6	
Permitted Phases				8			2		2	6		
Actuated Green, G (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Effective Green, g (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Actuated g/C Ratio		0.60		0.60	0.60		0.32		0.32	0.32	0.32	
Clearance Time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)		1798		205	1889		347		464	577	594	
v/s Ratio Prot		c0.36			0.27						0.01	
v/s Ratio Perm				0.31			c0.07		0.02	0.00		
v/c Ratio		0.60		0.51	0.45		0.22		0.06	0.02	0.03	
Uniform Delay, d1		12.5		11.5	10.9		24.9		23.5	23.2	23.3	
Progression Factor		1.00		1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		1.5		8.9	0.8		1.5		0.2	0.0	0.1	
Delay (s)		14.0		20.4	11.7		26.4		23.8	23.3	23.4	
Level of Service		B		C	B		C		C	C	C	
Approach Delay (s)		14.0			12.7			25.0			23.4	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	14.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.9%	ICU Level of Service	B
Analysis Period (min)	15		

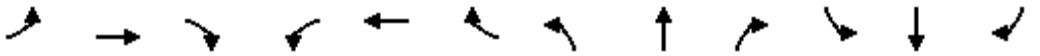
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	290	0	1188	208	658	0	0	787	490
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	12	10	10	12	12	11	12
Total Lost time (s)				4.0		5.0	3.0	4.0			4.0	
Lane Util. Factor				0.95		1.00	1.00	0.91			0.91	
Frpb, ped/bikes				1.00		1.00	1.00	1.00			0.98	
Flpb, ped/bikes				1.00		1.00	1.00	1.00			1.00	
Frt				1.00		0.85	1.00	1.00			0.94	
Flt Protected				0.95		1.00	0.95	1.00			1.00	
Satd. Flow (prot)				1540		1530	1535	4327			4269	
Flt Permitted				0.95		1.00	0.95	1.00			1.00	
Satd. Flow (perm)				1540		1530	1535	4327			4269	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	0	0	299	0	1225	214	678	0	0	811	505
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	299	0	1225	214	678	0	0	1316	0
Confl. Peds. (#/hr)	2					2	18		3	3		18
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%	4%	6%	0%	0%	4%	1%
Turn Type				Split		Prot	Prot					
Protected Phases				8	8	8	5	2			6	
Permitted Phases												
Actuated Green, G (s)				30.0		30.0	32.0	66.0			31.0	
Effective Green, g (s)				31.0		30.0	32.0	66.0			31.0	
Actuated g/C Ratio				0.30		0.29	0.30	0.63			0.30	
Clearance Time (s)				5.0		5.0	3.0	4.0			4.0	
Lane Grp Cap (vph)				455		437	468	2720			1260	
v/s Ratio Prot				0.19		c0.80	c0.14	0.16			c0.31	
v/s Ratio Perm												
v/c Ratio				0.66		2.80	0.46	0.25			1.17dr	
Uniform Delay, d1				32.4		37.5	29.5	8.6			37.0	
Progression Factor				1.00		1.00	0.63	2.06			1.00	
Incremental Delay, d2				7.2		817.8	2.7	0.2			37.8	
Delay (s)				39.6		855.3	21.3	17.8			74.8	
Level of Service				D		F	C	B			E	
Approach Delay (s)		0.0			695.3			18.7			74.8	
Approach LOS		A			F			B			E	

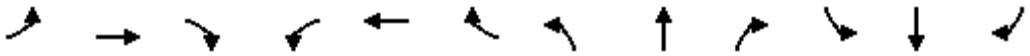
Intersection Summary			
HCM Average Control Delay	314.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.41		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	98.8%	ICU Level of Service	F
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	324	770	144	0	0	0	0	542	401	355	721	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	13	12	12	12	12	12	10	10	8	12	12	12
Total Lost time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Util. Factor	0.91	0.91						0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00						1.00	1.00	1.00	1.00	
Flpb, ped/bikes	0.99	1.00						1.00	1.00	1.00	1.00	
Frt	1.00	0.98						1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1509	3157						4368	2244	1598	4680	
Flt Permitted	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1509	3157						4368	2244	1598	4680	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	341	811	152	0	0	0	0	571	422	374	759	0
RTOR Reduction (vph)	0	13	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	307	984	0	0	0	0	0	571	422	374	759	0
Confl. Peds. (#/hr)	6		1	1		6	6					6
Heavy Vehicles (%)	6%	1%	0%	0%	0%	0%	0%	5%	4%	7%	5%	0%
Turn Type	Perm								Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Actuated Green, G (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Effective Green, g (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Actuated g/C Ratio	0.32	0.32						0.27	0.27	0.30	0.59	
Clearance Time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Grp Cap (vph)	489	1022						1165	598	472	2763	
v/s Ratio Prot								0.13		c0.23	0.16	
v/s Ratio Perm	0.20	0.31							c0.19			
v/c Ratio	0.63	0.96						0.49	0.71	0.79	0.27	
Uniform Delay, d1	30.1	34.9						32.5	34.8	34.0	10.5	
Progression Factor	1.00	1.00						1.14	1.14	0.86	0.22	
Incremental Delay, d2	6.0	20.5						1.3	6.3	5.2	0.1	
Delay (s)	36.1	55.4						38.3	45.8	34.6	2.4	
Level of Service	D	E						D	D	C	A	
Approach Delay (s)		50.9			0.0			41.5			13.0	
Approach LOS		D			A			D			B	

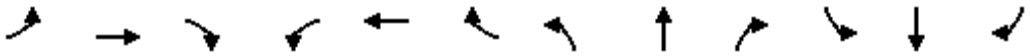
Intersection Summary			
HCM Average Control Delay	35.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	98.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	286	25	24	11	137	0	0	142	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	14	12	12	16	12
Total Lost time (s)				4.0	4.0		4.0	4.0			-3.0	
Lane Util. Factor				1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes				1.00	0.99		1.00	1.00			1.00	
Flpb, ped/bikes				1.00	1.00		1.00	1.00			1.00	
Frt				1.00	0.93		1.00	1.00			1.00	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1688	3133		1710	1846			1955	
Flt Permitted				0.95	1.00		0.56	1.00			1.00	
Satd. Flow (perm)				1688	3133		1003	1846			1955	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	301	26	25	12	144	0	0	149	5
RTOR Reduction (vph)	0	0	0	0	17	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	301	34	0	12	144	0	0	153	0
Confl. Peds. (#/hr)	2		2	2		2			6	6		
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	0%	4%	0%	0%	4%	0%
Turn Type				Perm			pm+pt					
Protected Phases					8		7	2			6	
Permitted Phases				8			2					
Actuated Green, G (s)				27.0	27.0		50.0	50.0			40.0	
Effective Green, g (s)				27.0	27.0		50.0	50.0			46.0	
Actuated g/C Ratio				0.32	0.32		0.59	0.59			0.54	
Clearance Time (s)				4.0	4.0		4.0	4.0			3.0	
Lane Grp Cap (vph)				536	995		648	1086			1058	
v/s Ratio Prot					0.01		0.00	c0.08			c0.08	
v/s Ratio Perm				c0.18			0.01					
v/c Ratio				0.56	0.03		0.02	0.13			0.14	
Uniform Delay, d1				24.1	20.0		10.3	7.8			9.7	
Progression Factor				1.00	1.00		1.06	1.18			1.00	
Incremental Delay, d2				4.2	0.1		0.1	0.3			0.3	
Delay (s)				28.3	20.1		11.0	9.5			10.0	
Level of Service				C	C		B	A			A	
Approach Delay (s)		0.0			27.1			9.6			10.0	
Approach LOS		A			C			A			A	

Intersection Summary			
HCM Average Control Delay	19.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	1.0
Intersection Capacity Utilization	36.7%	ICU Level of Service	A
Analysis Period (min)	15		

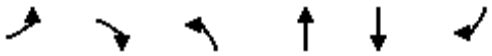
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	12	11	23	3	0	14	0	122	31	46	383	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	16	15	12	8	12	8	12	12	12	10	13	12
Total Lost time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.97			0.98			0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00			1.00		1.00	1.00	
Frt	1.00	0.90			0.89			0.97		1.00	1.00	
Flt Protected	0.95	1.00			0.99			1.00		0.95	1.00	
Satd. Flow (prot)	1935	1729			1550			1726		1590	1860	
Flt Permitted	0.75	1.00			0.98			1.00		0.62	1.00	
Satd. Flow (perm)	1517	1729			1533			1726		1044	1860	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	13	12	26	3	0	16	0	136	34	51	426	0
RTOR Reduction (vph)	0	18	0	0	11	0	0	11	0	0	0	0
Lane Group Flow (vph)	13	20	0	0	8	0	0	159	0	51	426	0
Confl. Peds. (#/hr)	1		11	11		1	1		10	10		1
Confl. Bikes (#/hr)			2	2			1		2	2		1
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Turn Type	Perm			Perm						pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Effective Green, g (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Actuated g/C Ratio	0.32	0.32			0.32			0.47		0.59	0.59	
Clearance Time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Grp Cap (vph)	482	549			487			812		659	1094	
v/s Ratio Prot		c0.01						0.09		0.01	c0.23	
v/s Ratio Perm	0.01				0.01					0.04		
v/c Ratio	0.03	0.04			0.02			0.20		0.08	0.39	
Uniform Delay, d1	20.0	20.0			19.9			13.1		8.3	9.3	
Progression Factor	1.00	1.00			1.00			1.00		0.96	0.85	
Incremental Delay, d2	0.1	0.1			0.1			0.5		0.2	1.0	
Delay (s)	20.1	20.1			20.0			13.7		8.2	8.9	
Level of Service	C	C			B			B		A	A	
Approach Delay (s)		20.1			20.0			13.7			8.8	
Approach LOS		C			B			B			A	

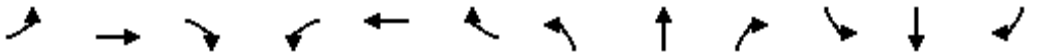
Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	41.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



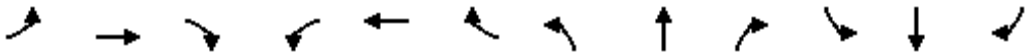
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	46	39	10	183	273	27
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	14	12	13	12	10	12
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.94		1.00	1.00	0.99	
Flt Protected	0.97		0.95	1.00	1.00	
Satd. Flow (prot)	1754		1765	1782	1656	
Flt Permitted	0.97		0.52	1.00	1.00	
Satd. Flow (perm)	1754		966	1782	1656	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	51	43	11	203	303	30
RTOR Reduction (vph)	29	0	0	0	5	0
Lane Group Flow (vph)	65	0	11	203	328	0
Confl. Peds. (#/hr)			2			2
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.0		36.0	36.0	36.0	
Effective Green, g (s)	21.0		36.0	36.0	36.0	
Actuated g/C Ratio	0.32		0.55	0.55	0.55	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	567		535	987	917	
v/s Ratio Prot	c0.04			0.11	c0.20	
v/s Ratio Perm			0.01			
v/c Ratio	0.11		0.02	0.21	0.36	
Uniform Delay, d1	15.5		6.5	7.3	8.1	
Progression Factor	1.00		0.46	0.60	1.44	
Incremental Delay, d2	0.4		0.1	0.5	0.9	
Delay (s)	15.9		3.1	4.8	12.6	
Level of Service	B		A	A	B	
Approach Delay (s)	15.9			4.7	12.6	
Approach LOS	B			A	B	

Intersection Summary			
HCM Average Control Delay	10.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	28.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



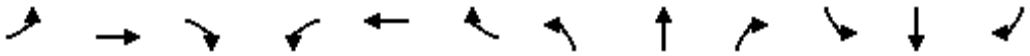
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	30	265	9	257	122	0	0	275	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	14	16	12	12	15	12	12	13	10
Total Lost time (s)					4.0		4.0	4.0			3.0	3.0
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Frt					1.00		1.00	1.00			1.00	0.85
Flt Protected					1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3772		1693	1678			1738	1428
Flt Permitted					1.00		0.50	1.00			1.00	1.00
Satd. Flow (perm)					3772		887	1678			1738	1428
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	32	279	9	271	128	0	0	289	18
RTOR Reduction (vph)	0	0	0	0	2	0	0	0	0	0	0	10
Lane Group Flow (vph)	0	0	0	0	318	0	271	128	0	0	289	8
Confl. Peds. (#/hr)	1					1			5	5		
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	1%	18%	0%	0%	7%	0%
Turn Type				Split			pm+pt					Perm
Protected Phases				8	8		7	2			6	
Permitted Phases							2					6
Actuated Green, G (s)					26.0		51.0	51.0			38.0	38.0
Effective Green, g (s)					26.0		51.0	51.0			38.0	38.0
Actuated g/C Ratio					0.31		0.60	0.60			0.45	0.45
Clearance Time (s)					4.0		4.0	4.0			3.0	3.0
Lane Grp Cap (vph)					1154		627	1007			777	638
v/s Ratio Prot					c0.08		c0.05	0.08			0.17	
v/s Ratio Perm							c0.21					0.01
v/c Ratio					0.28		0.43	0.13			0.37	0.01
Uniform Delay, d1					22.4		12.7	7.4			15.6	13.1
Progression Factor					1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2					0.6		2.2	0.3			1.4	0.0
Delay (s)					23.0		14.9	7.6			17.0	13.1
Level of Service					C		B	A			B	B
Approach Delay (s)		0.0			23.0			12.6			16.7	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM Average Control Delay	17.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	95	94	38	133	203	30	59	702	44
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	15	12	12	12	12	12	13	12
Total Lost time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.98		1.00	0.98		1.00	0.99	
Flt Protected					0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1896		1710	3286		1707	3467	
Flt Permitted					0.98		0.25	1.00		0.59	1.00	
Satd. Flow (perm)					1896		447	3286		1063	3467	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	106	104	42	148	226	33	66	780	49
RTOR Reduction (vph)	0	0	0	0	10	0	0	15	0	0	6	0
Lane Group Flow (vph)	0	0	0	0	242	0	148	244	0	66	823	0
Confl. Peds. (#/hr)							5		5	5		5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	1%	0%
Turn Type				Split			pm+pt			pm+pt		
Protected Phases				8	8		5	2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)					23.0		41.0	34.0		41.0	34.0	
Effective Green, g (s)					23.0		41.0	34.0		41.0	34.0	
Actuated g/C Ratio					0.31		0.55	0.45		0.55	0.45	
Clearance Time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Grp Cap (vph)					581		362	1490		641	1572	
v/s Ratio Prot					c0.13		c0.04	0.07		0.01	c0.24	
v/s Ratio Perm							0.19			0.05		
v/c Ratio					0.42		0.41	0.16		0.10	0.52	
Uniform Delay, d1					20.7		16.4	12.1		8.2	14.7	
Progression Factor					1.00		0.83	0.80		1.00	1.00	
Incremental Delay, d2					2.2		3.4	0.2		0.3	1.3	
Delay (s)					22.9		17.0	9.9		8.5	15.9	
Level of Service					C		B	A		A	B	
Approach Delay (s)		0.0			22.9			12.5			15.4	
Approach LOS		A			C			B			B	

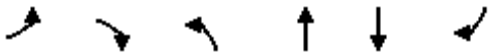
Intersection Summary			
HCM Average Control Delay	15.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	53.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	32	49	12	8	63	63	5	271	20	159	588	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	16	12	12	10	11	12	12	11	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.94		1.00	0.99		1.00	0.99	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1967			1654		1595	3178		1704	3231	
Flt Permitted		0.88			0.99		0.34	1.00		0.56	1.00	
Satd. Flow (perm)		1765			1638		571	3178		998	3231	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	36	54	13	9	70	70	6	301	22	177	653	56
RTOR Reduction (vph)	0	7	0	0	43	0	0	7	0	0	8	0
Lane Group Flow (vph)	0	96	0	0	106	0	6	316	0	177	701	0
Confl. Peds. (#/hr)	2					2	1		6	6		1
Confl. Bikes (#/hr)			1	1			3					3
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	0%	3%	0%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Effective Green, g (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Actuated g/C Ratio		0.33			0.33		0.56	0.56		0.56	0.56	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		588			546		320	1780		559	1809	
v/s Ratio Prot								0.10			c0.22	
v/s Ratio Perm		0.05			c0.06		0.01			0.18		
v/c Ratio		0.16			0.19		0.02	0.18		0.32	0.39	
Uniform Delay, d1		17.6			17.8		7.3	8.1		8.8	9.3	
Progression Factor		1.00			1.00		1.00	1.00		0.27	0.25	
Incremental Delay, d2		0.6			0.8		0.1	0.2		1.3	0.5	
Delay (s)		18.2			18.6		7.4	8.3		3.7	2.9	
Level of Service		B			B		A	A		A	A	
Approach Delay (s)		18.2			18.6			8.3			3.0	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	6.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	49.2%	ICU Level of Service	A
Analysis Period (min)	15		

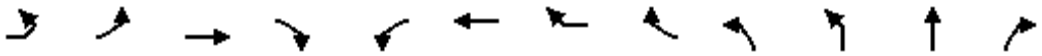
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	35	182	64	236	557	77
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	37	192	67	248	586	81

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	228	150	166	391	276
Volume Left (vph)	37	67	0	0	0
Volume Right (vph)	192	0	0	0	81
Hadj (s)	-0.42	0.28	0.05	0.05	-0.15
Departure Headway (s)	5.5	6.3	6.1	5.7	5.5
Degree Utilization, x	0.35	0.26	0.28	0.62	0.42
Capacity (veh/h)	607	548	568	620	642
Control Delay (s)	11.5	10.3	10.2	16.2	11.2
Approach Delay (s)	11.5	10.3		14.1	
Approach LOS	B	B		B	

Intersection Summary			
Delay	12.6		
HCM Level of Service	B		
Intersection Capacity Utilization	51.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	32	35	371	18	18	381	65	73	55	68	351	31
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	0.95	
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.93			1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Frt		1.00	1.00	0.85	1.00	1.00	0.85			1.00	0.99	
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	
Satd. Flow (prot)		1612	1731	1530	1710	1731	1421			1710	3252	
Flt Permitted		0.14	1.00	1.00	0.52	1.00	1.00			0.14	1.00	
Satd. Flow (perm)		238	1731	1530	937	1731	1421			257	3252	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	36	39	412	20	20	423	72	81	61	76	390	34
RTOR Reduction (vph)	0	0	0	12	0	0	39	0	0	0	6	0
Lane Group Flow (vph)	0	75	412	8	20	423	114	0	0	137	418	0
Confl. Peds. (#/hr)		25					25					3
Heavy Vehicles (%)	6%	6%	4%	0%	0%	4%	0%	0%	0%	0%	4%	0%
Turn Type	Perm	pm+pt		Perm	Perm		Perm		Perm	Perm		
Protected Phases		7	4			8					2	
Permitted Phases	4	4		4	8		8		2	2		
Actuated Green, G (s)		44.0	44.0	44.0	25.0	25.0	25.0			28.0	28.0	
Effective Green, g (s)		44.0	44.0	44.0	25.0	25.0	25.0			28.0	28.0	
Actuated g/C Ratio		0.42	0.42	0.42	0.24	0.24	0.24			0.27	0.27	
Clearance Time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Grp Cap (vph)		303	725	641	223	412	338			69	867	
v/s Ratio Prot		0.04	c0.24			c0.24					0.13	
v/s Ratio Perm		0.07		0.01	0.02		0.08			c0.53		
v/c Ratio		0.25	0.57	0.01	0.09	1.03	0.34			1.99	0.48	
Uniform Delay, d1		21.5	23.3	17.8	31.1	40.0	33.1			38.5	32.4	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Incremental Delay, d2		1.9	3.2	0.0	0.8	51.3	2.7			491.0	1.9	
Delay (s)		23.4	26.5	17.9	31.9	91.3	35.8			529.5	34.3	
Level of Service		C	C	B	C	F	D			F	C	
Approach Delay (s)			25.7			75.1					155.2	
Approach LOS			C			E					F	

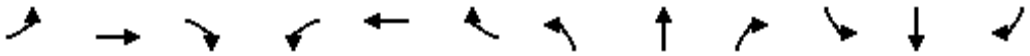
Intersection Summary			
HCM Average Control Delay	137.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.41		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	100.9%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations								
Volume (vph)	103	559	80	101	4	108	587	190
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5				4.5	4.5	
Lane Util. Factor	1.00	0.95				1.00	0.88	
Frpb, ped/bikes	1.00	1.00				1.00	1.00	
Flpb, ped/bikes	1.00	1.00				1.00	1.00	
Frt	1.00	0.96				1.00	0.85	
Flt Protected	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1705	3246				1710	2633	
Flt Permitted	0.38	1.00				0.95	1.00	
Satd. Flow (perm)	678	3246				1710	2633	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	114	621	89	112	4	120	652	211
RTOR Reduction (vph)	0	12	0	0	0	0	26	0
Lane Group Flow (vph)	114	810	0	0	0	124	837	0
Confl. Peds. (#/hr)	3							
Heavy Vehicles (%)	0%	2%	0%	0%	0%	0%	3%	0%
Turn Type	Perm				Split		Perm	
Protected Phases		6			9	9		
Permitted Phases	6						9	
Actuated Green, G (s)	27.5	27.5				20.5	20.5	
Effective Green, g (s)	27.5	27.5				20.5	20.5	
Actuated g/C Ratio	0.26	0.26				0.20	0.20	
Clearance Time (s)	4.5	4.5				4.5	4.5	
Lane Grp Cap (vph)	178	850				334	514	
v/s Ratio Prot		0.25				0.07		
v/s Ratio Perm	0.17						c0.32	
v/c Ratio	0.64	0.95				0.37	1.63	
Uniform Delay, d1	34.4	38.1				36.7	42.2	
Progression Factor	1.00	1.00				1.00	1.00	
Incremental Delay, d2	16.4	21.4				3.1	291.8	
Delay (s)	50.7	59.5				39.8	334.0	
Level of Service	D	E				D	F	
Approach Delay (s)		58.4				297.1		
Approach LOS		E				F		

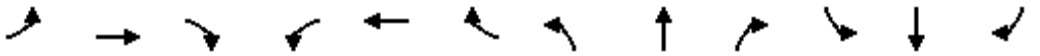
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	64	577	0	0	440	49	83	51	17	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	11	11	16	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.99			0.98				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		1681			1954			1843				
Flt Permitted		0.92			1.00			0.97				
Satd. Flow (perm)		1547			1954			1843				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	67	607	0	0	463	52	87	54	18	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	674	0	0	515	0	0	159	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		40.0			40.0			17.0				
Effective Green, g (s)		40.0			40.0			17.0				
Actuated g/C Ratio		0.62			0.62			0.26				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		952			1202			482				
v/s Ratio Prot					0.26							
v/s Ratio Perm		c0.44						0.09				
v/c Ratio		0.71			0.43			0.33				
Uniform Delay, d1		8.5			6.5			19.4				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		4.4			1.1			1.8				
Delay (s)		13.0			7.6			21.2				
Level of Service		B			A			C				
Approach Delay (s)		13.0			7.6			21.2			0.0	
Approach LOS		B			A			C			A	

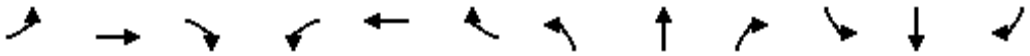
Intersection Summary			
HCM Average Control Delay	11.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	69	319	149	114	299	122	103	625	82	136	751	93
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	9	9	10	9
Total Lost time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.96	1.00	1.00	0.95	1.00	1.00	0.94
Flpb, ped/bikes		1.00	1.00		0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1981	1434		1945	1444	1546	3040	1296	1505	3069	1252
Flt Permitted		0.46	1.00		0.75	1.00	0.23	1.00	1.00	0.30	1.00	1.00
Satd. Flow (perm)		918	1434		1485	1444	379	3040	1296	468	3069	1252
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	73	336	157	120	315	128	108	658	86	143	791	98
RTOR Reduction (vph)	0	0	93	0	0	91	0	0	51	0	0	49
Lane Group Flow (vph)	0	409	64	0	435	37	108	658	35	143	791	49
Confl. Peds. (#/hr)	24		45	45		24	36		24	24		36
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	2%	2%	2%	2%	3%	2%	3%	5%	1%	2%	4%	3%
Turn Type	pm+pt		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		43.0	43.0		30.0	30.0	50.6	42.3	42.3	51.4	42.7	42.7
Effective Green, g (s)		43.0	43.0		30.0	30.0	50.6	42.3	42.3	51.4	42.7	42.7
Actuated g/C Ratio		0.41	0.41		0.29	0.29	0.48	0.40	0.40	0.49	0.41	0.41
Clearance Time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		477	587		424	413	275	1225	522	315	1248	509
v/s Ratio Prot		c0.08					0.03	0.22		c0.04	c0.26	
v/s Ratio Perm		0.27	0.04		c0.29	0.03	0.16		0.03	0.18		0.04
v/c Ratio		0.86	0.11		1.03	0.09	0.39	0.54	0.07	0.45	0.63	0.10
Uniform Delay, d1		28.2	19.2		37.5	27.5	16.4	23.9	19.2	15.9	24.9	19.2
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.75	1.55	2.68
Incremental Delay, d2		17.8	0.4		50.5	0.4	0.9	1.7	0.2	1.0	2.4	0.4
Delay (s)		46.0	19.5		88.0	27.9	17.3	25.6	19.5	28.9	41.1	52.0
Level of Service		D	B		F	C	B	C	B	C	D	D
Approach Delay (s)		38.6			74.3			23.9			40.4	
Approach LOS		D			E			C			D	

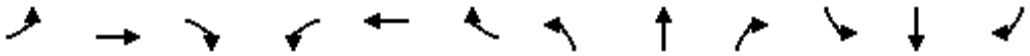
Intersection Summary			
HCM Average Control Delay	41.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	86.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	83	387	83	90	427	90	49	59	67	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		0.98			0.98			0.95				
Flt Protected		0.99			0.99			0.99				
Satd. Flow (prot)		1643			1643			1797				
Flt Permitted		0.85			0.85			0.99				
Satd. Flow (perm)		1401			1415			1797				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	87	407	87	95	449	95	52	62	71	0	0	0
RTOR Reduction (vph)	0	10	0	0	10	0	0	35	0	0	0	0
Lane Group Flow (vph)	0	571	0	0	629	0	0	150	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		40.0			40.0			17.0				
Effective Green, g (s)		40.0			40.0			17.0				
Actuated g/C Ratio		0.62			0.62			0.26				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		862			871			470				
v/s Ratio Prot												
v/s Ratio Perm		0.41			c0.44			0.08				
v/c Ratio		0.66			0.72			0.32				
Uniform Delay, d1		8.1			8.7			19.3				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		4.0			5.2			1.8				
Delay (s)		12.1			13.8			21.1				
Level of Service		B			B			C				
Approach Delay (s)		12.1			13.8			21.1			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM Average Control Delay	14.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.5%	ICU Level of Service	B
Analysis Period (min)	15		

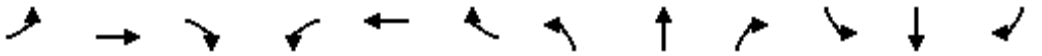
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	21	426	71	74	495	36	37	76	72	53	235	47
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	11	12	12	15	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.96		1.00	0.96		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		0.99	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.98	
Flt Protected		1.00	1.00		0.99	1.00		0.98	1.00		0.99	
Satd. Flow (prot)		1687	1382		1712	1417		1686	1455		1886	
Flt Permitted		0.97	1.00		0.89	1.00		0.84	1.00		0.94	
Satd. Flow (perm)		1634	1382		1537	1417		1436	1455		1780	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	22	448	75	78	521	38	39	80	76	56	247	49
RTOR Reduction (vph)	0	0	32	0	0	12	0	0	52	0	7	0
Lane Group Flow (vph)	0	470	43	0	599	26	0	119	24	0	345	0
Confl. Peds. (#/hr)	25		19	19		25	36		30	30		36
Confl. Bikes (#/hr)	1		2	2		1	3					3
Heavy Vehicles (%)	0%	3%	3%	0%	1%	0%	0%	1%	1%	0%	1%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Effective Green, g (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.32	0.32		0.32	
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Grp Cap (vph)		937	792		881	812		460	466		570	
v/s Ratio Prot												
v/s Ratio Perm		0.29	0.03		c0.39	0.02		0.08	0.02		c0.19	
v/c Ratio		0.50	0.05		0.68	0.03		0.26	0.05		0.60	
Uniform Delay, d1		9.6	7.0		11.2	7.0		18.9	17.6		21.5	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		1.9	0.1		4.2	0.1		1.4	0.2		4.7	
Delay (s)		11.5	7.2		15.4	7.0		20.3	17.8		26.2	
Level of Service		B	A		B	A		C	B		C	
Approach Delay (s)		10.9			14.9			19.3			26.2	
Approach LOS		B			B			B			C	

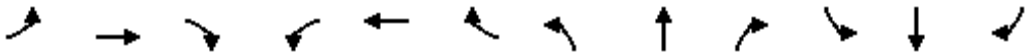
Intersection Summary			
HCM Average Control Delay	16.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	93.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	57	439	30	44	509	52	44	165	55	117	199	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	11	16	8	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	0.98	1.00		1.00	1.00		0.99	1.00	1.00	0.99	1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1530	3066		1651	3729		1585	1663	1370	1568	1680	1397
Flt Permitted	0.39	1.00		0.44	1.00		0.60	1.00	1.00	0.64	1.00	1.00
Satd. Flow (perm)	621	3066		773	3729		1001	1663	1370	1061	1680	1397
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	60	462	32	46	536	55	46	174	58	123	209	32
RTOR Reduction (vph)	0	8	0	0	12	0	0	0	35	0	0	19
Lane Group Flow (vph)	60	486	0	46	579	0	46	174	23	123	209	13
Confl. Peds. (#/hr)	51		3	3		51	13		13	13		13
Heavy Vehicles (%)	2%	3%	3%	0%	2%	0%	0%	1%	2%	1%	0%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Effective Green, g (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	296	1462		369	1778		400	665	548	424	672	559
v/s Ratio Prot		c0.16			0.16			0.10			c0.12	
v/s Ratio Perm	0.10			0.06			0.05		0.02	0.12		0.01
v/c Ratio	0.20	0.33		0.12	0.33		0.12	0.26	0.04	0.29	0.31	0.02
Uniform Delay, d1	9.8	10.6		9.5	10.5		12.3	13.1	11.9	13.2	13.4	11.8
Progression Factor	1.00	1.00		1.00	1.00		0.87	0.92	0.81	0.56	0.56	0.25
Incremental Delay, d2	1.5	0.6		0.7	0.5		0.6	1.0	0.1	1.7	1.2	0.1
Delay (s)	11.4	11.2		10.1	11.0		11.2	13.0	9.8	9.1	8.7	3.1
Level of Service	B	B		B	B		B	B	A	A	A	A
Approach Delay (s)		11.2			11.0			12.1			8.3	
Approach LOS		B			B			B			A	

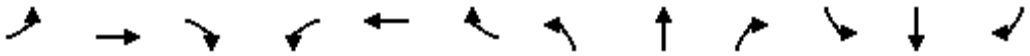
Intersection Summary			
HCM Average Control Delay	10.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	389	71	70	369	64	55	179	64	87	240	75
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	11	10	11	11	10	11	11	10	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	0.96	1.00		0.95	1.00		0.99	1.00		0.95	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.96		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1325	3143		1513	3126		1579	2918		1451	3002	
Flt Permitted	0.47	1.00		0.45	1.00		0.54	1.00		0.60	1.00	
Satd. Flow (perm)	654	3143		717	3126		906	2918		911	3002	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	52	401	73	72	380	66	57	185	66	90	247	77
RTOR Reduction (vph)	0	0	0	0	0	0	0	39	0	0	39	0
Lane Group Flow (vph)	52	474	0	72	446	0	57	212	0	90	285	0
Confl. Peds. (#/hr)	112		99	99		112	23		53	53		23
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	16%	1%	0%	0%	1%	9%	0%	8%	2%	5%	5%	7%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.41	0.41		0.41	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	314	1509		344	1500		374	1206		377	1241	
v/s Ratio Prot		c0.15			0.14			0.07			0.09	
v/s Ratio Perm	0.08			0.10			0.06			c0.10		
v/c Ratio	0.17	0.31		0.21	0.30		0.15	0.18		0.24	0.23	
Uniform Delay, d1	11.0	11.9		11.3	11.8		13.8	13.9		14.3	14.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.1	0.5		1.4	0.5		0.9	0.3		1.5	0.4	
Delay (s)	12.1	12.5		12.7	12.3		14.6	14.2		15.8	14.7	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		12.5			12.4			14.3			14.9	
Approach LOS		B			B			B			B	

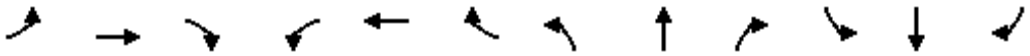
Intersection Summary			
HCM Average Control Delay	13.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	86	420	57	31	500	46	81	194	57	76	473	106
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	8	16	12	9	10	10	9	10	10
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1594	1654		1367	1974		1534	2998		1534	3016	
Flt Permitted	0.27	1.00		0.33	1.00		0.28	1.00		0.59	1.00	
Satd. Flow (perm)	446	1654		482	1974		457	2998		951	3016	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	91	442	60	33	526	48	85	204	60	80	498	112
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	91	502	0	33	574	0	85	264	0	80	610	0
Confl. Peds. (#/hr)	21		95	95		21	36		8	8		36
Confl. Bikes (#/hr)	2		3	3		2	2					2
Heavy Vehicles (%)	0%	2%	0%	7%	2%	0%	0%	3%	0%	0%	2%	1%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	44.0	39.4		40.8	37.8		26.6	21.8		26.6	21.8	
Effective Green, g (s)	44.0	37.4		40.8	35.8		26.6	19.8		26.6	19.8	
Actuated g/C Ratio	0.52	0.44		0.48	0.42		0.31	0.23		0.31	0.23	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	293	728		263	831		204	698		331	703	
v/s Ratio Prot	c0.02	c0.30		0.00	0.29		c0.02	0.09		0.01	c0.20	
v/s Ratio Perm	0.14			0.06			0.11			0.06		
v/c Ratio	0.31	0.69		0.13	0.69		0.42	0.38		0.24	0.87	
Uniform Delay, d1	21.8	19.1		19.1	20.1		28.9	27.4		21.9	31.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.6	5.3		0.2	4.7		1.4	1.6		0.4	13.7	
Delay (s)	22.4	24.4		19.3	24.8		30.3	29.0		22.3	45.0	
Level of Service	C	C		B	C		C	C		C	D	
Approach Delay (s)		24.1			24.5			29.3			42.4	
Approach LOS		C			C			C			D	

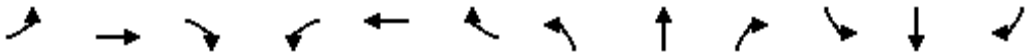
Intersection Summary			
HCM Average Control Delay	30.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	76.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	71	375	61	111	482	112	63	150	55	121	348	77
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	11	11	11	11	12	12	10	10	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		0.99	1.00	
Frt		0.98			0.98		1.00	0.96		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3681			3130		1652	3236		1549	3027	
Flt Permitted		0.76			0.76		0.46	1.00		0.62	1.00	
Satd. Flow (perm)		2811			2400		798	3236		1005	3027	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	75	395	64	117	507	118	66	158	58	127	366	81
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	534	0	0	742	0	66	216	0	127	447	0
Confl. Peds. (#/hr)	23		30	30		23	1		20	20		1
Confl. Bikes (#/hr)	3					3						
Heavy Vehicles (%)	0%	3%	0%	2%	2%	0%	0%	1%	0%	2%	2%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.0			33.0		32.0	32.0		32.0	32.0	
Effective Green, g (s)		34.0			34.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio		0.45			0.45		0.44	0.44		0.44	0.44	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		1274			1088		351	1424		442	1332	
v/s Ratio Prot								0.07			c0.15	
v/s Ratio Perm		0.19			c0.31		0.08			0.13		
v/c Ratio		0.42			0.68		0.19	0.15		0.29	0.34	
Uniform Delay, d1		13.8			16.2		12.8	12.6		13.5	13.8	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.0			3.5		1.2	0.2		1.6	0.7	
Delay (s)		14.9			19.7		14.0	12.8		15.1	14.5	
Level of Service		B			B		B	B		B	B	
Approach Delay (s)		14.9			19.7			13.1			14.6	
Approach LOS		B			B			B			B	

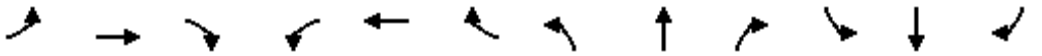
Intersection Summary			
HCM Average Control Delay	16.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	70.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	93	823	6	19	553	236	1	1	9	202	1	76
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	12	12	12	12	12	13	13	13
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	1.00		1.00	1.00	0.85		0.89			0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00		1.00			0.97	
Satd. Flow (prot)	1605	3206		1660	3320	1485		1548			3176	
Flt Permitted	0.42	1.00		0.29	1.00	1.00		0.98			0.77	
Satd. Flow (perm)	710	3206		508	3320	1485		1520			2538	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	98	866	6	20	582	248	1	1	9	213	1	80
RTOR Reduction (vph)	0	0	0	0	0	89	0	7	0	0	53	0
Lane Group Flow (vph)	98	872	0	20	582	159	0	4	0	0	241	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	46.1	46.1		46.1	46.1	46.1		18.0			18.0	
Effective Green, g (s)	46.1	46.1		46.1	46.1	46.1		18.0			18.0	
Actuated g/C Ratio	0.64	0.64		0.64	0.64	0.64		0.25			0.25	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		8.0			8.0	
Lane Grp Cap (vph)	454	2050		325	2123	949		379			634	
v/s Ratio Prot		c0.27			0.18							
v/s Ratio Perm	0.14			0.04		0.11		0.00			c0.09	
v/c Ratio	0.22	0.43		0.06	0.27	0.17		0.01			0.38	
Uniform Delay, d1	5.4	6.4		4.9	5.7	5.2		20.4			22.4	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	1.1	0.6		0.4	0.3	0.4		0.1			1.6	
Delay (s)	6.5	7.1		5.2	6.0	5.6		20.4			24.0	
Level of Service	A	A		A	A	A		C			C	
Approach Delay (s)		7.0			5.9			20.4			24.0	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM Average Control Delay	9.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	72.1	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	124	216	116	94	162	55	130	876	87	122	816	93
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	9	12	10	10	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.95		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1560	1506		1563	1586		1493	3069	1337	1523	3099	1318
Flt Permitted	0.46	1.00		0.24	1.00		0.21	1.00	1.00	0.18	1.00	1.00
Satd. Flow (perm)	749	1506		401	1586		323	3069	1337	285	3099	1318
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	131	227	122	99	171	58	137	922	92	128	859	98
RTOR Reduction (vph)	0	23	0	0	14	0	0	0	40	0	0	46
Lane Group Flow (vph)	131	326	0	99	215	0	137	922	52	128	859	52
Confl. Peds. (#/hr)	10		13	13		10	18		7	7		18
Confl. Bikes (#/hr)	2					2	2		1	1		2
Heavy Vehicles (%)	2%	1%	1%	2%	1%	2%	3%	4%	0%	1%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	28.0	21.0		28.0	21.0		42.0	35.0	35.0	42.0	35.0	35.0
Effective Green, g (s)	26.0	22.0		26.0	22.0		40.0	35.0	35.0	40.0	35.0	35.0
Actuated g/C Ratio	0.31	0.26		0.31	0.26		0.47	0.41	0.41	0.47	0.41	0.41
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	286	390		205	410		235	1264	551	222	1276	543
v/s Ratio Prot	0.03	c0.22		c0.03	0.14		c0.04	c0.30		0.04	0.28	
v/s Ratio Perm	0.11			0.11			0.23		0.04	0.23		0.04
v/c Ratio	0.46	0.84		0.48	0.52		0.58	0.73	0.09	0.58	0.67	0.10
Uniform Delay, d1	22.5	29.8		22.7	27.0		14.4	21.0	15.3	14.7	20.3	15.3
Progression Factor	1.00	1.00		1.00	1.00		0.63	0.79	0.52	1.00	1.00	1.00
Incremental Delay, d2	5.2	18.8		7.9	4.7		9.4	3.5	0.3	10.5	2.9	0.4
Delay (s)	27.7	48.5		30.6	31.7		18.6	20.0	8.3	25.1	23.2	15.7
Level of Service	C	D		C	C		B	B	A	C	C	B
Approach Delay (s)		42.9			31.4			18.9			22.7	
Approach LOS		D			C			B			C	

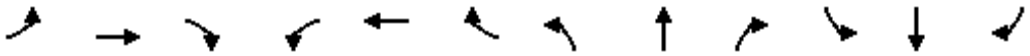
Intersection Summary			
HCM Average Control Delay	25.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	71.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	22	179	34	20	173	20	22	141	38	37	251	49
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	14	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.99			1.00			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.99			0.97			0.98	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1839			1851			1938			1976	
Flt Permitted		0.97			0.96			0.95			0.95	
Satd. Flow (perm)		1784			1794			1849			1895	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	23	188	36	21	182	21	23	148	40	39	264	52
RTOR Reduction (vph)	0	9	0	0	6	0	0	13	0	0	10	0
Lane Group Flow (vph)	0	238	0	0	218	0	0	198	0	0	345	0
Confl. Peds. (#/hr)	18		34	34		18	16		19	19		16
Confl. Bikes (#/hr)			6	6			1		4	4		1
Heavy Vehicles (%)	0%	1%	0%	5%	1%	0%	0%	2%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.42			0.42			0.46			0.46	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		741			745			853			875	
v/s Ratio Prot												
v/s Ratio Perm		c0.13			0.12			0.11			c0.18	
v/c Ratio		0.32			0.29			0.23			0.39	
Uniform Delay, d1		12.8			12.6			10.6			11.5	
Progression Factor		1.00			0.65			1.16			1.00	
Incremental Delay, d2		1.1			1.0			0.6			1.3	
Delay (s)		14.0			9.2			12.9			12.9	
Level of Service		B			A			B			B	
Approach Delay (s)		14.0			9.2			12.9			12.9	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	12.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.6%	ICU Level of Service	A
Analysis Period (min)	15		

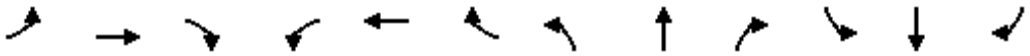
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	190	36	25	180	18	39	199	31	38	206	38
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.97	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1495	3062		1576	3122		1518	3118		1550	3074	
Flt Permitted	0.62	1.00		0.60	1.00		0.59	1.00		0.60	1.00	
Satd. Flow (perm)	978	3062		1002	3122		947	3118		981	3074	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	25	200	38	26	189	19	41	209	33	40	217	40
RTOR Reduction (vph)	0	24	0	0	12	0	0	14	0	0	17	0
Lane Group Flow (vph)	25	214	0	26	196	0	41	228	0	40	240	0
Confl. Peds. (#/hr)	20		17	17		20	2					2
Confl. Bikes (#/hr)	32		36	36		32	22		25	25		22
Heavy Vehicles (%)	4%	1%	0%	0%	0%	0%	5%	0%	0%	3%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0		39.0	39.0		39.0	39.0	
Effective Green, g (s)	19.0	19.0		19.0	19.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.58	0.58		0.58	0.58	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	286	895		293	913		554	1823		574	1797	
v/s Ratio Prot		c0.07			0.06			0.07			c0.08	
v/s Ratio Perm	0.03			0.03			0.04			0.04		
v/c Ratio	0.09	0.24		0.09	0.21		0.07	0.13		0.07	0.13	
Uniform Delay, d1	16.7	17.5		16.7	17.4		5.9	6.1		5.8	6.1	
Progression Factor	0.89	0.91		0.75	0.74		1.23	1.22		0.40	0.36	
Incremental Delay, d2	0.6	0.6		0.6	0.5		0.3	0.1		0.2	0.2	
Delay (s)	15.4	16.5		13.1	13.3		7.5	7.5		2.6	2.3	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		16.4			13.3			7.5			2.4	
Approach LOS		B			B			A			A	

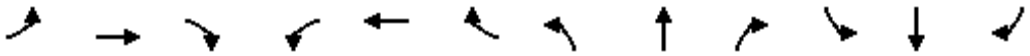
Intersection Summary			
HCM Average Control Delay	9.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.17		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



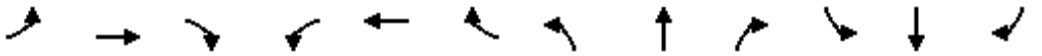
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	66	165	40	24	153	35	23	245	16	30	321	33
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	9	9	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.97		1.00	0.97			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1555	3059		1524	2940			1923			1938	
Flt Permitted	0.63	1.00		0.62	1.00			0.96			0.96	
Satd. Flow (perm)	1033	3059		996	2940			1852			1874	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	67	168	41	24	156	36	23	250	16	31	328	34
RTOR Reduction (vph)	0	25	0	0	22	0	0	3	0	0	5	0
Lane Group Flow (vph)	67	184	0	24	170	0	0	286	0	0	388	0
Confl. Peds. (#/hr)	11		17	17		11	26		7	7		26
Heavy Vehicles (%)	2%	1%	0%	0%	1%	3%	4%	5%	0%	0%	4%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Effective Green, g (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40			0.48			0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	413	1224		398	1176			883			894	
v/s Ratio Prot		0.06			0.06							
v/s Ratio Perm	c0.06			0.02				0.15			c0.21	
v/c Ratio	0.16	0.15		0.06	0.14			0.32			0.43	
Uniform Delay, d1	12.5	12.5		12.0	12.4			10.5			11.2	
Progression Factor	0.98	0.91		0.77	0.76			0.98			1.00	
Incremental Delay, d2	0.8	0.3		0.3	0.2			1.0			1.5	
Delay (s)	13.1	11.6		9.5	9.7			11.2			12.7	
Level of Service	B	B		A	A			B			B	
Approach Delay (s)		12.0			9.7			11.2			12.7	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	11.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



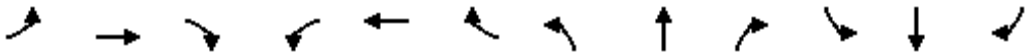
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	47	111	26	19	153	25	30	230	11	29	360	57
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	16	12	10	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.97		1.00	0.98			0.99			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			1.00	
Satd. Flow (prot)	1652	1973		1583	1976			1983			1979	
Flt Permitted	0.58	1.00		0.66	1.00			0.93			0.97	
Satd. Flow (perm)	1015	1973		1092	1976			1853			1925	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	52	123	29	21	170	28	33	256	12	32	400	63
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	52	152	0	21	198	0	0	301	0	0	495	0
Confl. Peds. (#/hr)	1		10	10		1	2		5	5		2
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	2%	0%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Effective Green, g (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Actuated g/C Ratio	0.31	0.31		0.31	0.31			0.57			0.57	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	312	607		336	608			1055			1096	
v/s Ratio Prot		0.08			c0.10							
v/s Ratio Perm	0.05			0.02				0.16			c0.26	
v/c Ratio	0.17	0.25		0.06	0.33			0.29			0.45	
Uniform Delay, d1	16.4	16.9		15.9	17.3			7.2			8.1	
Progression Factor	0.80	0.78		0.92	0.92			0.97			1.00	
Incremental Delay, d2	1.1	1.0		0.4	1.4			0.7			1.3	
Delay (s)	14.3	14.2		14.9	17.3			7.7			9.5	
Level of Service	B	B		B	B			A			A	
Approach Delay (s)		14.2			17.1			7.7			9.5	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



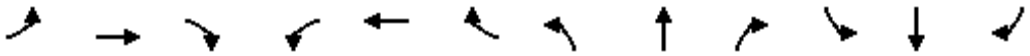
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	51	12	91	2	5	9	55	223	5	3	442	72
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	10	11	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98		1.00	0.98		1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.87		1.00	0.91		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1695	1726		1702	1815		1594	1647	1428	1653	2000	1496
Flt Permitted	0.75	1.00		0.68	1.00		0.41	1.00	1.00	0.60	1.00	1.00
Satd. Flow (perm)	1333	1726		1225	1815		693	1647	1428	1049	2000	1496
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	57	13	101	2	6	10	61	248	6	3	491	80
RTOR Reduction (vph)	0	73	0	0	7	0	0	0	2	0	0	28
Lane Group Flow (vph)	57	41	0	2	9	0	61	248	4	3	491	52
Confl. Peds. (#/hr)	5		5	5		5	3					3
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	0%	2%	0%	0%	2%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	17.0	17.0		17.0	17.0		39.0	39.0	39.0	39.0	39.0	39.0
Effective Green, g (s)	18.0	18.0		18.0	18.0		39.0	39.0	39.0	39.0	39.0	39.0
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.60	0.60	0.60	0.60	0.60	0.60
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	369	478		339	503		416	988	857	629	1200	898
v/s Ratio Prot		0.02			0.00			0.15			c0.25	
v/s Ratio Perm	c0.04			0.00			0.09		0.00	0.00		0.04
v/c Ratio	0.15	0.09		0.01	0.02		0.15	0.25	0.00	0.00	0.41	0.06
Uniform Delay, d1	17.8	17.4		17.0	17.1		5.7	6.1	5.2	5.2	6.9	5.4
Progression Factor	1.43	2.88		1.00	1.00		0.79	0.73	0.87	1.00	1.00	1.00
Incremental Delay, d2	0.9	0.3		0.0	0.1		0.6	0.5	0.0	0.0	1.0	0.1
Delay (s)	26.3	50.5		17.1	17.1		5.1	5.0	4.6	5.2	7.9	5.5
Level of Service	C	D		B	B		A	A	A	A	A	A
Approach Delay (s)		42.5			17.1			5.0			7.6	
Approach LOS		D			B			A			A	

Intersection Summary			
HCM Average Control Delay	12.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	251	163	157	195	0	0	0	0	109	470	377
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)		4.0		3.0	3.0					5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	
Frpb, ped/bikes		0.99		1.00	1.00					1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Frt		0.94		1.00	1.00					1.00	0.93	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		2904		1693	3288					1503	3021	
Flt Permitted		1.00		0.41	1.00					0.95	1.00	
Satd. Flow (perm)		2904		725	3288					1503	3021	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	264	172	165	205	0	0	0	0	115	495	397
RTOR Reduction (vph)	0	106	0	0	0	0	0	0	0	0	141	0
Lane Group Flow (vph)	0	330	0	165	205	0	0	0	0	115	751	0
Confl. Peds. (#/hr)	18		3	3		18	1					1
Heavy Vehicles (%)	0%	4%	1%	1%	4%	0%	0%	0%	0%	10%	2%	1%
Turn Type				D.P+P						Split		
Protected Phases		8		7	7 8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		33.0		53.0	56.0					37.0	37.0	
Effective Green, g (s)		33.0		53.0	56.0					37.0	37.0	
Actuated g/C Ratio		0.32		0.52	0.55					0.36	0.36	
Clearance Time (s)		4.0		3.0						5.0	5.0	
Lane Grp Cap (vph)		940		567	1805					545	1096	
v/s Ratio Prot		c0.11		c0.06	0.06					0.08	c0.25	
v/s Ratio Perm				0.09								
v/c Ratio		0.35		0.29	0.11					0.21	0.68	
Uniform Delay, d1		26.3		13.3	11.1					22.4	27.6	
Progression Factor		1.00		2.17	2.12					1.00	1.00	
Incremental Delay, d2		1.0		1.2	0.1					0.9	3.5	
Delay (s)		27.4		30.0	23.5					23.3	31.0	
Level of Service		C		C	C					C	C	
Approach Delay (s)		27.4			26.4			0.0			30.2	
Approach LOS		C			C			A			C	

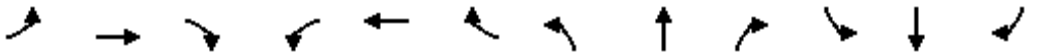
Intersection Summary			
HCM Average Control Delay	28.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	102.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	60.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	141	219	0	0	279	109	73	511	215	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	9	12	13	12	13	12	12	12
Total Lost time (s)	4.0	4.0			4.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.96		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1674	3196			2844		1767	1782	1560			
Flt Permitted	0.39	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	683	3196			2844		1767	1782	1560			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	148	231	0	0	294	115	77	538	226	0	0	0
RTOR Reduction (vph)	0	0	0	0	40	0	0	0	160	0	0	0
Lane Group Flow (vph)	148	231	0	0	369	0	77	538	66	0	0	0
Confl. Peds. (#/hr)	9		13	13		9			1	1		
Confl. Bikes (#/hr)	3					3						
Heavy Vehicles (%)	2%	7%	0%	0%	3%	1%	0%	1%	0%	0%	0%	0%
Turn Type	pm+pt						custom		Perm			
Protected Phases	4	1 4			1		2	2				
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	59.0	63.0			26.0		30.0	30.0	30.0			
Effective Green, g (s)	59.0	63.0			26.0		30.0	30.0	30.0			
Actuated g/C Ratio	0.58	0.62			0.25		0.29	0.29	0.29			
Clearance Time (s)	4.0				4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	716	1974			725		520	524	459			
v/s Ratio Prot	c0.07	0.07			c0.13		0.04	c0.30				
v/s Ratio Perm	0.05								0.04			
v/c Ratio	0.21	0.12			0.51		0.15	1.03	0.14			
Uniform Delay, d1	10.2	8.0			32.5		26.6	36.0	26.5			
Progression Factor	0.43	0.44			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.6	0.1			2.5		0.6	46.3	0.7			
Delay (s)	5.0	3.6			35.1		27.2	82.3	27.2			
Level of Service	A	A			D		C	F	C			
Approach Delay (s)		4.2			35.1			62.4			0.0	
Approach LOS		A			D			E			A	

Intersection Summary			
HCM Average Control Delay	42.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	102.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	60.8%	ICU Level of Service	B
Analysis Period (min)	15		

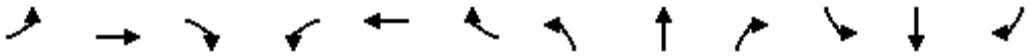
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	484	455	77	507	0	0	0	0	9	432	269
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	11	12	12	12	12	10	10	12
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	1.00
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.93		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3097		1710	3306					1596	3192	1530
Flt Permitted		1.00		0.11	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3097		203	3306					1596	3192	1530
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	509	479	81	534	0	0	0	0	9	455	283
RTOR Reduction (vph)	0	171	0	0	0	0	0	0	0	0	0	187
Lane Group Flow (vph)	0	817	0	81	534	0	0	0	0	9	455	96
Confl. Peds. (#/hr)	8		8	8		8	3					3
Confl. Bikes (#/hr)	9					9			61	61		
Heavy Vehicles (%)	0%	1%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type				pm+pt						Split		Prot
Protected Phases		8		7	7 8					6	6	6
Permitted Phases				7 8								
Actuated Green, G (s)		36.0		54.0	58.0					34.0	34.0	34.0
Effective Green, g (s)		36.0		54.0	58.0					34.0	34.0	34.0
Actuated g/C Ratio		0.36		0.54	0.58					0.34	0.34	0.34
Clearance Time (s)		4.0		4.0						4.0	4.0	4.0
Lane Grp Cap (vph)		1115		381	1917					543	1085	520
v/s Ratio Prot		c0.26		0.04	c0.16					0.01	c0.14	0.06
v/s Ratio Perm				0.08								
v/c Ratio		0.73		0.21	0.28					0.02	0.42	0.19
Uniform Delay, d1		27.8		14.0	10.5					21.9	25.4	23.2
Progression Factor		1.00		1.02	1.19					1.00	1.00	1.00
Incremental Delay, d2		4.3		0.9	0.3					0.1	1.2	0.8
Delay (s)		32.1		15.1	12.8					22.0	26.6	24.0
Level of Service		C		B	B					C	C	C
Approach Delay (s)		32.1			13.1			0.0			25.6	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM Average Control Delay	25.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.4%	ICU Level of Service	E
Analysis Period (min)	15		

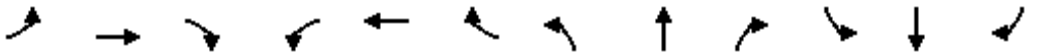
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	394	99	0	0	142	5	441	455	55	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	10	12	11	11	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	0.91	0.91			0.95		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			1.00		1.00	1.00	0.85			
Flt Protected	0.95	0.97			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1469	3109			3172		1555	1653	1530			
Flt Permitted	0.65	0.72			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	1011	2310			3172		1555	1653	1530			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	415	104	0	0	149	5	464	479	58	0	0	0
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	37	0	0	0
Lane Group Flow (vph)	207	312	0	0	151	0	464	479	21	0	0	0
Confl. Peds. (#/hr)	13		6	6		13			8	8		
Confl. Bikes (#/hr)	1					1			2	2		
Heavy Vehicles (%)	2%	1%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%
Turn Type	pm+pt						custom		custom			
Protected Phases	4	1 4			1		2	2	2			
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Effective Green, g (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Actuated g/C Ratio	0.51	0.51			0.15		0.37	0.37	0.37			
Clearance Time (s)	4.0				4.0		4.0	4.0	4.0			
Lane Grp Cap (vph)	680	1466			476		575	612	566			
v/s Ratio Prot	c0.11	0.08			c0.05		c0.30	0.29	0.01			
v/s Ratio Perm	0.05	0.03										
v/c Ratio	0.30	0.21			0.32		0.81	0.78	0.04			
Uniform Delay, d1	14.0	13.5			37.9		28.3	27.9	20.1			
Progression Factor	0.25	0.26			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.7	0.2			1.8		11.6	9.6	0.1			
Delay (s)	4.3	3.8			39.7		39.8	37.6	20.3			
Level of Service	A	A			D		D	D	C			
Approach Delay (s)		4.0			39.7			37.6			0.0	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM Average Control Delay	27.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.4%	ICU Level of Service	E
Analysis Period (min)	15		

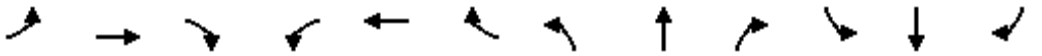
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	78	210	102	105	231	107	80	663	72	99	875	64
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	9	10	9	9	10	9
Total Lost time (s)		4.0			4.0		4.0	3.5	4.0	4.0	3.5	4.0
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		0.99			0.99		1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.96			0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		2936			2923		1508	3069	1309	1508	3099	1298
Flt Permitted		0.77			0.76		0.17	1.00	1.00	0.28	1.00	1.00
Satd. Flow (perm)		2281			2240		267	3069	1309	439	3099	1298
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	80	216	105	108	238	110	82	684	74	102	902	66
RTOR Reduction (vph)	0	42	0	0	36	0	0	0	45	0	0	33
Lane Group Flow (vph)	0	359	0	0	420	0	82	684	29	102	902	33
Confl. Peds. (#/hr)	35		30	30		35	34		8	8		34
Confl. Bikes (#/hr)	1					1	1					1
Heavy Vehicles (%)	1%	4%	0%	1%	3%	3%	2%	4%	2%	2%	3%	2%
Turn Type	pm+pt			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		35.0			27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)		36.0			28.0		36.0	33.5	33.0	36.0	33.5	33.0
Actuated g/C Ratio		0.42			0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)		5.0			5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)		1012			738		171	1210	508	236	1221	504
v/s Ratio Prot		c0.03					c0.02	0.22		0.02	c0.29	
v/s Ratio Perm		0.13			c0.19		0.18		0.02	0.16		0.03
v/c Ratio		0.35			0.57		0.48	0.57	0.06	0.43	0.74	0.07
Uniform Delay, d1		16.6			23.5		16.5	20.1	16.3	15.8	22.0	16.3
Progression Factor		1.00			1.00		1.30	0.68	0.54	1.10	1.17	1.79
Incremental Delay, d2		1.0			3.2		8.8	1.8	0.2	4.2	3.0	0.2
Delay (s)		17.6			26.7		30.3	15.4	9.0	21.5	28.8	29.5
Level of Service		B			C		C	B	A	C	C	C
Approach Delay (s)		17.6			26.7			16.3			28.1	
Approach LOS		B			C			B			C	

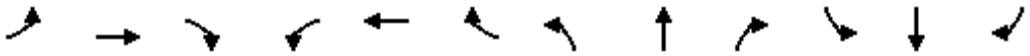
Intersection Summary			
HCM Average Control Delay	22.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	71.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	76	305	0	0	325	81	52	43	32	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.97			0.97				
Flt Protected		0.99			1.00			0.98				
Satd. Flow (prot)		1730			1701			1654				
Flt Permitted		0.86			1.00			0.98				
Satd. Flow (perm)		1500			1701			1654				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	80	321	0	0	342	85	55	45	34	0	0	0
RTOR Reduction (vph)	0	0	0	0	14	0	0	19	0	0	0	0
Lane Group Flow (vph)	0	401	0	0	413	0	0	115	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		38.0			38.0			19.0				
Effective Green, g (s)		38.0			38.0			19.0				
Actuated g/C Ratio		0.58			0.58			0.29				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		877			994			483				
v/s Ratio Prot					0.24							
v/s Ratio Perm		c0.27						0.07				
v/c Ratio		0.46			0.42			0.24				
Uniform Delay, d1		7.7			7.4			17.5				
Progression Factor		1.00			0.62			1.00				
Incremental Delay, d2		1.7			1.2			1.2				
Delay (s)		9.4			5.7			18.7				
Level of Service		A			A			B				
Approach Delay (s)		9.4			5.7			18.7			0.0	
Approach LOS		A			A			B			A	

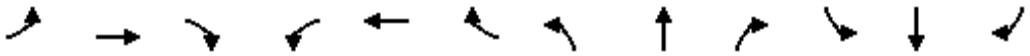
Intersection Summary			
HCM Average Control Delay	9.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	19	289	27	37	333	48	27	112	37	52	148	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	10	12	12	10	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			0.98	
Flpb, ped/bikes		1.00			1.00			0.99			1.00	
Frt		0.99			0.98			0.97			0.97	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1956			1939			2969			2987	
Flt Permitted		0.97			0.95			0.90			0.87	
Satd. Flow (perm)		1901			1849			2681			2614	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	20	304	28	39	351	51	28	118	39	55	156	44
RTOR Reduction (vph)	0	5	0	0	7	0	0	23	0	0	26	0
Lane Group Flow (vph)	0	347	0	0	434	0	0	162	0	0	229	0
Confl. Peds. (#/hr)	32		25	25		32	59		24	24		59
Confl. Bikes (#/hr)	3		2	2		3	4		2	2		4
Heavy Vehicles (%)	0%	3%	0%	3%	3%	0%	0%	0%	7%	4%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0			27.0			27.0	
Effective Green, g (s)		30.0			30.0			27.0			27.0	
Actuated g/C Ratio		0.46			0.46			0.42			0.42	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		877			853			1114			1086	
v/s Ratio Prot												
v/s Ratio Perm		0.18			c0.23			0.06			c0.09	
v/c Ratio		0.40			0.51			0.15			0.21	
Uniform Delay, d1		11.5			12.3			11.8			12.2	
Progression Factor		0.58			0.42			1.10			0.43	
Incremental Delay, d2		1.2			2.0			0.3			0.4	
Delay (s)		7.9			7.2			13.3			5.7	
Level of Service		A			A			B			A	
Approach Delay (s)		7.9			7.2			13.3			5.7	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM Average Control Delay	8.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	71.5%	ICU Level of Service	C
Analysis Period (min)	15		

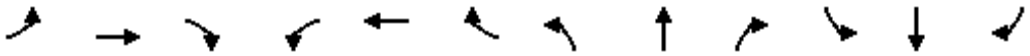
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	41	255	39	78	429	82	43	217	97	79	215	59
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	9	10	10	9	10	10	12	10	10	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00		0.99	1.00		0.99	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.95		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1508	3033		1568	3075		1586	2962		1585	3075	
Flt Permitted	0.37	1.00		0.56	1.00		0.58	1.00		0.55	1.00	
Satd. Flow (perm)	586	3033		919	3075		961	2962		922	3075	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	43	268	41	82	452	86	45	228	102	83	226	62
RTOR Reduction (vph)	0	19	0	0	24	0	0	47	0	0	29	0
Lane Group Flow (vph)	43	290	0	82	514	0	45	283	0	83	259	0
Confl. Peds. (#/hr)	20		31	31		20	16		20	20		16
Confl. Bikes (#/hr)							1		3	3		1
Heavy Vehicles (%)	5%	3%	0%	0%	1%	0%	0%	2%	2%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	198	1027		311	1041		517	1595		496	1656	
v/s Ratio Prot		0.10			c0.17			c0.10			0.08	
v/s Ratio Perm	0.07			0.09			0.05			0.09		
v/c Ratio	0.22	0.28		0.26	0.49		0.09	0.18		0.17	0.16	
Uniform Delay, d1	15.4	15.7		15.6	17.1		7.3	7.7		7.6	7.6	
Progression Factor	0.78	0.75		0.92	0.93		0.83	0.81		1.09	1.09	
Incremental Delay, d2	2.4	0.7		2.0	1.6		0.3	0.2		0.7	0.2	
Delay (s)	14.3	12.4		16.4	17.4		6.3	6.5		9.0	8.4	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		12.7			17.3			6.4			8.6	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	12.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.2%	ICU Level of Service	A
Analysis Period (min)	15		

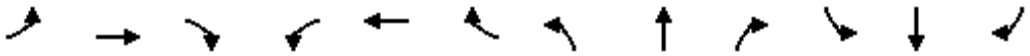
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	55	287	68	83	382	48	43	226	57	46	279	64
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	9	10	9	9	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			0.98	
Flpb, ped/bikes	0.98	1.00		0.99	1.00			0.99			1.00	
Frt	1.00	0.97		1.00	0.98			0.97			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1507	3013		1429	3719			3485			3520	
Flt Permitted	0.47	1.00		0.53	1.00			0.87			0.88	
Satd. Flow (perm)	748	3013		792	3719			3045			3123	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	58	302	72	87	402	51	45	238	60	48	294	67
RTOR Reduction (vph)	0	32	0	0	15	0	0	28	0	0	25	0
Lane Group Flow (vph)	58	342	0	87	438	0	0	315	0	0	384	0
Confl. Peds. (#/hr)	38		17	17		38	125		53	53		125
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	3%	0%	7%	2%	0%	0%	6%	10%	2%	5%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Effective Green, g (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48			0.40			0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	357	1437		378	1774			1218			1249	
v/s Ratio Prot		0.11			c0.12							
v/s Ratio Perm	0.08			0.11				0.10			c0.12	
v/c Ratio	0.16	0.24		0.23	0.25			0.26			0.31	
Uniform Delay, d1	9.6	10.0		10.0	10.1			13.1			13.3	
Progression Factor	1.53	1.68		1.14	1.13			0.47			0.68	
Incremental Delay, d2	1.0	0.4		1.3	0.3			0.5			0.6	
Delay (s)	15.7	17.2		12.7	11.7			6.6			9.7	
Level of Service	B	B		B	B			A			A	
Approach Delay (s)		17.0			11.9			6.6			9.7	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.2%	ICU Level of Service	B
Analysis Period (min)	15		

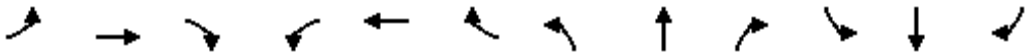
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	82	246	82	88	266	88	114	79	45	45	79	114
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	16	12	12	16	12
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		0.95			1.00			1.00	
Frt		1.00	0.85		0.97			0.97			0.94	
Flt Protected		0.99	1.00		0.99			0.98			0.99	
Satd. Flow (prot)		1669	1436		3083			1885			1835	
Flt Permitted		0.80	1.00		0.82			0.71			0.91	
Satd. Flow (perm)		1352	1436		2540			1363			1681	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	86	259	86	93	280	93	120	83	47	47	83	120
RTOR Reduction (vph)	0	0	41	0	34	0	0	13	0	0	51	0
Lane Group Flow (vph)	0	345	45	0	432	0	0	237	0	0	199	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		34.0	34.0		34.0			21.0			21.0	
Effective Green, g (s)		34.0	34.0		34.0			21.0			21.0	
Actuated g/C Ratio		0.52	0.52		0.52			0.32			0.32	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Grp Cap (vph)		707	751		1329			440			543	
v/s Ratio Prot												
v/s Ratio Perm		c0.26	0.03		0.17			c0.17			0.12	
v/c Ratio		0.49	0.06		0.33			0.54			0.37	
Uniform Delay, d1		9.9	7.6		8.9			18.0			16.9	
Progression Factor		1.83	4.37		0.52			1.00			1.00	
Incremental Delay, d2		2.4	0.1		0.6			4.7			1.9	
Delay (s)		20.5	33.5		5.3			22.7			18.8	
Level of Service		C	C		A			C			B	
Approach Delay (s)		23.1			5.3			22.7			18.8	
Approach LOS		C			A			C			B	

Intersection Summary			
HCM Average Control Delay	16.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	74.5%	ICU Level of Service	D
Analysis Period (min)	15		

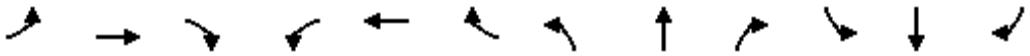
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	45	253	18	25	305	58	24	130	46	62	145	61
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	15	8	16	8	8	16	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			1.00	
Flpb, ped/bikes	0.98	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.98			0.97			0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1442	3037		1563	3017			3582			3604	
Flt Permitted	0.52	1.00		0.58	1.00			0.91			0.85	
Satd. Flow (perm)	787	3037		949	3017			3266			3096	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	47	266	19	26	321	61	25	137	48	65	153	64
RTOR Reduction (vph)	0	8	0	0	24	0	0	28	0	0	37	0
Lane Group Flow (vph)	47	277	0	26	358	0	0	182	0	0	245	0
Confl. Peds. (#/hr)	24		47	47		24	9		36	36		9
Confl. Bikes (#/hr)			4	4			1					1
Heavy Vehicles (%)	9%	4%	0%	0%	3%	0%	0%	1%	10%	0%	0%	8%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	30.0	30.0		30.0	30.0			27.0			27.0	
Effective Green, g (s)	30.0	30.0		30.0	30.0			27.0			27.0	
Actuated g/C Ratio	0.46	0.46		0.46	0.46			0.42			0.42	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	363	1402		438	1392			1357			1286	
v/s Ratio Prot		0.09			c0.12							
v/s Ratio Perm	0.06			0.03				0.06			c0.08	
v/c Ratio	0.13	0.20		0.06	0.26			0.13			0.19	
Uniform Delay, d1	10.0	10.4		9.7	10.7			11.8			12.1	
Progression Factor	0.77	0.78		0.75	0.58			1.06			0.40	
Incremental Delay, d2	0.7	0.3		0.2	0.3			0.2			0.3	
Delay (s)	8.3	8.3		7.4	6.5			12.7			5.2	
Level of Service	A	A		A	A			B			A	
Approach Delay (s)		8.3			6.5			12.7			5.2	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM Average Control Delay	7.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

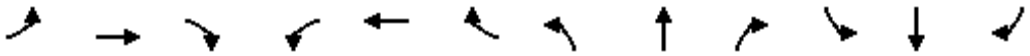


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	43	434	18	83	480	213	21	118	109	323	248	77
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.99			0.96			0.93			0.98	
Flt Protected		1.00			0.99			1.00			0.98	
Satd. Flow (prot)		3288			3167			3088			3182	
Flt Permitted		0.82			0.83			0.92			0.71	
Satd. Flow (perm)		2716			2640			2852			2325	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	45	457	19	87	505	224	22	124	115	340	261	81
RTOR Reduction (vph)	0	4	0	0	60	0	0	62	0	0	16	0
Lane Group Flow (vph)	0	517	0	0	756	0	0	199	0	0	666	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0			30.0			17.0	
Effective Green, g (s)		25.0			25.0			30.0			17.0	
Actuated g/C Ratio		0.38			0.38			0.46			0.26	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		1045			1015			1353			608	
v/s Ratio Prot								c0.02				
v/s Ratio Perm		0.19			c0.29			0.05			c0.29	
v/c Ratio		0.49			0.74			0.15			1.19dl	
Uniform Delay, d1		15.2			17.2			10.1			24.0	
Progression Factor		1.49			1.00			1.00			0.80	
Incremental Delay, d2		1.7			5.0			0.2			64.5	
Delay (s)		24.3			22.2			10.3			83.6	
Level of Service		C			C			B			F	
Approach Delay (s)		24.3			22.2			10.3			83.6	
Approach LOS		C			C			B			F	

Intersection Summary			
HCM Average Control Delay	39.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	82.5%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

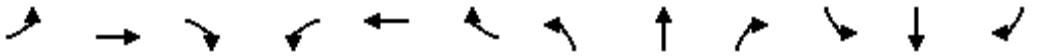
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	867	123	46	758	0	77	0	35	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	10	10	12	12	12	12	12	12	12
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			1.00				
Frt		0.98			1.00			0.96				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		3041			3090			1618				
Flt Permitted		1.00			0.82			0.79				
Satd. Flow (perm)		3041			2552			1330				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	913	129	48	798	0	81	0	37	0	0	0
RTOR Reduction (vph)	0	15	0	0	0	0	0	18	0	0	0	0
Lane Group Flow (vph)	0	1027	0	0	846	0	0	100	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	custom			Perm			Perm			Perm		
Protected Phases		4 5 6 11			8			2			2	
Permitted Phases	4 6 11			8			2			2		
Actuated Green, G (s)		65.0			33.0			16.0				
Effective Green, g (s)		58.0			33.0			16.0				
Actuated g/C Ratio		0.64			0.37			0.18				
Clearance Time (s)					5.0			5.0				
Lane Grp Cap (vph)		1960			936			236				
v/s Ratio Prot		c0.34										
v/s Ratio Perm					c0.33			c0.08				
v/c Ratio		0.52			0.90			0.42				
Uniform Delay, d1		8.6			27.0			32.9				
Progression Factor		0.06			1.35			1.00				
Incremental Delay, d2		0.4			13.1			5.5				
Delay (s)		0.9			49.6			38.4				
Level of Service		A			D			D				
Approach Delay (s)		0.9			49.6			38.4			0.0	
Approach LOS		A			D			D			A	

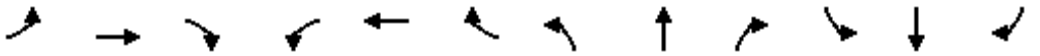
Intersection Summary			
HCM Average Control Delay	23.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	72.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	216	629	22	108	584	178	58	4	103	205	10	205
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	10	12	12	12	12	16	12	12	12	12
Total Lost time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85		0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (prot)	1550	3194		1660	3320	1485		1782		1660	1748	1485
Flt Permitted	0.33	1.00		0.38	1.00	1.00		0.88		0.44	1.00	1.00
Satd. Flow (perm)	544	3194		662	3320	1485		1594		769	1748	1485
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	227	662	23	114	615	187	61	4	108	216	11	216
RTOR Reduction (vph)	0	2	0	0	0	82	0	92	0	0	0	128
Lane Group Flow (vph)	227	683	0	114	615	105	0	81	0	216	11	88
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	56.0	45.4		48.1	40.5	50.5		11.0		24.0	24.0	36.5
Effective Green, g (s)	56.0	45.4		48.1	40.5	50.5		11.0		24.0	24.0	36.5
Actuated g/C Ratio	0.62	0.50		0.53	0.45	0.56		0.12		0.27	0.27	0.41
Clearance Time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Vehicle Extension (s)	4.0	3.0		4.0	3.0	3.0		4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	478	1611		438	1494	833		195		304	466	602
v/s Ratio Prot	c0.07	0.21		0.02	0.19	0.01				c0.08	0.01	0.02
v/s Ratio Perm	c0.23			0.12		0.06		0.05		c0.11		0.04
v/c Ratio	0.47	0.42		0.26	0.41	0.13		0.41		0.71	0.02	0.15
Uniform Delay, d1	8.2	14.1		10.5	16.7	9.3		36.5		28.4	24.4	16.9
Progression Factor	2.60	1.95		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	0.9	0.7		0.4	0.8	0.1		1.9		7.6	0.0	0.2
Delay (s)	22.1	28.2		10.9	17.5	9.4		38.5		36.0	24.4	17.1
Level of Service	C	C		B	B	A		D		D	C	B
Approach Delay (s)		26.7			15.1			38.5			26.5	
Approach LOS		C			B			D			C	

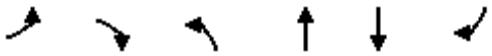
Intersection Summary			
HCM Average Control Delay	23.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	60.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	509	429	2	322	0	0	0	0	18	0	547
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	536	452	2	339	0	0	0	0	19	0	576
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		498										
pX, platoon unblocked												
vC, conflicting volume	339			536			709	879	268	611	879	169
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	339			536			709	879	268	611	879	169
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	95	100	32
cM capacity (veh/h)	1210			1021			101	282	727	375	282	842

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	268	268	452	115	226	19	576
Volume Left	0	0	0	2	0	19	0
Volume Right	0	0	452	0	0	0	576
cSH	1700	1700	1700	1021	1700	375	842
Volume to Capacity	0.16	0.16	0.27	0.00	0.13	0.05	0.68
Queue Length 95th (ft)	0	0	0	0	0	4	139
Control Delay (s)	0.0	0.0	0.0	0.2	0.0	15.1	18.0
Lane LOS				A		C	C
Approach Delay (s)	0.0			0.1		17.9	
Approach LOS						C	

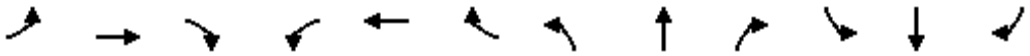
Intersection Summary				
Average Delay	5.5			
Intersection Capacity Utilization	51.9%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	527	0	324	0	0	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	555	0	341	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	277	277	341
Volume Left (vph)	277	277	341
Volume Right (vph)	0	0	0
Hadj (s)	0.55	0.55	0.25
Departure Headway (s)	6.1	6.1	5.5
Degree Utilization, x	0.47	0.47	0.52
Capacity (veh/h)	577	579	636
Control Delay (s)	13.1	13.1	14.3
Approach Delay (s)	13.1		14.3
Approach LOS	B		B

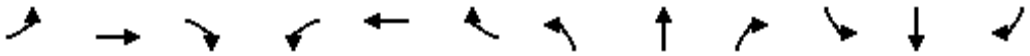
Intersection Summary			
Delay	13.5		
HCM Level of Service	B		
Intersection Capacity Utilization	41.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	472	64	188	485	0	0	0	0	101	21	58
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)		3.0		4.0	4.0						5.0	
Lane Util. Factor		0.95		1.00	0.95						0.95	
Frt		0.98		1.00	1.00						0.95	
Flt Protected		1.00		0.95	1.00						0.97	
Satd. Flow (prot)		3153		1605	3210						3073	
Flt Permitted		1.00		0.36	1.00						0.97	
Satd. Flow (perm)		3153		617	3210						3073	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	497	67	198	511	0	0	0	0	106	22	61
RTOR Reduction (vph)	0	12	0	0	0	0	0	0	0	0	42	0
Lane Group Flow (vph)	0	552	0	198	511	0	0	0	0	0	147	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type				pm+pt						Split		
Protected Phases		4		3	8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		36.0		49.0	49.0						27.0	
Effective Green, g (s)		36.0		49.0	49.0						27.0	
Actuated g/C Ratio		0.42		0.58	0.58						0.32	
Clearance Time (s)		3.0		4.0	4.0						5.0	
Lane Grp Cap (vph)		1335		472	1850						976	
v/s Ratio Prot		0.18		c0.05	0.16						c0.05	
v/s Ratio Perm				c0.19								
v/c Ratio		0.41		0.42	0.28						0.15	
Uniform Delay, d1		17.1		14.6	9.1						20.8	
Progression Factor		1.00		0.33	0.20						1.00	
Incremental Delay, d2		0.9		2.3	0.3						0.3	
Delay (s)		18.1		7.1	2.1						21.1	
Level of Service		B		A	A						C	
Approach Delay (s)		18.1			3.5			0.0			21.1	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	11.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	43.7%	ICU Level of Service	A
Analysis Period (min)	15		

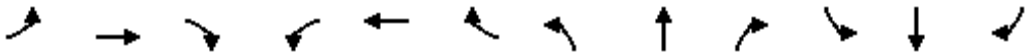
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	95	478	0	0	609	124	64	90	58	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	11	11	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0			3.0			5.0				
Lane Util. Factor	1.00	0.95			0.95			0.91				
Frt	1.00	1.00			0.97			0.96				
Flt Protected	0.95	1.00			1.00			0.99				
Satd. Flow (prot)	1660	3320			3128			4507				
Flt Permitted	0.25	1.00			1.00			0.99				
Satd. Flow (perm)	436	3320			3128			4507				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	100	503	0	0	641	131	67	95	61	0	0	0
RTOR Reduction (vph)	0	0	0	0	20	0	0	42	0	0	0	0
Lane Group Flow (vph)	100	503	0	0	752	0	0	181	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt						Split					
Protected Phases	7	4			8		2	2				
Permitted Phases	4											
Actuated Green, G (s)	48.0	48.0			35.0			27.0				
Effective Green, g (s)	48.0	48.0			35.0			27.0				
Actuated g/C Ratio	0.56	0.56			0.41			0.32				
Clearance Time (s)	5.0	5.0			3.0			5.0				
Lane Grp Cap (vph)	390	1875			1288			1432				
v/s Ratio Prot	0.03	c0.15			c0.24			c0.04				
v/s Ratio Perm	0.11											
v/c Ratio	0.26	0.27			0.58			0.13				
Uniform Delay, d1	16.5	9.5			19.4			20.6				
Progression Factor	0.38	0.32			1.00			1.00				
Incremental Delay, d2	1.5	0.3			1.9			0.2				
Delay (s)	7.8	3.3			21.3			20.8				
Level of Service	A	A			C			C				
Approach Delay (s)		4.1			21.3			20.8			0.0	
Approach LOS		A			C			C			A	

Intersection Summary			
HCM Average Control Delay	14.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	43.7%	ICU Level of Service	A
Analysis Period (min)	15		

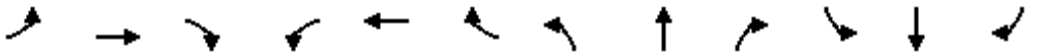
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	114	342	114	79	366	79	129	78	27	29	85	141
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	12	15	12	12	15	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		0.97			0.98			0.98			0.93	
Flt Protected		0.99			0.99			0.97			0.99	
Satd. Flow (prot)		2976			3006			1842			1769	
Flt Permitted		0.69			0.75			0.73			0.95	
Satd. Flow (perm)		2070			2273			1379			1690	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	120	360	120	83	385	83	136	82	28	31	89	148
RTOR Reduction (vph)	0	34	0	0	22	0	0	7	0	0	69	0
Lane Group Flow (vph)	0	566	0	0	529	0	0	239	0	0	199	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		23.0			23.0			32.0			32.0	
Effective Green, g (s)		23.0			23.0			32.0			32.0	
Actuated g/C Ratio		0.35			0.35			0.49			0.49	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		732			804			679			832	
v/s Ratio Prot												
v/s Ratio Perm		c0.27			0.23			c0.17			0.12	
v/c Ratio		0.77			0.66			0.35			0.24	
Uniform Delay, d1		18.7			17.7			10.1			9.5	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		7.8			4.2			1.4			0.7	
Delay (s)		26.5			21.9			11.6			10.2	
Level of Service		C			C			B			B	
Approach Delay (s)		26.5			21.9			11.6			10.2	
Approach LOS		C			C			B			B	

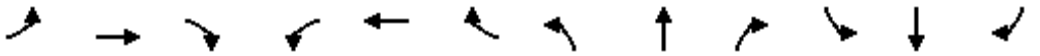
Intersection Summary			
HCM Average Control Delay	20.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	78.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	106	201	88	159	311	65	118	511	64	91	898	140
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	12	10	16	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.95		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1559	2980		1573	3683		1508	3069	1333	1520	3099	1336
Flt Permitted	0.45	1.00		0.53	1.00		0.14	1.00	1.00	0.36	1.00	1.00
Satd. Flow (perm)	739	2980		880	3683		214	3069	1333	576	3099	1336
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	112	212	93	167	327	68	124	538	67	96	945	147
RTOR Reduction (vph)	0	58	0	0	21	0	0	0	43	0	0	93
Lane Group Flow (vph)	112	247	0	167	374	0	124	538	24	96	945	54
Confl. Peds. (#/hr)	19		16	16		19	22		25	25		22
Heavy Vehicles (%)	2%	2%	0%	1%	2%	2%	2%	4%	0%	1%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	32.0	27.0		32.0	27.0		38.0	31.0	31.0	38.0	31.0	31.0
Effective Green, g (s)	30.0	28.0		30.0	28.0		36.0	31.0	31.0	36.0	31.0	31.0
Actuated g/C Ratio	0.35	0.33		0.35	0.33		0.42	0.36	0.36	0.42	0.36	0.36
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	299	982		343	1213		182	1119	486	311	1130	487
v/s Ratio Prot	0.02	0.08		c0.02	0.10		c0.05	0.18		0.02	c0.30	
v/s Ratio Perm	0.11			c0.15			0.24		0.02	0.11		0.04
v/c Ratio	0.37	0.25		0.49	0.31		0.68	0.48	0.05	0.31	0.84	0.11
Uniform Delay, d1	19.4	20.8		20.7	21.3		17.6	20.8	17.5	15.3	24.7	17.9
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.43	1.05	2.41
Incremental Delay, d2	3.6	0.6		4.9	0.7		18.7	1.5	0.2	1.9	5.7	0.3
Delay (s)	23.0	21.5		25.5	21.9		36.3	22.3	17.7	23.9	31.7	43.5
Level of Service	C	C		C	C		D	C	B	C	C	D
Approach Delay (s)		21.9			23.0			24.2			32.5	
Approach LOS		C			C			C			C	

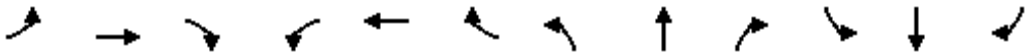
Intersection Summary			
HCM Average Control Delay	27.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	69.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	48	295	30	33	389	24	31	95	39	36	122	63
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	16	12	12	16	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00	0.98		1.00	0.99
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		0.99	1.00
Satd. Flow (prot)		1962	1466		1993	1480		2015	1506		2000	1511
Flt Permitted		0.90	1.00		0.96	1.00		0.92	1.00		0.92	1.00
Satd. Flow (perm)		1782	1466		1912	1480		1869	1506		1870	1511
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	51	311	32	35	409	25	33	100	41	38	128	66
RTOR Reduction (vph)	0	0	17	0	0	13	0	0	24	0	0	39
Lane Group Flow (vph)	0	362	15	0	444	12	0	133	17	0	166	27
Confl. Peds. (#/hr)	11		20	20		11	1		4	4		1
Confl. Bikes (#/hr)	1		1	1		1			1	1		
Heavy Vehicles (%)	4%	3%	0%	0%	2%	0%	0%	0%	0%	0%	1%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Effective Green, g (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Actuated g/C Ratio		0.46	0.46		0.46	0.46		0.42	0.42		0.42	0.42
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		822	677		882	683		776	626		777	628
v/s Ratio Prot												
v/s Ratio Perm		0.20	0.01		c0.23	0.01		0.07	0.01		c0.09	0.02
v/c Ratio		0.44	0.02		0.50	0.02		0.17	0.03		0.21	0.04
Uniform Delay, d1		11.8	9.5		12.3	9.5		12.0	11.2		12.2	11.3
Progression Factor		1.00	1.00		0.65	0.58		1.22	1.56		0.97	0.84
Incremental Delay, d2		1.7	0.1		2.0	0.0		0.5	0.1		0.6	0.1
Delay (s)		13.5	9.6		10.0	5.6		15.1	17.6		12.5	9.7
Level of Service		B	A		A	A		B	B		B	A
Approach Delay (s)		13.2			9.8			15.7			11.7	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	12.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.7%	ICU Level of Service	E
Analysis Period (min)	15		

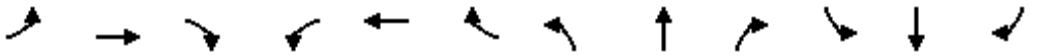
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	75	305	20	41	247	31	10	107	21	104	203	62
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.98		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1550	3070		1550	3047		1550	3023		1550	2991	
Flt Permitted	0.95	1.00		0.55	1.00		0.57	1.00		0.67	1.00	
Satd. Flow (perm)	1550	3070		891	3047		933	3023		1087	2991	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	79	321	21	43	260	33	11	113	22	109	214	65
RTOR Reduction (vph)	0	7	0	0	15	0	0	13	0	0	38	0
Lane Group Flow (vph)	79	335	0	43	278	0	11	122	0	109	241	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Prot			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Effective Green, g (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.11	0.49		0.34	0.34		0.42	0.42		0.42	0.42	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	167	1511		302	1031		388	1256		452	1242	
v/s Ratio Prot	c0.05	0.11			c0.09			0.04			0.08	
v/s Ratio Perm				0.05			0.01			c0.10		
v/c Ratio	0.47	0.22		0.14	0.27		0.03	0.10		0.24	0.19	
Uniform Delay, d1	27.3	9.4		14.9	15.7		11.2	11.6		12.3	12.1	
Progression Factor	0.92	0.50		0.77	0.74		0.89	0.94		1.12	1.12	
Incremental Delay, d2	8.9	0.3		1.0	0.6		0.1	0.2		1.3	0.3	
Delay (s)	34.1	5.0		12.4	12.2		10.2	11.0		15.1	13.8	
Level of Service	C	A		B	B		B	B		B	B	
Approach Delay (s)		10.5			12.3			10.9			14.2	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	12.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	37.6%	ICU Level of Service	A
Analysis Period (min)	15		

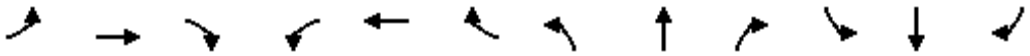
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	63	263	68	197	320	61	25	245	20	55	270	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.97		1.00	0.98			0.99			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1550	3003		1550	3025			3272			3230	
Flt Permitted	0.52	1.00		0.95	1.00			0.91			0.87	
Satd. Flow (perm)	841	3003		1550	3025			2982			2820	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	66	277	72	207	337	64	26	258	21	58	284	53
RTOR Reduction (vph)	0	35	0	0	24	0	0	9	0	0	19	0
Lane Group Flow (vph)	66	314	0	207	377	0	0	296	0	0	376	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Prot			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4						2			6		
Actuated Green, G (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Effective Green, g (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Actuated g/C Ratio	0.31	0.31		0.09	0.45			0.38			0.38	
Clearance Time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	259	924		143	1350			1147			1085	
v/s Ratio Prot		c0.10		c0.13	0.12							
v/s Ratio Perm	0.08							0.10			c0.13	
v/c Ratio	0.25	0.34		1.45	0.28			0.26			0.35	
Uniform Delay, d1	16.9	17.4		29.5	11.4			13.7			14.2	
Progression Factor	0.65	0.61		1.29	1.13			0.76			0.73	
Incremental Delay, d2	2.3	1.0		224.5	0.3			0.5			0.9	
Delay (s)	13.3	11.5		262.6	13.2			11.0			11.3	
Level of Service	B	B		F	B			B			B	
Approach Delay (s)		11.8			98.1			11.0			11.3	
Approach LOS		B			F			B			B	

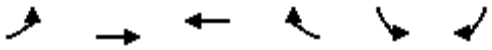
Intersection Summary			
HCM Average Control Delay	42.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	54.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	16	295	16	73	587	73	52	108	162	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	14	12	10	15	10
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			0.95				
Frt		0.99			0.99			0.92				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		1616			1601			3248				
Flt Permitted		0.96			0.93			0.99				
Satd. Flow (perm)		1557			1503			3248				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	17	311	17	77	618	77	55	114	171	0	0	0
RTOR Reduction (vph)	0	3	0	0	5	0	0	130	0	0	0	0
Lane Group Flow (vph)	0	342	0	0	767	0	0	210	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		41.6			41.6			15.4				
Effective Green, g (s)		41.6			41.6			15.4				
Actuated g/C Ratio		0.64			0.64			0.24				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		3.0			3.0			8.0				
Lane Grp Cap (vph)		996			962			770				
v/s Ratio Prot												
v/s Ratio Perm		0.22			c0.51			0.06				
v/c Ratio		0.34			0.80			0.27				
Uniform Delay, d1		5.4			8.6			20.2				
Progression Factor		1.59			1.00			1.00				
Incremental Delay, d2		0.9			6.8			0.8				
Delay (s)		9.5			15.4			21.0				
Level of Service		A			B			C				
Approach Delay (s)		9.5			15.4			21.0			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM Average Control Delay	15.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	80.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	73	374	569	38	117	157
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	81	416	632	42	130	174
Pedestrians		5	6		17	
Lane Width (ft)		16.0	16.0		10.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		1	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1319	491			
pX, platoon unblocked	0.84				0.84	0.84
vC, conflicting volume	691				1254	675
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	532				1206	512
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	90				14	62
cM capacity (veh/h)	842				152	464

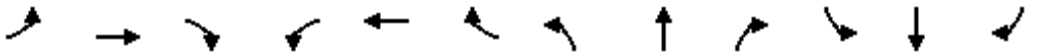
Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	497	674	130	174
Volume Left	81	0	130	0
Volume Right	0	42	0	174
cSH	842	1700	152	464
Volume to Capacity	0.10	0.40	0.86	0.38
Queue Length 95th (ft)	8	0	144	43
Control Delay (s)	2.6	0.0	97.4	17.4
Lane LOS	A		F	C
Approach Delay (s)	2.6	0.0	51.5	
Approach LOS			F	

Intersection Summary			
Average Delay	11.5		
Intersection Capacity Utilization	77.0%	ICU Level of Service	D
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	664	0	1	595	3	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frt	1.00			1.00	0.88	
Flt Protected	1.00			1.00	1.00	
Satd. Flow (prot)	1748			1747	1526	
Flt Permitted	1.00			1.00	1.00	
Satd. Flow (perm)	1748			1747	1526	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	699	0	1	626	3	31
RTOR Reduction (vph)	0	0	0	0	26	0
Lane Group Flow (vph)	699	0	0	627	8	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type			Perm			
Protected Phases	1 2 4			4	3	
Permitted Phases			4			
Actuated Green, G (s)	63.0			31.0	14.0	
Effective Green, g (s)	59.0			31.0	14.0	
Actuated g/C Ratio	0.69			0.36	0.16	
Clearance Time (s)				4.0	4.0	
Lane Grp Cap (vph)	1213			637	251	
v/s Ratio Prot	c0.40				c0.01	
v/s Ratio Perm				0.36		
v/c Ratio	0.58			0.98	0.03	
Uniform Delay, d1	6.6			26.8	29.8	
Progression Factor	0.06			1.00	1.00	
Incremental Delay, d2	1.3			32.0	0.2	
Delay (s)	1.7			58.8	30.1	
Level of Service	A			E	C	
Approach Delay (s)	1.7			58.8	30.1	
Approach LOS	A			E	C	

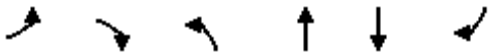
Intersection Summary			
HCM Average Control Delay	28.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	46.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	226	584	30	383	0	0	0	0	17	6	240
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	238	615	32	403	0	0	0	0	18	6	253
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	403			238			1015	1012	426	585	704	403
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	403			238			1015	1012	426	585	704	403
tC, single (s)	4.1			4.2			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			100	100	100	95	98	58
cM capacity (veh/h)	1166			1312			109	235	582	391	355	597

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	159	694	435	24	253
Volume Left	0	0	32	18	0
Volume Right	0	615	0	0	253
cSH	1700	1700	1312	381	597
Volume to Capacity	0.09	0.41	0.02	0.06	0.42
Queue Length 95th (ft)	0	0	2	5	52
Control Delay (s)	0.0	0.0	0.8	15.1	15.4
Lane LOS			A	C	C
Approach Delay (s)	0.0		0.8	15.4	
Approach LOS				C	

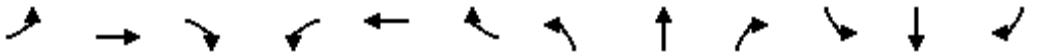
Intersection Summary				
Average Delay	2.9			
Intersection Capacity Utilization	57.4%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	243	0	414	0	0	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	256	0	436	0	0	0

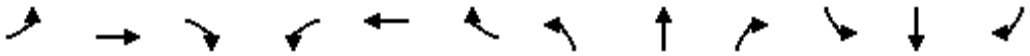
Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	128	128	436
Volume Left (vph)	128	128	436
Volume Right (vph)	0	0	0
Hadj (s)	0.55	0.55	0.25
Departure Headway (s)	6.2	6.2	4.9
Degree Utilization, x	0.22	0.22	0.59
Capacity (veh/h)	550	551	721
Control Delay (s)	9.8	9.8	14.7
Approach Delay (s)	9.8		14.7
Approach LOS	A		B

Intersection Summary			
Delay	12.9		
HCM Level of Service	B		
Intersection Capacity Utilization	38.2%	ICU Level of Service	A
Analysis Period (min)	15		



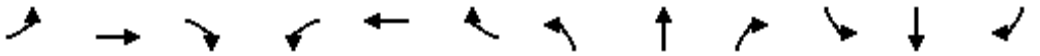
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	482	337	253	597	0	0	0	0	279	269	372
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	13	12	12	12	12	10	10	11
Total Lost time (s)		6.0	6.0		6.0					6.0	6.0	6.0
Lane Util. Factor		0.95	1.00		0.95					0.86	0.81	0.86
Frpb, ped/bikes		1.00	0.98		1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	0.95	0.85
Flt Protected		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (prot)		3179	1232		3424					1359	3806	1133
Flt Permitted		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (perm)		3179	1232		3424					1359	3806	1133
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	507	355	266	628	0	0	0	0	294	283	392
RTOR Reduction (vph)	0	0	234	0	0	0	0	0	0	0	53	113
Lane Group Flow (vph)	0	507	121	0	894	0	0	0	0	162	558	83
Confl. Peds. (#/hr)	4		6	6		4						
Heavy Vehicles (%)	0%	4%	6%	1%	2%	0%	0%	0%	0%	1%	1%	1%
Parking (#/hr)			0									0
Turn Type			Perm	Split						Split		custom
Protected Phases		2		10 12 14	10 12 14					4	4	
Permitted Phases			2									4 2
Actuated Green, G (s)		38.9	38.9		68.3					23.0	23.0	67.9
Effective Green, g (s)		38.9	38.9		68.3					23.0	23.0	67.9
Actuated g/C Ratio		0.24	0.24		0.43					0.14	0.14	0.42
Clearance Time (s)		6.0	6.0							6.0	6.0	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		773	300		1462					195	547	481
v/s Ratio Prot		c0.16			c0.26					0.12	c0.15	
v/s Ratio Perm			0.10									0.07
v/c Ratio		0.66	0.40		0.61					0.83	1.02	0.17
Uniform Delay, d1		54.5	50.8		35.6					66.6	68.5	28.6
Progression Factor		1.00	1.00		0.04					1.00	1.00	1.00
Incremental Delay, d2		4.3	4.0		0.1					24.9	43.6	0.2
Delay (s)		58.8	54.8		1.6					91.5	112.1	28.8
Level of Service		E	D		A					F	F	C
Approach Delay (s)		57.2			1.6			0.0			91.8	
Approach LOS		E			A			A			F	

Intersection Summary			
HCM Average Control Delay	51.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	31.8
Intersection Capacity Utilization	73.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



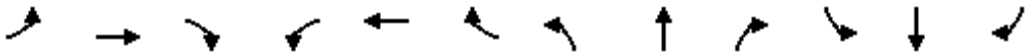
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	290	472	0	0	537	132	313	204	185	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	13	12	12	11	12	13	13	14	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0				
Lane Util. Factor	1.00	0.95			0.95	1.00	0.91	0.91				
Frt	1.00	1.00			1.00	0.85	1.00	0.94				
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (prot)	1605	3431			3210	1485	1561	3065				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (perm)	1605	3431			3210	1485	1561	3065				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	305	497	0	0	565	139	329	215	195	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	86	0	59	0	0	0	0
Lane Group Flow (vph)	305	497	0	0	565	53	250	430	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Split					Perm	Split					
Protected Phases	2 4 8	2 4 8			10		12	12				
Permitted Phases						10						
Actuated Green, G (s)	83.7	83.7			36.6	36.6	12.7	12.7				
Effective Green, g (s)	83.7	83.7			36.6	36.6	12.7	12.7				
Actuated g/C Ratio	0.52	0.52			0.23	0.23	0.08	0.08				
Clearance Time (s)					6.0	6.0	6.0	6.0				
Vehicle Extension (s)					3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	840	1795			734	340	124	243				
v/s Ratio Prot	c0.19	0.14			c0.18		c0.16	0.14				
v/s Ratio Perm						0.04						
v/c Ratio	0.36	0.28			0.77	0.16	2.02	1.77				
Uniform Delay, d1	22.5	21.3			57.8	49.4	73.7	73.7				
Progression Factor	0.01	0.02			1.00	1.00	1.00	1.00				
Incremental Delay, d2	0.2	0.1			4.9	0.2	484.4	362.7				
Delay (s)	0.5	0.4			62.6	49.6	558.1	436.4				
Level of Service	A	A			E	D	F	F				
Approach Delay (s)		0.4			60.1			477.5			0.0	
Approach LOS		A			E			F			A	

Intersection Summary			
HCM Average Control Delay	176.2	HCM Level of Service	F
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	29.0
Intersection Capacity Utilization	62.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	138	254	134	87	206	66	104	504	68	96	803	120
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	14	12	10	10	12	9	10	12
Total Lost time (s)	4.0	4.0	5.0	4.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.99	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1572	1600	1373	1593	1778		1578	3016		1537	3001	
Flt Permitted	0.43	1.00	1.00	0.50	1.00		0.15	1.00		0.34	1.00	
Satd. Flow (perm)	710	1600	1373	838	1778		246	3016		544	3001	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	141	259	137	89	210	67	106	514	69	98	819	122
RTOR Reduction (vph)	0	0	92	0	12	0	0	12	0	0	13	0
Lane Group Flow (vph)	141	259	45	89	265	0	106	571	0	98	928	0
Confl. Peds. (#/hr)	28		8	8		28	59		11	11		59
Confl. Bikes (#/hr)	3					3	1		2	2		1
Heavy Vehicles (%)	1%	5%	2%	0%	4%	0%	1%	4%	0%	0%	3%	3%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	36.3	29.3	29.3	33.3	27.8		39.6	34.1		39.6	34.1	
Effective Green, g (s)	34.3	30.3	29.3	31.3	27.8		37.6	34.1		37.6	34.1	
Actuated g/C Ratio	0.38	0.34	0.33	0.35	0.31		0.42	0.38		0.42	0.38	
Clearance Time (s)	3.0	5.0	5.0	3.0	5.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	330	542	450	331	553		171	1150		279	1145	
v/s Ratio Prot	c0.03	c0.16		0.01	0.15		c0.03	0.19		0.02	c0.31	
v/s Ratio Perm	0.14		0.03	0.08			0.23			0.13		
v/c Ratio	0.43	0.48	0.10	0.27	0.48		0.62	0.50		0.35	0.81	
Uniform Delay, d1	19.0	23.3	20.9	20.1	24.9		18.1	21.1		16.4	24.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.9	3.0	0.4	0.4	2.9		6.5	1.5		0.8	6.3	
Delay (s)	19.9	26.3	21.3	20.6	27.9		24.7	22.6		17.1	31.0	
Level of Service	B	C	C	C	C		C	C		B	C	
Approach Delay (s)		23.4			26.1			23.0			29.7	
Approach LOS		C			C			C			C	

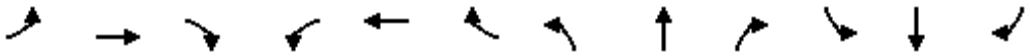
Intersection Summary			
HCM Average Control Delay	26.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	89.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	38	305	59	13	288	21	36	57	19	20	88	67
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	10	10	10	12	15	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00			0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.98			0.95	
Flt Protected		0.99	1.00		1.00	1.00		0.98			0.99	
Satd. Flow (prot)		1968	1467		1629	1381		1892			1870	
Flt Permitted		0.95	1.00		0.98	1.00		0.89			0.97	
Satd. Flow (perm)		1870	1467		1605	1381		1716			1827	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	40	321	62	14	303	22	38	60	20	21	93	71
RTOR Reduction (vph)	0	0	31	0	0	11	0	11	0	0	34	0
Lane Group Flow (vph)	0	361	31	0	317	11	0	107	0	0	151	0
Confl. Peds. (#/hr)	12		20	20		12	8		2	2		8
Confl. Bikes (#/hr)	1		2	2		1			1	1		
Heavy Vehicles (%)	3%	3%	0%	0%	3%	0%	0%	0%	0%	0%	1%	3%
Turn Type	Perm		Perm	Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Effective Green, g (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Actuated g/C Ratio		0.49	0.49		0.49	0.49		0.42			0.42	
Clearance Time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		921	722		790	680		713			759	
v/s Ratio Prot												
v/s Ratio Perm		0.19	0.02		c0.20	0.01		0.06			c0.08	
v/c Ratio		0.39	0.04		0.40	0.02		0.15			0.20	
Uniform Delay, d1		10.4	8.6		10.4	8.4		11.8			12.1	
Progression Factor		1.00	1.00		1.95	2.83		1.00			1.96	
Incremental Delay, d2		1.3	0.1		1.5	0.0		0.4			0.6	
Delay (s)		11.6	8.7		21.8	24.0		12.3			24.3	
Level of Service		B	A		C	C		B			C	
Approach Delay (s)		11.2			22.0			12.3			24.3	
Approach LOS		B			C			B			C	

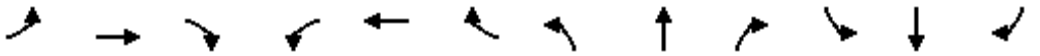
Intersection Summary			
HCM Average Control Delay	17.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	59.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	58	189	40	11	206	10	34	108	18	14	175	66
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.94		1.00	0.97		1.00	0.97		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.96	
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		1.00	
Satd. Flow (prot)		1748	1443		1728	1487		1713	1489		1712	
Flt Permitted		0.88	1.00		0.98	1.00		0.90	1.00		0.98	
Satd. Flow (perm)		1555	1443		1701	1487		1555	1489		1690	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	60	197	42	11	215	10	35	112	19	15	182	69
RTOR Reduction (vph)	0	0	27	0	0	6	0	0	10	0	19	0
Lane Group Flow (vph)	0	257	15	0	226	4	0	147	9	0	247	0
Confl. Peds. (#/hr)	19		25	25		19	3		6	6		3
Confl. Bikes (#/hr)	1		2	2		1			1	1		
Heavy Vehicles (%)	0%	2%	0%	0%	4%	0%	0%	5%	0%	0%	0%	2%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Effective Green, g (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Actuated g/C Ratio		0.35	0.35		0.35	0.35		0.49	0.49		0.49	
Clearance Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Grp Cap (vph)		550	511		602	526		766	733		832	
v/s Ratio Prot												
v/s Ratio Perm		c0.17	0.01		0.13	0.00		0.09	0.01		c0.15	
v/c Ratio		0.47	0.03		0.38	0.01		0.19	0.01		0.30	
Uniform Delay, d1		16.3	13.7		15.6	13.6		9.3	8.4		9.8	
Progression Factor		1.93	3.45		0.96	0.97		0.20	0.25		1.02	
Incremental Delay, d2		2.7	0.1		1.7	0.0		0.4	0.0		0.9	
Delay (s)		34.0	47.4		16.7	13.1		2.2	2.1		10.9	
Level of Service		C	D		B	B		A	A		B	
Approach Delay (s)		35.9			16.6			2.2			10.9	
Approach LOS		D			B			A			B	

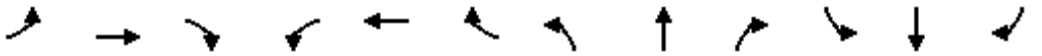
Intersection Summary			
HCM Average Control Delay	18.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	61.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	147	35	76	8	14	9	38	224	8	20	458	194
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.95		0.98			1.00			1.00	0.94
Flpb, ped/bikes		0.98	1.00		0.99			1.00			1.00	1.00
Frt		1.00	0.85		0.96			1.00			1.00	0.85
Flt Protected		0.96	1.00		0.99			0.99			1.00	1.00
Satd. Flow (prot)		1871	1440		1776			1993			1976	1382
Flt Permitted		0.78	1.00		0.94			0.91			0.98	1.00
Satd. Flow (perm)		1509	1440		1693			1820			1948	1382
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	155	37	80	8	15	9	40	236	8	21	482	204
RTOR Reduction (vph)	0	0	47	0	7	0	0	2	0	0	0	90
Lane Group Flow (vph)	0	192	33	0	25	0	0	282	0	0	503	114
Confl. Peds. (#/hr)	37		53	53		37	39		54	54		39
Confl. Bikes (#/hr)							2					2
Heavy Vehicles (%)	4%	0%	1%	0%	0%	0%	0%	1%	0%	0%	3%	4%
Turn Type	pm+pt		Perm	Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		27.0	27.0		17.0			32.0			32.0	32.0
Effective Green, g (s)		27.0	27.0		17.0			32.0			32.0	32.0
Actuated g/C Ratio		0.42	0.42		0.26			0.49			0.49	0.49
Clearance Time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		671	598		443			896			959	680
v/s Ratio Prot		c0.04										
v/s Ratio Perm		0.08	0.02		0.01			0.16			c0.26	0.08
v/c Ratio		0.29	0.06		0.06			0.32			0.52	0.17
Uniform Delay, d1		12.6	11.4		18.0			9.9			11.3	9.1
Progression Factor		0.63	0.77		1.00			0.61			0.62	0.22
Incremental Delay, d2		1.0	0.2		0.2			0.8			1.6	0.4
Delay (s)		8.9	8.9		18.2			6.9			8.6	2.5
Level of Service		A	A		B			A			A	A
Approach Delay (s)		8.9			18.2			6.9			6.9	
Approach LOS		A			B			A			A	

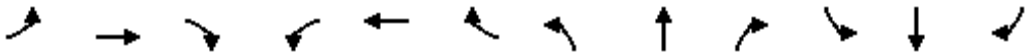
Intersection Summary			
HCM Average Control Delay	7.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	69.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



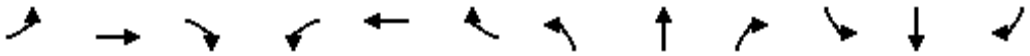
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	866	289	324	935	0	0	0	0	513	284	334
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	11	8	8	8	11	12	14
Total Lost time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Lane Util. Factor		0.91		1.00	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.96		1.00	1.00					1.00	0.98	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.98	1.00
Satd. Flow (prot)		4569		1620	3320					1489	2913	1442
Flt Permitted		1.00		0.14	1.00					0.95	0.98	1.00
Satd. Flow (perm)		4569		242	3320					1489	2913	1442
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	884	295	331	954	0	0	0	0	523	290	341
RTOR Reduction (vph)	0	44	0	0	0	0	0	0	0	0	9	111
Lane Group Flow (vph)	0	1135	0	331	954	0	0	0	0	298	584	152
Confl. Peds. (#/hr)	15		11	11		15						
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	0%	3%	3%	2%	3%	0%	0%	0%	0%	1%	3%	3%
Turn Type				pm+pt						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Actuated Green, G (s)		47.8		75.2	75.2					27.8	27.8	27.8
Effective Green, g (s)		47.8		75.2	75.2					27.8	27.8	27.8
Actuated g/C Ratio		0.42		0.65	0.65					0.24	0.24	0.24
Clearance Time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Vehicle Extension (s)		7.0		3.5	7.0					3.5	3.5	3.5
Lane Grp Cap (vph)		1899		433	2171					360	704	349
v/s Ratio Prot		0.25		c0.15	0.29							
v/s Ratio Perm				c0.35						0.20	0.20	0.11
v/c Ratio		0.60		0.76	0.44					0.83	0.83	0.44
Uniform Delay, d1		26.1		21.5	9.7					41.3	41.4	37.0
Progression Factor		1.00		1.09	1.51					1.00	1.00	1.00
Incremental Delay, d2		1.4		6.0	0.5					14.8	8.2	1.0
Delay (s)		27.5		29.5	15.1					56.1	49.6	38.0
Level of Service		C		C	B					E	D	D
Approach Delay (s)		27.5			18.8			0.0			48.6	
Approach LOS		C			B			A			D	

Intersection Summary			
HCM Average Control Delay	31.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	98.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	341	1038	0	0	852	269	406	333	292	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	11	12	12	12	12	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0		6.0				
Lane Util. Factor	0.97	0.95			0.95	1.00		0.91				
Frpb, ped/bikes	1.00	1.00			1.00	0.98		1.00				
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00				
Frt	1.00	1.00			1.00	0.85		0.96				
Flt Protected	0.95	1.00			1.00	1.00		0.98				
Satd. Flow (prot)	3144	3353			3241	1489		4526				
Flt Permitted	0.20	1.00			1.00	1.00		0.98				
Satd. Flow (perm)	647	3353			3241	1489		4526				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	359	1093	0	0	897	283	427	351	307	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	99	0	59	0	0	0	0
Lane Group Flow (vph)	359	1093	0	0	897	184	0	1026	0	0	0	0
Confl. Peds. (#/hr)	7		5	5		7						
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	2%	2%	0%	0%	2%	1%	2%	1%	3%	0%	0%	0%
Turn Type	pm+pt					Perm	Perm					
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8					
Actuated Green, G (s)	70.0	70.0			52.2	52.2		33.0				
Effective Green, g (s)	70.0	70.0			52.2	52.2		33.0				
Actuated g/C Ratio	0.61	0.61			0.45	0.45		0.29				
Clearance Time (s)	6.0	6.0			6.0	6.0		6.0				
Vehicle Extension (s)	3.5	7.0			7.0	7.0		5.0				
Lane Grp Cap (vph)	650	2041			1471	676		1299				
v/s Ratio Prot	0.06	c0.33			c0.28							
v/s Ratio Perm	0.28					0.12		0.23				
v/c Ratio	0.55	0.54			0.61	0.27		0.79				
Uniform Delay, d1	13.2	13.1			23.7	19.6		37.8				
Progression Factor	0.48	0.30			0.97	1.10		1.00				
Incremental Delay, d2	0.8	0.8			1.6	0.8		3.8				
Delay (s)	7.2	4.6			24.5	22.3		41.6				
Level of Service	A	A			C	C		D				
Approach Delay (s)		5.3			24.0			41.6			0.0	
Approach LOS		A			C			D			A	

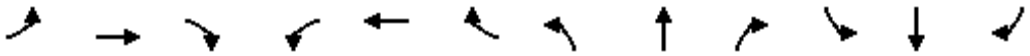
Intersection Summary			
HCM Average Control Delay	21.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	98.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	132	619	399	102	612	52	227	179	66	74	162	121
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	11	12	12	10	10	13	10	10	10
Total Lost time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		0.99	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.96		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1564	3273	1313	1600	3283		1578	3002		1540	2941	
Flt Permitted	0.19	1.00	1.00	0.40	1.00		0.39	1.00		0.59	1.00	
Satd. Flow (perm)	308	3273	1313	681	3283		652	3002		961	2941	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	139	652	420	107	644	55	239	188	69	78	171	127
RTOR Reduction (vph)	0	0	169	0	6	0	0	38	0	0	107	0
Lane Group Flow (vph)	139	652	251	107	693	0	239	219	0	78	191	0
Confl. Peds. (#/hr)	11		23	23		11	8		12	12		8
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	2%	1%	3%	3%	3%	0%	1%	1%	2%	3%	0%	1%
Parking (#/hr)			0									
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	65.0	52.5	68.8	41.7	32.7		38.0	26.6		26.1	18.2	
Effective Green, g (s)	65.0	52.5	68.8	41.7	32.7		38.0	26.6		26.1	18.2	
Actuated g/C Ratio	0.57	0.46	0.60	0.36	0.28		0.33	0.23		0.23	0.16	
Clearance Time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0		3.0	7.0		3.0	7.0	
Lane Grp Cap (vph)	489	1494	786	319	934		347	694		258	465	
v/s Ratio Prot	0.07	c0.20	0.05	c0.03	c0.21		c0.10	0.07		0.02	0.06	
v/s Ratio Perm	0.09		0.15	0.10			c0.13			0.05		
v/c Ratio	0.28	0.44	0.32	0.34	0.74		0.69	0.32		0.30	0.41	
Uniform Delay, d1	13.9	21.2	11.5	25.0	37.3		30.6	36.7		36.2	43.6	
Progression Factor	0.67	0.82	2.95	1.00	1.00		0.85	0.93		1.00	1.00	
Incremental Delay, d2	1.2	0.8	0.2	0.6	5.3		5.4	0.9		0.7	2.1	
Delay (s)	10.5	18.3	34.1	25.7	42.6		31.6	34.9		36.9	45.7	
Level of Service	B	B	C	C	D		C	C		D	D	
Approach Delay (s)		22.9			40.4			33.3			43.8	
Approach LOS		C			D			C			D	

Intersection Summary			
HCM Average Control Delay	32.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	70.0%	ICU Level of Service	C
Analysis Period (min)	15		

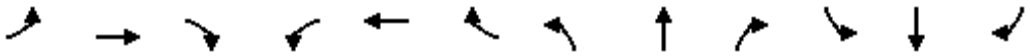
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	46	193	367	68	202	107	362	340	78	206	408	56
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	12	11	12	12	11	13	12	10	11	12
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.90		1.00	0.95		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1705	2894		1653	3184		1620	3407		1580	3183	
Flt Permitted	0.54	1.00		0.29	1.00		0.32	1.00		0.50	1.00	
Satd. Flow (perm)	961	2894		504	3184		544	3407		826	3183	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	48	203	386	72	213	113	381	358	82	217	429	59
RTOR Reduction (vph)	0	269	0	0	56	0	0	17	0	0	9	0
Lane Group Flow (vph)	48	320	0	72	270	0	381	423	0	217	479	0
Confl. Peds. (#/hr)	12		3	3		12	5					5
Heavy Vehicles (%)	0%	2%	2%	0%	1%	1%	2%	1%	0%	1%	2%	0%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	41.7	35.0		43.9	36.1		56.2	44.2		40.1	32.1	
Effective Green, g (s)	41.7	35.0		43.9	36.1		56.2	44.2		40.1	32.1	
Actuated g/C Ratio	0.36	0.30		0.38	0.31		0.49	0.38		0.35	0.28	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.5	7.0		3.5	7.0		3.5	7.0		3.5	7.0	
Lane Grp Cap (vph)	392	881		270	999		454	1309		340	888	
v/s Ratio Prot	0.01	c0.11		c0.02	0.08		c0.15	0.12		0.04	0.15	
v/s Ratio Perm	0.04			0.08			c0.26			0.18		
v/c Ratio	0.12	0.36		0.27	0.27		0.84	0.32		0.64	0.54	
Uniform Delay, d1	24.0	31.3		23.6	29.6		20.8	24.9		28.8	35.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.98	
Incremental Delay, d2	0.2	1.2		0.6	0.7		13.1	0.7		3.9	2.2	
Delay (s)	24.2	32.5		24.3	30.2		33.9	25.5		32.6	36.5	
Level of Service	C	C		C	C		C	C		C	D	
Approach Delay (s)		31.8			29.2			29.4			35.3	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM Average Control Delay	31.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	74.0%	ICU Level of Service	D
Analysis Period (min)	15		

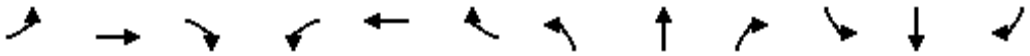
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	101	578	135	10	376	66	102	281	9	188	578	174
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	9	11	12	9	9	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.98		1.00	1.00		1.00	0.97	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3029			3035		1451	3227		1522	2872	
Flt Permitted		0.72			0.93		0.23	1.00		0.57	1.00	
Satd. Flow (perm)		2209			2826		351	3227		906	2872	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	106	608	142	11	396	69	107	296	9	198	608	183
RTOR Reduction (vph)	0	25	0	0	21	0	0	3	0	0	44	0
Lane Group Flow (vph)	0	831	0	0	455	0	107	302	0	198	747	0
Confl. Peds. (#/hr)	4		2	2		4	8		4	4		8
Confl. Bikes (#/hr)							2					2
Heavy Vehicles (%)	1%	2%	2%	0%	2%	6%	6%	2%	0%	1%	3%	3%
Turn Type	pm+pt			Perm			pm+pt			pm+pt		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			17.0		28.0	24.0		28.0	24.0	
Effective Green, g (s)		25.0			17.0		28.0	24.0		28.0	24.0	
Actuated g/C Ratio		0.38			0.26		0.43	0.37		0.43	0.37	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		900			739		219	1192		428	1060	
v/s Ratio Prot		c0.06					c0.03	0.09		0.03	c0.26	
v/s Ratio Perm		c0.30			0.16		0.18			0.17		
v/c Ratio		0.92			0.62		0.49	0.25		0.46	0.71	
Uniform Delay, d1		19.1			21.1		12.0	14.3		12.2	17.5	
Progression Factor		1.00			1.51		0.95	0.59		1.00	1.00	
Incremental Delay, d2		16.3			1.0		7.3	0.5		3.6	3.9	
Delay (s)		35.4			33.0		18.8	9.0		15.8	21.4	
Level of Service		D			C		B	A		B	C	
Approach Delay (s)		35.4			33.0			11.5			20.3	
Approach LOS		D			C			B			C	

Intersection Summary			
HCM Average Control Delay	25.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	80.3%	ICU Level of Service	D
Analysis Period (min)	15		

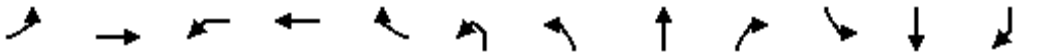
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	67	198	136	103	159	27	70	450	78	33	662	66
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.94		1.00	0.98		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1707	1885		1599	1992		1676	3221		1435	3274	
Flt Permitted	0.64	1.00		0.44	1.00		0.31	1.00		0.42	1.00	
Satd. Flow (perm)	1141	1885		736	1992		538	3221		636	3274	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	71	208	143	108	167	28	74	474	82	35	697	69
RTOR Reduction (vph)	0	38	0	0	9	0	0	21	0	0	12	0
Lane Group Flow (vph)	71	313	0	108	186	0	74	535	0	35	754	0
Confl. Peds. (#/hr)	3		20	20		3	2		3	3		2
Confl. Bikes (#/hr)			1	1			2		2	2		2
Heavy Vehicles (%)	0%	0%	1%	6%	0%	0%	2%	3%	6%	19%	3%	2%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.48	0.48		0.48	0.48	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	421	696		272	736		257	1536		303	1561	
v/s Ratio Prot		c0.17			0.09			0.17			c0.23	
v/s Ratio Perm	0.06			0.15			0.14			0.06		
v/c Ratio	0.17	0.45		0.40	0.25		0.29	0.35		0.12	0.48	
Uniform Delay, d1	13.8	15.5		15.2	14.3		10.3	10.7		9.4	11.6	
Progression Factor	1.00	1.00		1.31	1.33		1.00	1.00		1.07	0.88	
Incremental Delay, d2	0.9	2.1		2.6	0.5		2.8	0.6		0.5	0.7	
Delay (s)	14.7	17.6		22.5	19.4		13.1	11.3		10.6	10.9	
Level of Service	B	B		C	B		B	B		B	B	
Approach Delay (s)		17.1			20.5			11.5			10.9	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM Average Control Delay	13.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	68.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	750	221	534	18	3	10	9	46	9	0	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	10	10	10	12	12	16	12	12	16	12
Total Lost time (s)		5.0		5.0				4.0			4.0	
Lane Util. Factor		0.95		0.95				1.00			1.00	
Frpb, ped/bikes		1.00		1.00				0.99			0.98	
Flpb, ped/bikes		1.00		1.00				1.00			1.00	
Frt		1.00		1.00				0.91			0.94	
Flt Protected		1.00		0.99				0.99			0.97	
Satd. Flow (prot)		3160		3090				1811			1824	
Flt Permitted		0.95		0.56				0.96			0.89	
Satd. Flow (perm)		3012		1746				1750			1672	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	2	789	233	562	19	3	11	9	48	9	0	3
RTOR Reduction (vph)	0	0	0	2	0	0	0	38	0	0	4	0
Lane Group Flow (vph)	0	791	0	812	0	0	0	33	0	0	13	0
Confl. Peds. (#/hr)	7		4		7		7		2	2		7
Confl. Bikes (#/hr)							2		2	2		2
Heavy Vehicles (%)	0%	1%	2%	1%	6%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Perm		custom			Perm	Perm			Perm		
Protected Phases		8	7	4				2			6	
Permitted Phases	8		4 7			2	2			6		
Actuated Green, G (s)		18.0		27.0				14.0			14.0	
Effective Green, g (s)		18.0		27.0				14.0			14.0	
Actuated g/C Ratio		0.28		0.42				0.22			0.22	
Clearance Time (s)		5.0		5.0				4.0			4.0	
Lane Grp Cap (vph)		834		849				377			360	
v/s Ratio Prot				c0.09								
v/s Ratio Perm		0.26		c0.31				c0.02			0.01	
v/c Ratio		0.95		1.11dl				0.09			0.04	
Uniform Delay, d1		23.0		18.4				20.4			20.2	
Progression Factor		1.45		0.89				1.00			1.00	
Incremental Delay, d2		14.0		21.2				0.5			0.2	
Delay (s)		47.5		37.7				20.9			20.4	
Level of Service		D		D				C			C	
Approach Delay (s)		47.5		37.7				20.9			20.4	
Approach LOS		D		D				C			C	

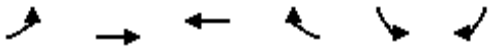
Intersection Summary			
HCM Average Control Delay	49.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	90.1%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group



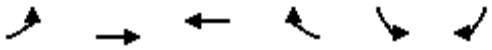
Movement	SBR2	NEL	NER
Lane Configurations			
Volume (vph)	5	3	242
Ideal Flow (vphpl)	1800	1800	1800
Lane Width	12	12	12
Total Lost time (s)		5.0	
Lane Util. Factor		1.00	
Frpb, ped/bikes		1.00	
Flpb, ped/bikes		1.00	
Frt		0.87	
Flt Protected		1.00	
Satd. Flow (prot)		1559	
Flt Permitted		1.00	
Satd. Flow (perm)		1559	
Peak-hour factor, PHF	0.95	0.95	0.95
Adj. Flow (vph)	5	3	255
RTOR Reduction (vph)	0	0	0
Lane Group Flow (vph)	0	258	0
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Heavy Vehicles (%)	0%	0%	0%
Turn Type			
Protected Phases		3	
Permitted Phases			
Actuated Green, G (s)		10.0	
Effective Green, g (s)		10.0	
Actuated g/C Ratio		0.15	
Clearance Time (s)		5.0	
Lane Grp Cap (vph)		240	
v/s Ratio Prot		c0.17	
v/s Ratio Perm			
v/c Ratio		1.07	
Uniform Delay, d1		27.5	
Progression Factor		0.87	
Incremental Delay, d2		77.3	
Delay (s)		101.2	
Level of Service		F	
Approach Delay (s)		101.2	
Approach LOS		F	

Intersection Summary



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	256	769	557	62	91	222
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frt		1.00	0.99		1.00	0.85
Flt Protected		0.99	1.00		0.95	1.00
Satd. Flow (prot)		3279	3271		1660	1485
Flt Permitted		0.65	1.00		0.95	1.00
Satd. Flow (perm)		2168	3271		1660	1485
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	269	809	586	65	96	234
RTOR Reduction (vph)	0	0	13	0	0	173
Lane Group Flow (vph)	0	1078	638	0	96	61
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		40.0	40.0		17.0	17.0
Effective Green, g (s)		40.0	40.0		17.0	17.0
Actuated g/C Ratio		0.62	0.62		0.26	0.26
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1334	2013		434	388
v/s Ratio Prot			0.20		c0.06	
v/s Ratio Perm		c0.50				0.04
v/c Ratio		0.81	0.32		0.22	0.16
Uniform Delay, d1		9.6	6.0		18.8	18.5
Progression Factor		1.22	1.24		1.27	2.35
Incremental Delay, d2		1.9	0.4		1.2	0.9
Delay (s)		13.6	7.8		25.1	44.3
Level of Service		B	A		C	D
Approach Delay (s)		13.6	7.8		38.7	
Approach LOS		B	A		D	

Intersection Summary			
HCM Average Control Delay	15.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



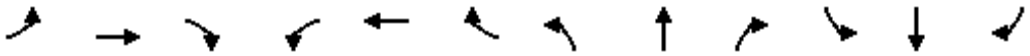
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	79	784	535	148	259	86
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	12	10	11	12	10	10
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frpb, ped/bikes		1.00	1.00		1.00	0.99
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.97		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3118	3069		1506	1343
Flt Permitted		0.82	1.00		0.95	1.00
Satd. Flow (perm)		2578	3069		1506	1343
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	83	825	563	156	273	91
RTOR Reduction (vph)	0	0	39	0	0	59
Lane Group Flow (vph)	0	908	680	0	273	32
Confl. Peds. (#/hr)	2			2		1
Heavy Vehicles (%)	1%	2%	2%	10%	6%	5%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		34.0	34.0		23.0	23.0
Effective Green, g (s)		34.0	34.0		23.0	23.0
Actuated g/C Ratio		0.52	0.52		0.35	0.35
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1348	1605		533	475
v/s Ratio Prot			0.22		c0.18	
v/s Ratio Perm		c0.35				0.02
v/c Ratio		0.67	0.42		0.51	0.07
Uniform Delay, d1		11.4	9.5		16.6	13.9
Progression Factor		1.05	1.09		1.64	3.32
Incremental Delay, d2		1.8	0.7		3.2	0.2
Delay (s)		13.8	11.1		30.4	46.4
Level of Service		B	B		C	D
Approach Delay (s)		13.8	11.1		34.4	
Approach LOS		B	B		C	

Intersection Summary			
HCM Average Control Delay	16.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	71.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



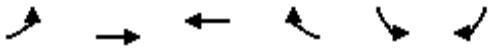
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	649	251	117	570	195	55
Ideal Flow (vphpl)	2300	1800	1800	2300	1800	1800
Lane Width	15	12	14	16	15	12
Total Lost time (s)	5.0		5.0	5.0	5.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.96		1.00	1.00	0.97	
Flt Protected	1.00		0.95	1.00	0.96	
Satd. Flow (prot)	2387		1788	2506	1748	
Flt Permitted	1.00		0.13	1.00	0.96	
Satd. Flow (perm)	2387		243	2506	1748	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	683	264	123	600	205	58
RTOR Reduction (vph)	21	0	0	0	16	0
Lane Group Flow (vph)	926	0	123	600	247	0
Confl. Peds. (#/hr)						1
Heavy Vehicles (%)	2%	2%	2%	4%	7%	0%
Turn Type			Perm			
Protected Phases	4			8	2	
Permitted Phases			8			
Actuated Green, G (s)	31.0		31.0	31.0	24.0	
Effective Green, g (s)	31.0		31.0	31.0	24.0	
Actuated g/C Ratio	0.48		0.48	0.48	0.37	
Clearance Time (s)	5.0		5.0	5.0	5.0	
Lane Grp Cap (vph)	1138		116	1195	645	
v/s Ratio Prot	0.39			0.24	c0.14	
v/s Ratio Perm			c0.51			
v/c Ratio	0.81		1.06	0.50	0.38	
Uniform Delay, d1	14.5		17.0	11.7	15.1	
Progression Factor	1.33		1.00	1.00	1.00	
Incremental Delay, d2	5.0		100.7	1.5	1.7	
Delay (s)	24.4		117.7	13.2	16.8	
Level of Service	C		F	B	B	
Approach Delay (s)	24.4			31.0	16.8	
Approach LOS	C			C	B	

Intersection Summary			
HCM Average Control Delay	25.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	75.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	957	37	108	678	1	59	0	149	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	15	13	11	11	12	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0	4.0	3.0	3.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00			
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1881	3431	1479	1589	3320	1530		1938	1500			
Flt Permitted	0.38	1.00	1.00	0.23	1.00	1.00		0.76	1.00			
Satd. Flow (perm)	759	3431	1479	380	3320	1530		1545	1500			
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	1	997	39	112	706	1	61	0	155	0	0	0
RTOR Reduction (vph)	0	0	14	0	0	0	0	0	139	0	0	0
Lane Group Flow (vph)	1	997	25	112	706	1	0	61	16	0	0	0
Heavy Vehicles (%)	0%	3%	0%	4%	3%	0%	0%	0%	2%	0%	0%	0%
Turn Type	Perm		Perm	custom		custom	Perm		Perm	Perm		
Protected Phases		4		3	3 8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)	53.7	53.7	53.7	68.1	68.1	68.1		8.9	8.9			
Effective Green, g (s)	53.7	53.7	53.7	68.1	68.1	68.1		8.9	8.9			
Actuated g/C Ratio	0.63	0.63	0.63	0.80	0.80	0.80		0.10	0.10			
Clearance Time (s)	4.0	4.0	4.0	3.0		4.0		4.0	4.0			
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0			
Lane Grp Cap (vph)	480	2168	934	467	2660	1226		162	157			
v/s Ratio Prot		c0.29		0.03	c0.21							
v/s Ratio Perm	0.00		0.02	0.16		0.00		c0.04	0.01			
v/c Ratio	0.00	0.46	0.03	0.24	0.27	0.00		0.38	0.10			
Uniform Delay, d1	5.8	8.1	5.9	2.9	2.1	1.7		35.5	34.4			
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00			
Incremental Delay, d2	0.0	0.7	0.1	0.3	0.1	0.0		1.5	0.3			
Delay (s)	5.8	8.8	5.9	3.2	2.2	1.7		36.9	34.7			
Level of Service	A	A	A	A	A	A		D	C			
Approach Delay (s)		8.7			2.3			35.4			0.0	
Approach LOS		A			A			D			A	

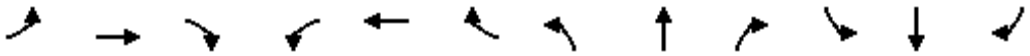
Intersection Summary			
HCM Average Control Delay	9.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	49.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	9	918	807	29	71	13
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10
Total Lost time (s)		5.0	5.0		3.0	
Lane Util. Factor		0.95	0.95		1.00	
Frt		1.00	0.99		0.98	
Flt Protected		1.00	1.00		0.96	
Satd. Flow (prot)		3098	3083		1532	
Flt Permitted		0.95	1.00		0.96	
Satd. Flow (perm)		2929	3083		1532	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	9	966	849	31	75	14
RTOR Reduction (vph)	0	0	3	0	7	0
Lane Group Flow (vph)	0	975	877	0	82	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Perm					
Protected Phases		4	8 2 11		5	
Permitted Phases	4					
Actuated Green, G (s)		33.0	64.0		7.0	
Effective Green, g (s)		33.0	64.0		7.0	
Actuated g/C Ratio		0.37	0.71		0.08	
Clearance Time (s)		5.0			3.0	
Lane Grp Cap (vph)		1074	2192		119	
v/s Ratio Prot			c0.28		c0.05	
v/s Ratio Perm		c0.33				
v/c Ratio		0.91	0.40		0.69	
Uniform Delay, d1		27.1	5.2		40.4	
Progression Factor		1.00	0.01		1.00	
Incremental Delay, d2		12.6	0.3		27.6	
Delay (s)		39.7	0.3		68.1	
Level of Service		D	A		E	
Approach Delay (s)		39.7	0.3		68.1	
Approach LOS		D	A		E	

Intersection Summary			
HCM Average Control Delay	23.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	45.9%	ICU Level of Service	A
Analysis Period (min)	15		

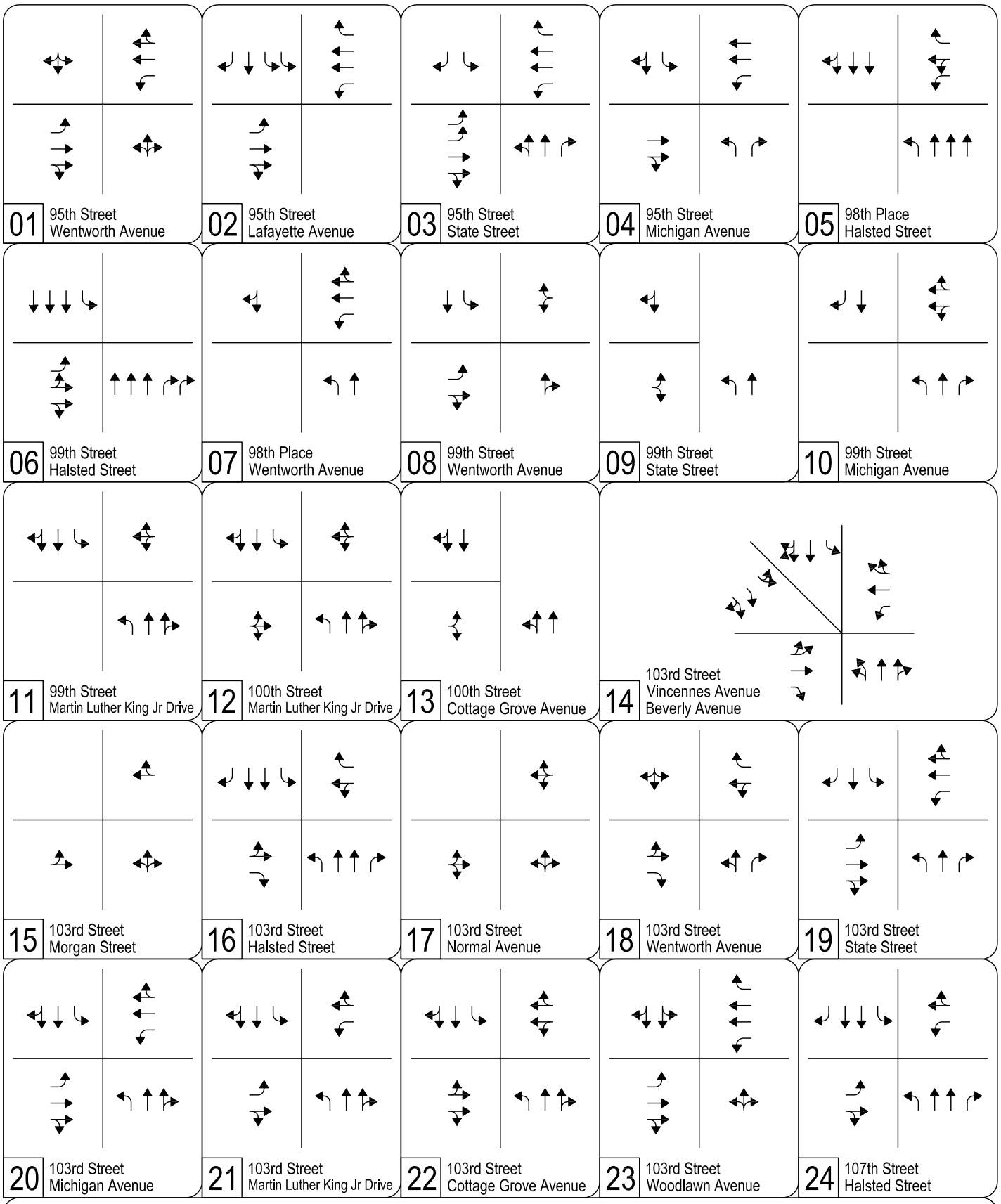
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	38	476	0	1	559	38	3	2	28	192	0	126
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12	12	11	12	11
Total Lost time (s)		4.0			4.0			3.0			3.0	3.0
Lane Util. Factor		1.00			0.95			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			0.94			1.00	0.98
Flpb, ped/bikes		1.00			1.00			1.00			0.99	1.00
Frt		1.00			0.99			0.88			1.00	0.85
Flt Protected		1.00			1.00			1.00			0.95	1.00
Satd. Flow (prot)		1774			3340			1467			1669	1348
Flt Permitted		0.92			0.95			0.97			0.89	1.00
Satd. Flow (perm)		1643			3190			1432			1568	1348
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	40	501	0	1	588	40	3	2	29	202	0	133
RTOR Reduction (vph)	0	0	0	0	6	0	0	26	0	0	0	89
Lane Group Flow (vph)	0	541	0	0	623	0	0	8	0	0	202	44
Confl. Peds. (#/hr)	60		44	44		60	14		10	10		14
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	0%	1%	0%	0%	1%	3%	20%	0%	0%	1%	0%	7%
Turn Type	Perm			Prot			Perm			pm+pt		Perm
Protected Phases		4		3	3 4			1		2	1 2	
Permitted Phases	4				3		1	1		1 2		1 2
Actuated Green, G (s)		31.0			45.0			9.0			25.0	28.0
Effective Green, g (s)		31.0			45.0			9.0			25.0	28.0
Actuated g/C Ratio		0.36			0.53			0.11			0.29	0.33
Clearance Time (s)		4.0						3.0				
Lane Grp Cap (vph)		599			1714			152			480	444
v/s Ratio Prot					c0.06						c0.08	
v/s Ratio Perm		c0.33			0.13			0.01			c0.04	0.03
v/c Ratio		0.90			0.36			0.05			0.42	0.10
Uniform Delay, d1		25.6			11.7			34.2			24.2	19.8
Progression Factor		1.00			1.11			1.00			1.00	1.00
Incremental Delay, d2		19.4			0.2			0.7			2.7	0.4
Delay (s)		45.0			13.1			34.8			26.9	20.2
Level of Service		D			B			C			C	C
Approach Delay (s)		45.0			13.1			34.8			24.2	
Approach LOS		D			B			C			C	

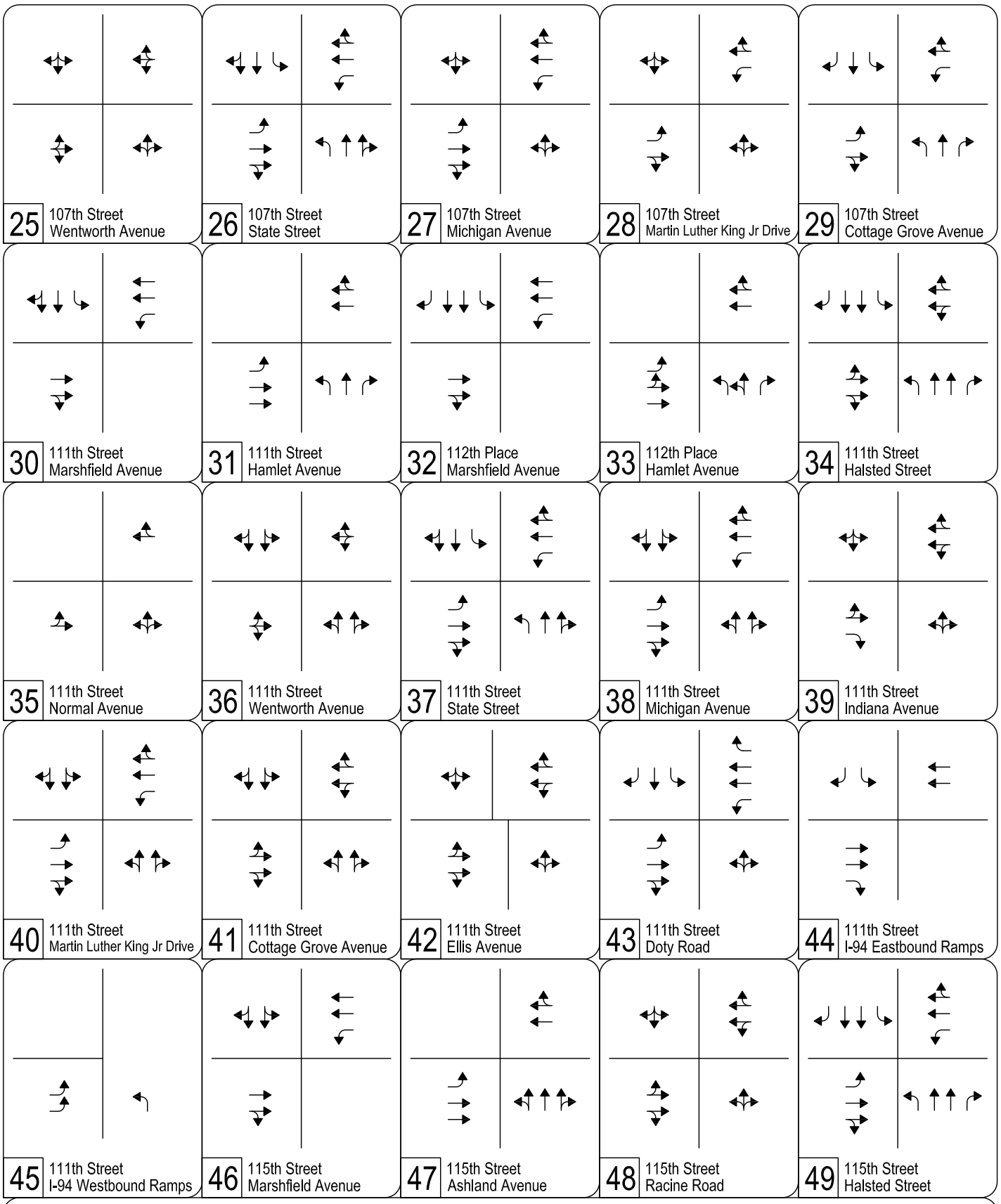
Intersection Summary			
HCM Average Control Delay	27.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	74.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



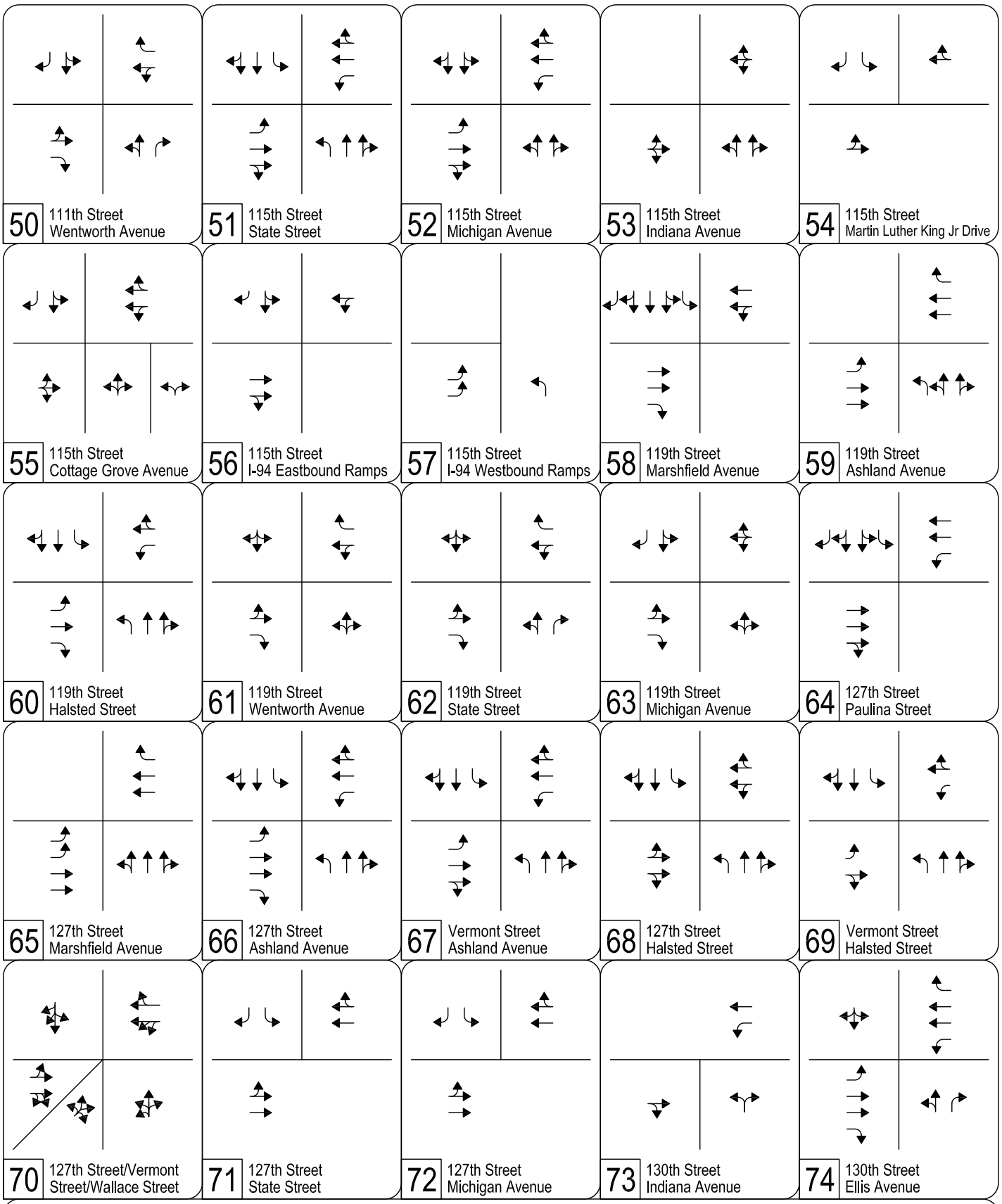
No Build (2030) Intersection Lane Geometry

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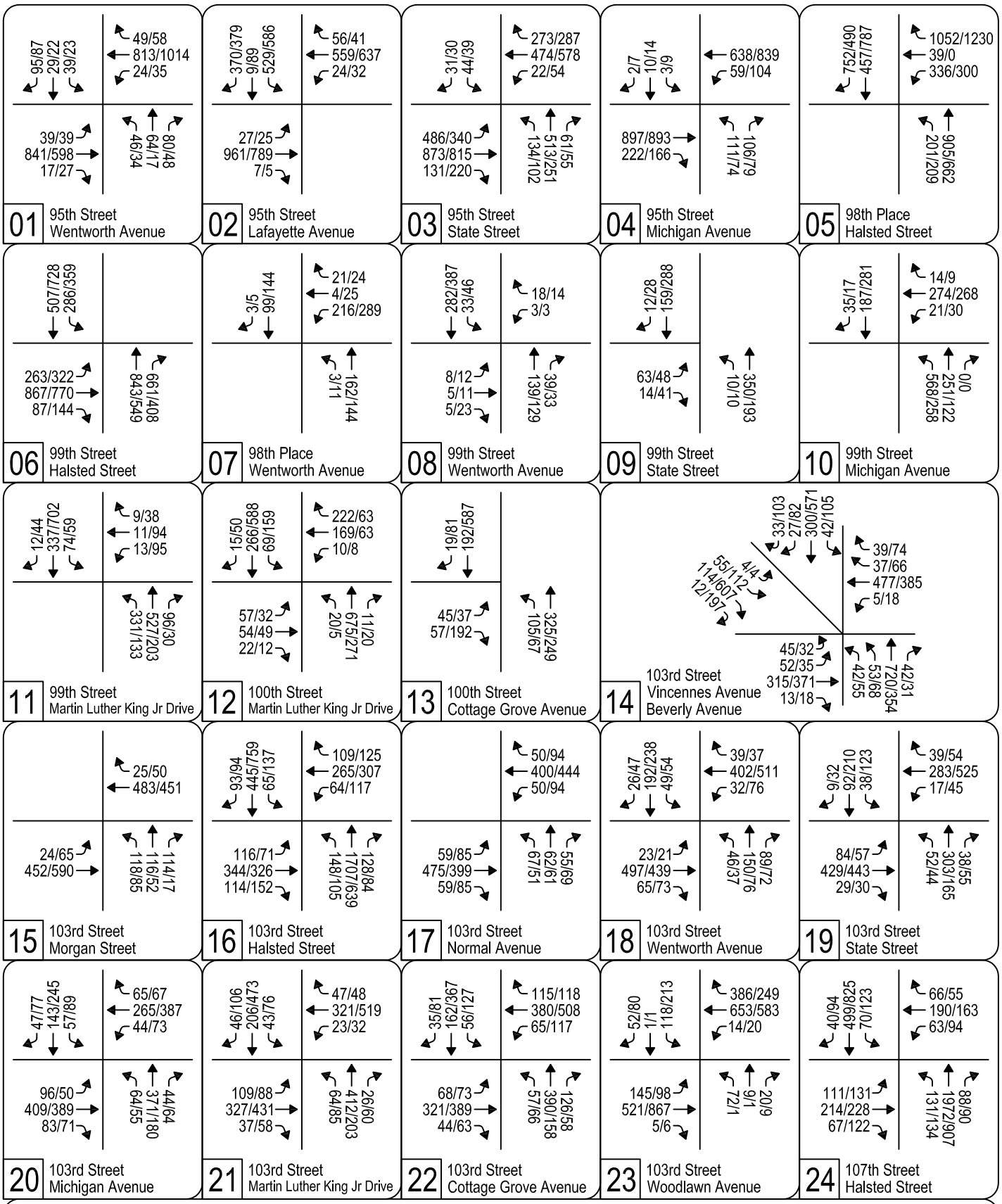
No Build (2030) Intersection Lane Geometry

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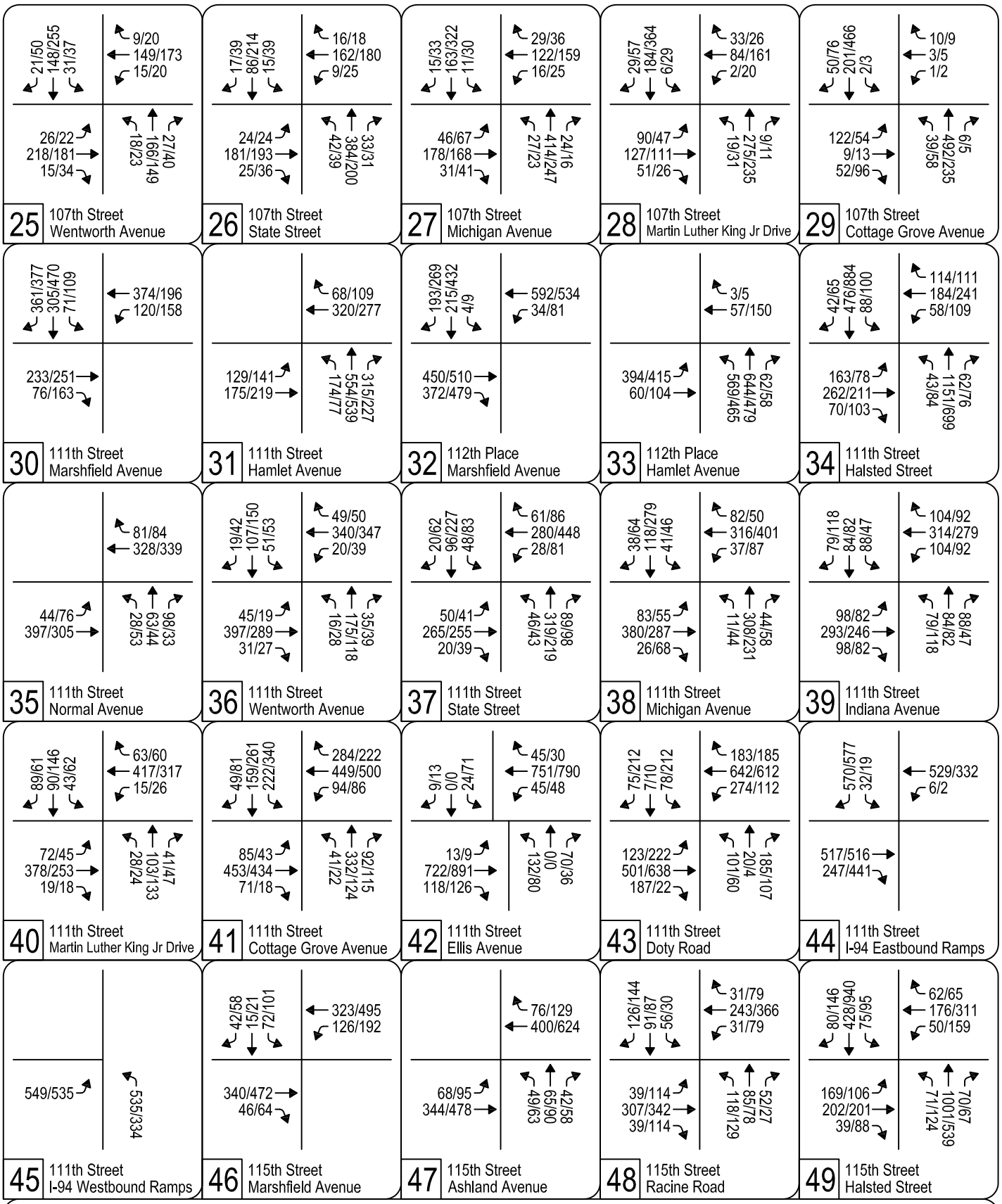
No Build (2030) Intersection Lane Geometry

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No Build (2030) Intersection Traffic Volumes

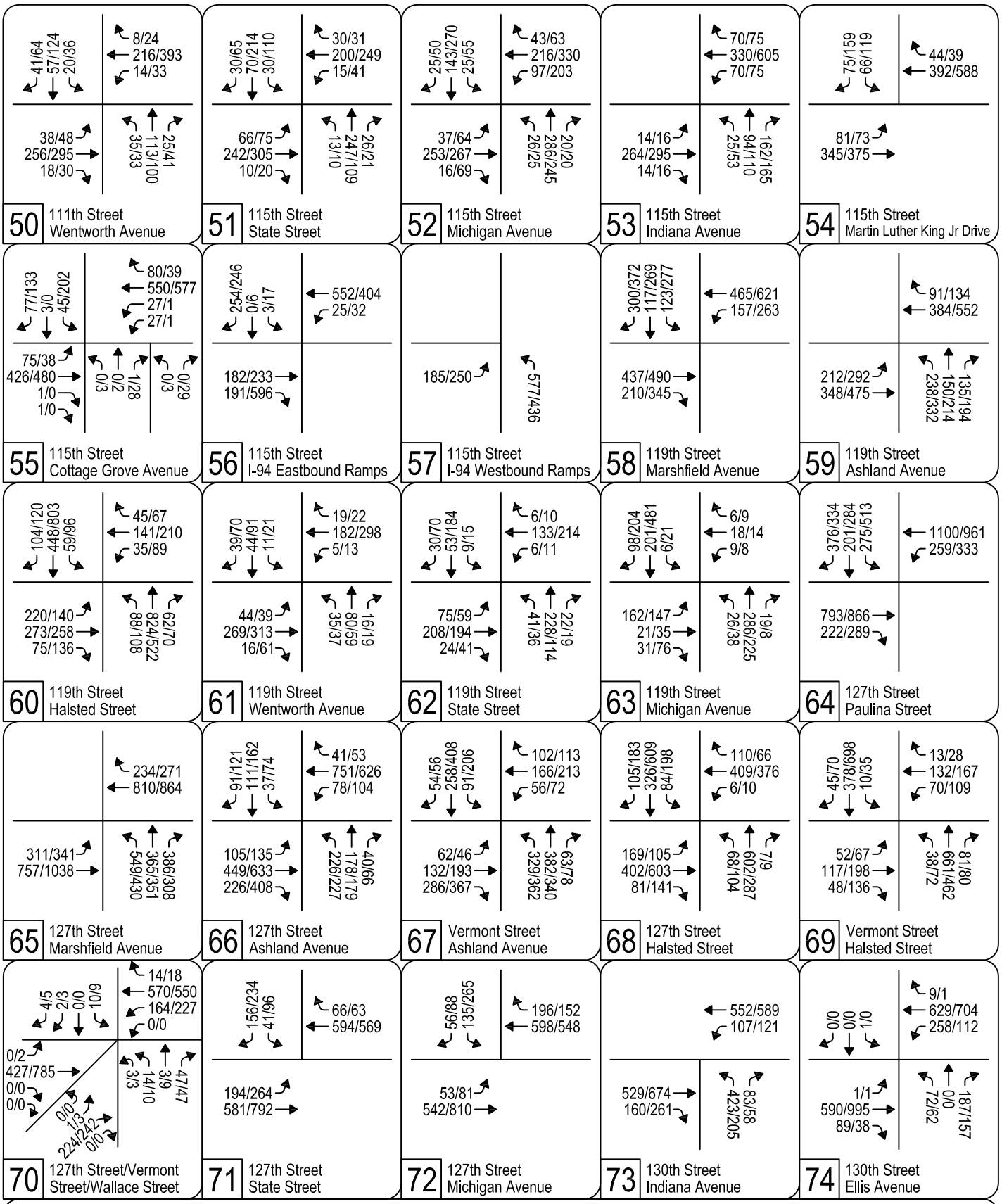
Legend: AM/PM Peak Hour Volumes



No Build (2030) Intersection Traffic Volumes

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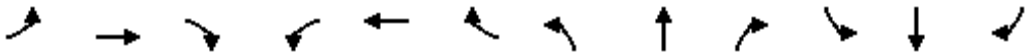
Legend: AM/PM Peak Hour Volumes



No Build (2030) Intersection Traffic Volumes

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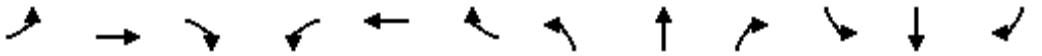
Legend: AM/PM Peak Hour Volumes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	841	17	24	813	49	46	64	80	39	29	95
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	16	10	10	16	8	15	8	8	14	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			0.99			0.99	
Flpb, ped/bikes	0.99	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	0.99			0.94			0.92	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1417	2976		1592	2979			1752			1663	
Flt Permitted	0.25	1.00		0.25	1.00			0.90			0.90	
Satd. Flow (perm)	369	2976		418	2979			1596			1514	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	41	885	18	25	856	52	48	67	84	41	31	100
RTOR Reduction (vph)	0	2	0	0	7	0	0	41	0	0	59	0
Lane Group Flow (vph)	41	901	0	25	901	0	0	158	0	0	113	0
Confl. Peds. (#/hr)	61		11	11		61	3		5	5		3
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	11%	7%	0%	0%	6%	2%	2%	7%	4%	5%	7%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			22.0			22.0	
Effective Green, g (s)	34.0	34.0		34.0	34.0			23.0			23.0	
Actuated g/C Ratio	0.52	0.52		0.52	0.52			0.35			0.35	
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0			5.0	
Lane Grp Cap (vph)	193	1557		219	1558			565			536	
v/s Ratio Prot		c0.30			0.30							
v/s Ratio Perm	0.11			0.06				c0.10			0.07	
v/c Ratio	0.21	0.58		0.11	0.58			0.28			0.21	
Uniform Delay, d1	8.3	10.6		7.9	10.6			15.1			14.7	
Progression Factor	1.00	1.00		0.83	1.16			1.00			1.00	
Incremental Delay, d2	2.5	1.6		0.9	1.4			1.2			0.9	
Delay (s)	10.8	12.2		7.5	13.7			16.3			15.6	
Level of Service	B	B		A	B			B			B	
Approach Delay (s)		12.1			13.5			16.3			15.6	
Approach LOS		B			B			B			B	

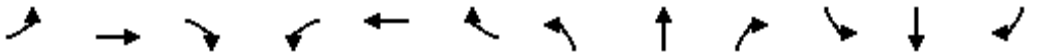
Intersection Summary			
HCM Average Control Delay	13.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	27	961	7	24	559	56	0	0	0	529	9	370
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00				0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.67				1.00	1.00	0.96
Flpb, ped/bikes	0.91	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	778	3285		1710	3138	512				3100	1440	1399
Flt Permitted	0.43	1.00		0.14	1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	352	3285		248	3138	512				3100	1440	1399
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	28	1012	7	25	588	59	0	0	0	557	9	389
RTOR Reduction (vph)	0	1	0	0	0	26	0	0	0	0	0	172
Lane Group Flow (vph)	28	1018	0	25	588	33	0	0	0	557	9	217
Confl. Peds. (#/hr)	354		13	13		354	22		22	22		22
Confl. Bikes (#/hr)	4					4			1	1		
Heavy Vehicles (%)	100%	4%	0%	0%	9%	100%	0%	0%	0%	7%	25%	5%
Turn Type	pm+pt			pm+pt		Perm				Split		Perm
Protected Phases	7	4		3	8					6	6	
Permitted Phases	4			8		8						6
Actuated Green, G (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Effective Green, g (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Actuated g/C Ratio	0.33	0.33		0.56	0.56	0.56				0.23	0.23	0.23
Clearance Time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Grp Cap (vph)	162	1087		634	1762	288				715	332	323
v/s Ratio Prot	0.02	c0.31		0.01	c0.19					c0.18	0.01	
v/s Ratio Perm	0.04			0.01		0.06						0.16
v/c Ratio	0.17	0.94		0.04	0.33	0.12				0.78	0.03	0.67
Uniform Delay, d1	31.6	42.2		15.1	15.4	13.4				46.9	38.7	45.5
Progression Factor	0.80	0.82		0.29	0.63	1.53				1.00	1.00	1.00
Incremental Delay, d2	2.0	14.1		0.1	0.3	0.5				8.2	0.2	10.7
Delay (s)	27.4	48.8		4.5	10.0	20.9				55.1	38.9	56.2
Level of Service	C	D		A	A	C				E	D	E
Approach Delay (s)		48.2			10.7			0.0			55.4	
Approach LOS		D			B			A			E	

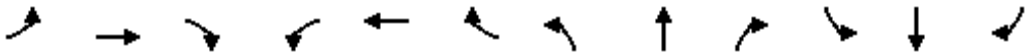
Intersection Summary			
HCM Average Control Delay	41.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	52.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	486	873	131	22	474	273	134	513	61	44	0	31
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.65		1.00	0.94	1.00		0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.98		1.00	1.00	0.85		1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (prot)	3190	3107		1555	2923	944		3300	1417	855		734
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (perm)	3190	3107		1555	2923	944		3300	1417	855		734
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	512	919	138	23	499	287	141	540	64	46	0	33
RTOR Reduction (vph)	0	9	0	0	0	158	0	0	25	0	0	31
Lane Group Flow (vph)	512	1049	0	23	499	129	0	681	39	46	0	2
Confl. Peds. (#/hr)	425		21	21		425	6		34	34		6
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	4%	8%	3%	10%	17%	5%	1%	3%	2%	100%	0%	100%
Turn Type	Prot			Prot		Perm	Split		Perm	Prot		custom
Protected Phases	7	4		3	8		2	2		6		
Permitted Phases						8			2			6
Actuated Green, G (s)	43.0	65.0		9.0	31.0	31.0		30.0	30.0	8.0		8.0
Effective Green, g (s)	43.0	65.0		9.0	31.0	31.0		30.0	30.0	8.0		8.0
Actuated g/C Ratio	0.33	0.50		0.07	0.24	0.24		0.23	0.23	0.06		0.06
Clearance Time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	1055	1554		108	697	225		762	327	53		45
v/s Ratio Prot	0.16	c0.34		0.01	c0.17			c0.21		c0.05		
v/s Ratio Perm						0.14			0.03			0.00
v/c Ratio	0.49	0.67		0.21	0.72	0.57		0.89	0.12	0.87		0.05
Uniform Delay, d1	34.7	24.5		57.2	45.5	43.6		48.5	39.5	60.5		57.4
Progression Factor	0.75	0.20		1.00	1.00	1.00		0.95	0.89	1.00		1.00
Incremental Delay, d2	0.7	1.1		4.5	6.2	10.1		14.9	0.7	76.0		0.4
Delay (s)	26.9	6.0		61.6	51.7	53.8		60.7	36.1	136.5		57.8
Level of Service	C	A		E	D	D		E	D	F		E
Approach Delay (s)		12.8			52.7			58.6			103.6	
Approach LOS		B			D			E			F	

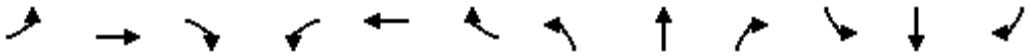
Intersection Summary			
HCM Average Control Delay	35.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	897	222	59	638	0	111	0	106	3	10	2
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	11	11	8	12	12	12	14	15	12
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes		0.99		1.00	1.00		1.00		0.98	1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00		1.00		1.00	0.99	1.00	
Frt		0.97		1.00	1.00		1.00		0.85	1.00	0.98	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		2860		1650	3005		1390		1465	1803	1934	
Flt Permitted		1.00		0.15	1.00		0.75		1.00	0.95	1.00	
Satd. Flow (perm)		2860		267	3005		1096		1465	1803	1934	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	997	247	66	709	0	123	0	118	3	11	2
RTOR Reduction (vph)	0	22	0	0	0	0	0	0	77	0	1	0
Lane Group Flow (vph)	0	1222	0	66	709	0	123	0	41	3	12	0
Confl. Peds. (#/hr)	49		15	15		49			12	12		
Heavy Vehicles (%)	0%	6%	14%	0%	10%	0%	23%	0%	2%	0%	0%	0%
Turn Type				Perm			custom		custom	Perm		
Protected Phases		4			8						6	
Permitted Phases				8			2		2	6		
Actuated Green, G (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Effective Green, g (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Actuated g/C Ratio		0.60		0.60	0.60		0.32		0.32	0.32	0.32	
Clearance Time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)		1716		160	1803		351		469	577	619	
v/s Ratio Prot		c0.43			0.24						0.01	
v/s Ratio Perm				0.25			c0.11		0.03	0.00		
v/c Ratio		0.71		0.41	0.39		0.35		0.09	0.01	0.02	
Uniform Delay, d1		14.0		10.6	10.5		26.0		23.8	23.2	23.3	
Progression Factor		1.00		1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		2.5		7.7	0.6		2.7		0.4	0.0	0.1	
Delay (s)		16.5		18.3	11.1		28.8		24.2	23.2	23.3	
Level of Service		B		B	B		C		C	C	C	
Approach Delay (s)		16.5			11.7			26.5			23.3	
Approach LOS		B			B			C			C	

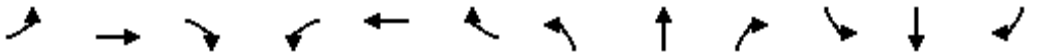
Intersection Summary			
HCM Average Control Delay	16.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	336	39	1052	201	905	0	0	457	752
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	12	10	10	12	12	11	12
Total Lost time (s)				4.0	4.0	5.0	3.0	4.0			4.0	
Lane Util. Factor				0.95	0.95	1.00	1.00	0.91			0.91	
Frpb, ped/bikes				1.00	1.00	0.99	1.00	1.00			0.98	
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00			1.00	
Frt				1.00	1.00	0.85	1.00	1.00			0.91	
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (prot)				1525	1629	1479	1550	4368			3930	
Flt Permitted				0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (perm)				1525	1629	1479	1550	4368			3930	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	343	40	1073	205	923	0	0	466	767
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	343	40	1073	205	923	0	0	1233	0
Confl. Peds. (#/hr)	2					2	12		8	8		12
Heavy Vehicles (%)	0%	0%	0%	3%	5%	2%	3%	5%	0%	0%	5%	8%
Turn Type				Perm		Perm	Prot					
Protected Phases					8		5	2			6	
Permitted Phases				8		8						
Actuated Green, G (s)				30.0	30.0	30.0	32.0	66.0			31.0	
Effective Green, g (s)				31.0	31.0	30.0	32.0	66.0			31.0	
Actuated g/C Ratio				0.30	0.30	0.29	0.30	0.63			0.30	
Clearance Time (s)				5.0	5.0	5.0	3.0	4.0			4.0	
Lane Grp Cap (vph)				450	481	423	472	2746			1160	
v/s Ratio Prot							c0.13	0.21			c0.31	
v/s Ratio Perm				0.22	0.02	c0.73						
v/c Ratio				0.76	0.08	2.54	0.43	0.34			1.91dr	
Uniform Delay, d1				33.6	26.7	37.5	29.2	9.2			37.0	
Progression Factor				1.00	1.00	1.00	0.66	2.38			1.00	
Incremental Delay, d2				11.6	0.3	698.4	2.0	0.2			44.9	
Delay (s)				45.2	27.1	735.9	21.2	22.1			81.9	
Level of Service				D	C	F	C	C			F	
Approach Delay (s)		0.0			553.8			21.9			81.9	
Approach LOS		A			F			C			F	

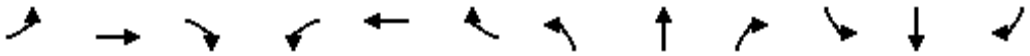
Intersection Summary			
HCM Average Control Delay	244.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.32		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.9%	ICU Level of Service	F
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group



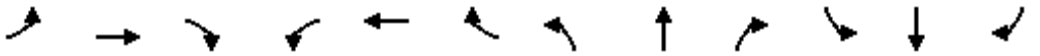
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	263	867	87	0	0	0	0	843	661	286	507	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	13	12	12	12	12	12	10	10	8	12	12	12
Total Lost time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Util. Factor	0.91	0.91						0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00						1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00						1.00	1.00	1.00	1.00	
Frt	1.00	0.99						1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1497	3186						4368	2187	1583	4636	
Flt Permitted	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1497	3186						4368	2187	1583	4636	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	271	894	90	0	0	0	0	869	681	295	523	0
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	244	1004	0	0	0	0	0	869	681	295	523	0
Confl. Peds. (#/hr)	4		14	14		4	4		3	3		4
Heavy Vehicles (%)	7%	1%	0%	0%	0%	0%	0%	5%	4%	8%	6%	0%
Turn Type	Perm								Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Actuated Green, G (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Effective Green, g (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Actuated g/C Ratio	0.32	0.32						0.27	0.27	0.30	0.59	
Clearance Time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Grp Cap (vph)	485	1032						1165	583	467	2737	
v/s Ratio Prot								0.20		c0.19	0.11	
v/s Ratio Perm	0.16	0.32							c0.31			
v/c Ratio	0.50	0.97						0.75	1.17	0.63	0.19	
Uniform Delay, d1	28.7	35.0						35.2	38.5	32.1	9.9	
Progression Factor	1.00	1.00						0.44	0.46	1.06	0.44	
Incremental Delay, d2	3.7	22.2						0.4	77.5	2.4	0.1	
Delay (s)	32.4	57.3						15.7	95.3	36.5	4.4	
Level of Service	C	E						B	F	D	A	
Approach Delay (s)		52.4			0.0			50.7			16.0	
Approach LOS		D			A			D			B	

Intersection Summary			
HCM Average Control Delay	43.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



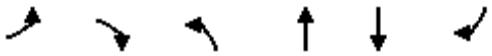
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	216	4	21	3	162	0	0	99	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	14	12	12	16	12
Total Lost time (s)				4.0	4.0		4.0	4.0			-3.0	
Lane Util. Factor				1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes				1.00	0.98		1.00	1.00			1.00	
Flpb, ped/bikes				1.00	1.00		1.00	1.00			1.00	
Frt				1.00	0.87		1.00	1.00			1.00	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1578	2709		1285	1882			1958	
Flt Permitted				0.95	1.00		0.59	1.00			1.00	
Satd. Flow (perm)				1578	2709		805	1882			1958	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	240	4	23	3	180	0	0	110	3
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	240	9	0	3	180	0	0	112	0
Confl. Peds. (#/hr)	2		2	2		2	3					3
Heavy Vehicles (%)	0%	0%	0%	8%	25%	5%	33%	2%	0%	0%	3%	33%
Turn Type				Perm			pm+pt					
Protected Phases					8		7	2			6	
Permitted Phases				8			2					
Actuated Green, G (s)				27.0	27.0		50.0	50.0			40.0	
Effective Green, g (s)				27.0	27.0		50.0	50.0			46.0	
Actuated g/C Ratio				0.32	0.32		0.59	0.59			0.54	
Clearance Time (s)				4.0	4.0		4.0	4.0			3.0	
Lane Grp Cap (vph)				501	861		513	1107			1060	
v/s Ratio Prot					0.00		0.00	c0.10			0.06	
v/s Ratio Perm				c0.15			0.00					
v/c Ratio				0.48	0.01		0.01	0.16			0.11	
Uniform Delay, d1				23.3	19.9		9.7	8.0			9.5	
Progression Factor				1.00	1.00		1.04	1.19			1.00	
Incremental Delay, d2				3.3	0.0		0.0	0.3			0.2	
Delay (s)				26.6	19.9		10.1	9.8			9.7	
Level of Service				C	B		B	A			A	
Approach Delay (s)		0.0			25.9			9.8			9.7	
Approach LOS		A			C			A			A	

Intersection Summary			
HCM Average Control Delay	17.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



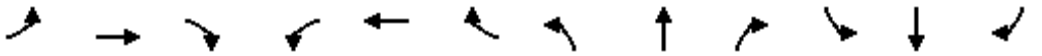
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	8	5	5	3	0	18	0	139	39	33	282	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	16	15	12	8	12	8	12	12	12	10	13	12
Total Lost time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99			1.00			1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00			1.00		1.00	1.00	
Frt	1.00	0.93			0.88			0.97		1.00	1.00	
Flt Protected	0.95	1.00			0.99			1.00		0.95	1.00	
Satd. Flow (prot)	1938	1809			1578			1688		1595	1755	
Flt Permitted	0.74	1.00			0.98			1.00		0.61	1.00	
Satd. Flow (perm)	1516	1809			1565			1688		1019	1755	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	8	5	5	3	0	19	0	146	41	35	297	0
RTOR Reduction (vph)	0	3	0	0	13	0	0	12	0	0	0	0
Lane Group Flow (vph)	8	7	0	0	9	0	0	175	0	35	297	0
Confl. Peds. (#/hr)			3	3			5		2	2		5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	3%	0%	6%	0%
Turn Type	Perm			Perm						pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Effective Green, g (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Actuated g/C Ratio	0.32	0.32			0.32			0.47		0.59	0.59	
Clearance Time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Grp Cap (vph)	482	575			497			794		647	1032	
v/s Ratio Prot		0.00						0.10		0.00	c0.17	
v/s Ratio Perm	0.01				c0.01					0.03		
v/c Ratio	0.02	0.01			0.02			0.22		0.05	0.29	
Uniform Delay, d1	19.9	19.9			19.9			13.3		8.4	8.7	
Progression Factor	1.00	1.00			1.00			1.00		0.92	0.84	
Incremental Delay, d2	0.1	0.0			0.1			0.6		0.2	0.7	
Delay (s)	20.0	19.9			20.0			13.9		7.9	7.9	
Level of Service	B	B			B			B		A	A	
Approach Delay (s)		19.9			20.0			13.9			7.9	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	10.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.19		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



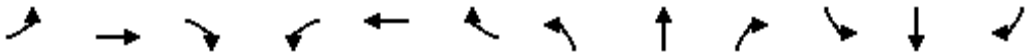
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	63	14	10	350	159	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	14	12	13	12	10	12
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.97		1.00	1.00	0.99	
Flt Protected	0.96		0.95	1.00	1.00	
Satd. Flow (prot)	1791		1767	1765	1634	
Flt Permitted	0.96		0.64	1.00	1.00	
Satd. Flow (perm)	1791		1187	1765	1634	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	70	16	11	389	177	13
RTOR Reduction (vph)	11	0	0	0	4	0
Lane Group Flow (vph)	75	0	11	389	186	0
Confl. Peds. (#/hr)		2				
Heavy Vehicles (%)	0%	0%	0%	2%	2%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.0		36.0	36.0	36.0	
Effective Green, g (s)	21.0		36.0	36.0	36.0	
Actuated g/C Ratio	0.32		0.55	0.55	0.55	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	579		657	978	905	
v/s Ratio Prot	c0.04			c0.22	0.11	
v/s Ratio Perm			0.01			
v/c Ratio	0.13		0.02	0.40	0.21	
Uniform Delay, d1	15.5		6.5	8.3	7.3	
Progression Factor	1.00		0.32	0.51	1.16	
Incremental Delay, d2	0.5		0.0	1.1	0.4	
Delay (s)	16.0		2.1	5.4	8.9	
Level of Service	B		A	A	A	
Approach Delay (s)	16.0			5.3	8.9	
Approach LOS	B			A	A	

Intersection Summary			
HCM Average Control Delay	7.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	39.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	21	274	14	568	251	0	0	187	35
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	14	16	12	12	15	12	12	13	10
Total Lost time (s)					4.0		4.0	4.0			3.0	3.0
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Frt					0.99		1.00	1.00			1.00	0.85
Flt Protected					1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3742		1660	1752			1603	1298
Flt Permitted					1.00		0.58	1.00			1.00	1.00
Satd. Flow (perm)					3742		1013	1752			1603	1298
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	23	304	16	631	279	0	0	208	39
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	0	0	0	22
Lane Group Flow (vph)	0	0	0	0	339	0	631	279	0	0	208	17
Confl. Peds. (#/hr)									30	30		
Heavy Vehicles (%)	0%	0%	0%	11%	2%	0%	3%	13%	0%	0%	16%	10%
Turn Type				Split			pm+pt					Perm
Protected Phases				8	8		7	2			6	
Permitted Phases							2					6
Actuated Green, G (s)					26.0		51.0	51.0			38.0	38.0
Effective Green, g (s)					26.0		51.0	51.0			38.0	38.0
Actuated g/C Ratio					0.31		0.60	0.60			0.45	0.45
Clearance Time (s)					4.0		4.0	4.0			3.0	3.0
Lane Grp Cap (vph)					1145		684	1051			717	580
v/s Ratio Prot					c0.09		c0.11	0.16			0.13	
v/s Ratio Perm							c0.45					0.01
v/c Ratio					0.30		0.92	0.27			0.29	0.03
Uniform Delay, d1					22.5		16.9	8.1			14.9	13.2
Progression Factor					1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2					0.7		19.9	0.6			1.0	0.1
Delay (s)					23.2		36.8	8.7			16.0	13.3
Level of Service					C		D	A			B	B
Approach Delay (s)		0.0			23.2			28.2			15.5	
Approach LOS		A			C			C			B	

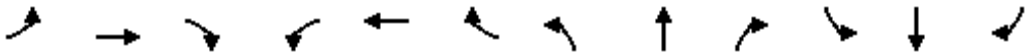
Intersection Summary			
HCM Average Control Delay	25.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	13	11	9	331	527	96	74	337	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	15	12	12	12	12	12	13	12
Total Lost time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.96		1.00	0.98		1.00	0.99	
Flt Protected					0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1796		1692	3237		1707	3352	
Flt Permitted					0.98		0.50	1.00		0.31	1.00	
Satd. Flow (perm)					1796		897	3237		566	3352	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	14	12	10	368	586	107	82	374	13
RTOR Reduction (vph)	0	0	0	0	7	0	0	20	0	0	3	0
Lane Group Flow (vph)	0	0	0	0	29	0	368	673	0	82	384	0
Confl. Peds. (#/hr)	2					2	6		20	20		6
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	0%	0%	0%	11%	0%	1%	3%	0%	0%	5%	0%
Turn Type				Split			pm+pt			pm+pt		
Protected Phases				8	8		5	2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)					23.0		41.0	34.0		41.0	34.0	
Effective Green, g (s)					23.0		41.0	34.0		41.0	34.0	
Actuated g/C Ratio					0.31		0.55	0.45		0.55	0.45	
Clearance Time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Grp Cap (vph)					551		565	1467		416	1520	
v/s Ratio Prot					c0.02		c0.06	0.21		0.02	0.11	
v/s Ratio Perm							c0.30			0.09		
v/c Ratio					0.05		0.65	0.46		0.20	0.25	
Uniform Delay, d1					18.3		13.7	14.2		12.3	12.7	
Progression Factor					1.00		0.69	0.74		1.00	1.00	
Incremental Delay, d2					0.2		5.3	0.9		1.1	0.4	
Delay (s)					18.5		14.7	11.4		13.4	13.1	
Level of Service					B		B	B		B	B	
Approach Delay (s)		0.0			18.5			12.6			13.1	
Approach LOS		A			B			B			B	

Intersection Summary			
HCM Average Control Delay	12.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	15		

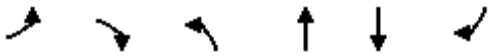
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	57	54	22	10	169	222	20	675	11	69	266	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	16	12	12	10	11	12	12	11	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.93		1.00	1.00		1.00	0.99	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1949			1627		1596	3233		1641	3131	
Flt Permitted		0.68			0.99		0.57	1.00		0.33	1.00	
Satd. Flow (perm)		1354			1618		959	3233		576	3131	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	60	57	23	11	178	234	21	711	12	73	280	16
RTOR Reduction (vph)	0	9	0	0	59	0	0	2	0	0	5	0
Lane Group Flow (vph)	0	131	0	0	364	0	21	721	0	73	291	0
Confl. Peds. (#/hr)									6	6		
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	0%	0%	12%	2%	2%	0%	2%	0%	4%	5%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Effective Green, g (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Actuated g/C Ratio		0.33			0.33		0.56	0.56		0.56	0.56	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		451			539		537	1810		323	1753	
v/s Ratio Prot								c0.22			0.09	
v/s Ratio Perm		0.10			c0.22		0.02			0.13		
v/c Ratio		0.29			0.67		0.04	0.40		0.23	0.17	
Uniform Delay, d1		18.4			21.5		7.4	9.3		8.3	8.0	
Progression Factor		1.00			1.00		1.00	1.00		0.17	0.06	
Incremental Delay, d2		1.6			6.6		0.1	0.7		1.6	0.2	
Delay (s)		20.1			28.1		7.6	10.0		3.0	0.7	
Level of Service		C			C		A	B		A	A	
Approach Delay (s)		20.1			28.1			9.9			1.1	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM Average Control Delay	13.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.5%	ICU Level of Service	C
Analysis Period (min)	15		

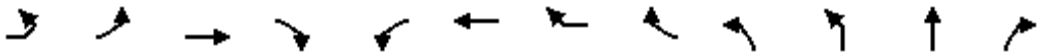
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	45	57	105	325	192	19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	50	63	117	361	213	21

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	113	237	241	142	92
Volume Left (vph)	50	117	0	0	0
Volume Right (vph)	63	0	0	0	21
Hadj (s)	-0.16	0.33	0.08	0.09	-0.08
Departure Headway (s)	5.3	5.4	5.1	5.4	5.2
Degree Utilization, x	0.17	0.35	0.34	0.21	0.13
Capacity (veh/h)	629	654	684	641	660
Control Delay (s)	9.3	10.1	9.6	8.7	7.8
Approach Delay (s)	9.3	9.9		8.3	
Approach LOS	A	A		A	

Intersection Summary			
Delay	9.4		
HCM Level of Service	A		
Intersection Capacity Utilization	35.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	45	52	315	13	5	477	37	39	42	53	720	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	0.95	
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.97			1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Frt		1.00	1.00	0.85	1.00	1.00	0.85			1.00	0.99	
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	
Satd. Flow (prot)		1575	1731	1530	1710	1731	1487			1710	3292	
Flt Permitted		0.11	1.00	1.00	0.55	1.00	1.00			0.39	1.00	
Satd. Flow (perm)		187	1731	1530	992	1731	1487			700	3292	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	50	58	350	14	6	530	41	43	47	59	800	47
RTOR Reduction (vph)	0	0	0	7	0	0	30	0	0	0	4	0
Lane Group Flow (vph)	0	108	350	7	6	530	54	0	0	106	843	0
Confl. Peds. (#/hr)		5					5					6
Heavy Vehicles (%)	8%	9%	4%	0%	0%	4%	0%	0%	0%	0%	3%	0%
Turn Type	Perm	pm+pt		Perm	Perm		Perm		Perm	Perm		
Protected Phases		7	4			8					2	
Permitted Phases	4	4		4	8		8		2	2		
Actuated Green, G (s)		50.0	50.0	50.0	32.0	32.0	32.0			25.0	25.0	
Effective Green, g (s)		50.0	50.0	50.0	32.0	32.0	32.0			25.0	25.0	
Actuated g/C Ratio		0.48	0.48	0.48	0.30	0.30	0.30			0.24	0.24	
Clearance Time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Grp Cap (vph)		281	824	729	302	528	453			167	784	
v/s Ratio Prot		0.05	c0.20			c0.31					c0.26	
v/s Ratio Perm		0.13		0.00	0.01		0.04			0.15		
v/c Ratio		0.38	0.42	0.01	0.02	1.00	0.12			0.63	1.08	
Uniform Delay, d1		20.2	18.1	14.5	25.5	36.5	26.3			35.9	40.0	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Incremental Delay, d2		3.9	1.6	0.0	0.1	40.1	0.5			17.0	54.4	
Delay (s)		24.1	19.7	14.5	25.7	76.6	26.9			52.9	94.4	
Level of Service		C	B	B	C	E	C			D	F	
Approach Delay (s)			20.5			69.4					89.8	
Approach LOS			C			E					F	

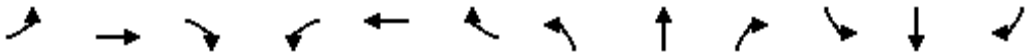
Intersection Summary			
HCM Average Control Delay	61.3	HCM Level of Service	E
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	78.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations								
Volume (vph)	42	300	27	33	4	55	114	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5				4.5	4.5	
Lane Util. Factor	1.00	0.95				1.00	0.88	
Frpb, ped/bikes	1.00	1.00				1.00	1.00	
Flpb, ped/bikes	1.00	1.00				1.00	1.00	
Frt	1.00	0.97				1.00	0.85	
Flt Protected	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1706	3279				1710	2621	
Flt Permitted	0.16	1.00				0.95	1.00	
Satd. Flow (perm)	293	3279				1710	2621	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	47	333	30	37	4	61	127	13
RTOR Reduction (vph)	0	8	0	0	0	0	7	0
Lane Group Flow (vph)	47	392	0	0	0	65	133	0
Confl. Peds. (#/hr)	6							
Heavy Vehicles (%)	0%	2%	0%	0%	0%	0%	3%	0%
Turn Type	Perm				Split		Perm	
Protected Phases		6			9	9		
Permitted Phases	6						9	
Actuated Green, G (s)	24.5	24.5				17.5	17.5	
Effective Green, g (s)	24.5	24.5				17.5	17.5	
Actuated g/C Ratio	0.23	0.23				0.17	0.17	
Clearance Time (s)	4.5	4.5				4.5	4.5	
Lane Grp Cap (vph)	68	765				285	437	
v/s Ratio Prot		0.12				0.04		
v/s Ratio Perm	0.16						c0.05	
v/c Ratio	0.69	0.51				0.23	0.31	
Uniform Delay, d1	36.8	35.1				37.9	38.4	
Progression Factor	1.00	1.00				1.00	1.00	
Incremental Delay, d2	44.8	2.4				1.9	1.8	
Delay (s)	81.6	37.5				39.8	40.2	
Level of Service	F	D				D	D	
Approach Delay (s)		42.1				40.1		
Approach LOS		D				D		

Intersection Summary



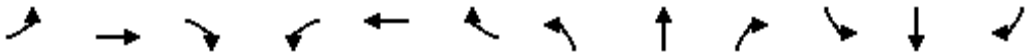
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	452	0	0	483	25	118	116	114	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	11	11	16	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.99			0.96				
Flt Protected		1.00			1.00			0.98				
Satd. Flow (prot)		1653			1930			1772				
Flt Permitted		0.96			1.00			0.98				
Satd. Flow (perm)		1594			1930			1772				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	502	0	0	537	28	131	129	127	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	529	0	0	565	0	0	387	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		31.0			31.0			26.0				
Effective Green, g (s)		31.0			31.0			26.0				
Actuated g/C Ratio		0.48			0.48			0.40				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		760			920			709				
v/s Ratio Prot					0.29							
v/s Ratio Perm		c0.33						0.22				
v/c Ratio		0.70			0.61			0.55				
Uniform Delay, d1		13.3			12.6			15.0				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		5.2			3.1			3.0				
Delay (s)		18.5			15.6			18.0				
Level of Service		B			B			B				
Approach Delay (s)		18.5			15.6			18.0			0.0	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	17.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	116	344	114	64	265	109	148	1707	128	65	445	93
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	9	9	10	9
Total Lost time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.96	1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1920	1426		1923	1396	1500	3099	1284	1425	2956	1265
Flt Permitted		0.66	1.00		0.63	1.00	0.40	1.00	1.00	0.09	1.00	1.00
Satd. Flow (perm)		1278	1426		1221	1396	625	3099	1284	142	2956	1265
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	122	362	120	67	279	115	156	1797	135	68	468	98
RTOR Reduction (vph)	0	0	71	0	0	68	0	0	29	0	0	59
Lane Group Flow (vph)	0	484	49	0	346	47	156	1797	106	68	468	39
Confl. Peds. (#/hr)	42		39	39		42	20		8	8		20
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	6%	4%	3%	0%	6%	5%	6%	3%	4%	8%	8%	4%
Turn Type	pm+pt		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		43.0	43.0		43.0	43.0	53.1	44.4	44.4	48.9	42.3	42.3
Effective Green, g (s)		43.0	43.0		43.0	43.0	53.1	44.4	44.4	48.9	42.3	42.3
Actuated g/C Ratio		0.41	0.41		0.41	0.41	0.51	0.42	0.42	0.47	0.40	0.40
Clearance Time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		523	584		500	572	389	1310	543	147	1191	510
v/s Ratio Prot							c0.03	c0.58		c0.03	0.16	
v/s Ratio Perm		c0.38	0.03		0.28	0.03	0.17		0.08	0.19		0.03
v/c Ratio		0.93	0.08		0.69	0.08	0.40	1.37	0.19	0.46	0.39	0.08
Uniform Delay, d1		29.5	19.0		25.5	18.9	14.7	30.3	19.1	23.1	22.2	19.3
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.09	0.77	0.42
Incremental Delay, d2		22.4	0.3		7.7	0.3	0.7	172.2	0.8	2.2	0.9	0.3
Delay (s)		51.8	19.2		33.2	19.2	15.4	202.5	19.9	27.4	18.0	8.5
Level of Service		D	B		C	B	B	F	B	C	B	A
Approach Delay (s)		45.4			29.7			176.7			17.5	
Approach LOS		D			C			F			B	

Intersection Summary			
HCM Average Control Delay	111.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	111.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	475	59	50	400	50	67	62	55	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		0.99			0.99			0.96				
Flt Protected		1.00			0.99			0.98				
Satd. Flow (prot)		1627			1626			1777				
Flt Permitted		0.91			0.90			0.98				
Satd. Flow (perm)		1487			1472			1777				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	66	528	66	56	444	56	74	69	61	0	0	0
RTOR Reduction (vph)	0	6	0	0	6	0	0	23	0	0	0	0
Lane Group Flow (vph)	0	654	0	0	550	0	0	181	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		38.0			38.0			19.0				
Effective Green, g (s)		38.0			38.0			19.0				
Actuated g/C Ratio		0.58			0.58			0.29				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		869			861			519				
v/s Ratio Prot												
v/s Ratio Perm		c0.44			0.37			0.10				
v/c Ratio		0.75			0.64			0.35				
Uniform Delay, d1		10.0			8.9			18.1				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		6.0			3.6			1.8				
Delay (s)		16.0			12.6			20.0				
Level of Service		B			B			B				
Approach Delay (s)		16.0			12.6			20.0			0.0	
Approach LOS		B			B			B			A	

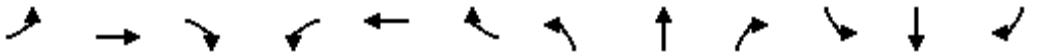
Intersection Summary			
HCM Average Control Delay	15.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	497	65	32	402	39	46	150	89	49	192	26
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	11	12	12	15	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.97		1.00	0.95		1.00	0.98		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		0.99	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.99	
Flt Protected		1.00	1.00		1.00	1.00		0.99	1.00		0.99	
Satd. Flow (prot)		1656	1255		1634	1288		1663	1490		1776	
Flt Permitted		0.97	1.00		0.94	1.00		0.89	1.00		0.91	
Satd. Flow (perm)		1616	1255		1548	1288		1497	1490		1634	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	24	523	68	34	423	41	48	158	94	52	202	27
RTOR Reduction (vph)	0	0	29	0	0	17	0	0	64	0	5	0
Lane Group Flow (vph)	0	547	39	0	457	24	0	206	30	0	276	0
Confl. Peds. (#/hr)	33		15	15		33	68		5	5		68
Confl. Bikes (#/hr)	4					4						
Heavy Vehicles (%)	0%	5%	14%	19%	5%	9%	2%	2%	1%	10%	7%	8%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Effective Green, g (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.32	0.32		0.32	
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Grp Cap (vph)		927	720		888	738		479	477		523	
v/s Ratio Prot												
v/s Ratio Perm		c0.34	0.03		0.30	0.02		0.14	0.02		c0.17	
v/c Ratio		0.59	0.05		0.51	0.03		0.43	0.06		0.53	
Uniform Delay, d1		10.3	7.0		9.7	7.0		20.1	17.7		20.9	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		2.8	0.1		2.1	0.1		2.8	0.3		3.8	
Delay (s)		13.1	7.2		11.8	7.0		22.9	18.0		24.6	
Level of Service		B	A		B	A		C	B		C	
Approach Delay (s)		12.4			11.4			21.4			24.6	
Approach LOS		B			B			C			C	

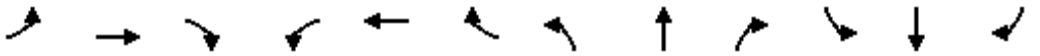
Intersection Summary			
HCM Average Control Delay	15.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	89.2%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	84	429	29	17	283	39	52	303	38	38	92	9
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	11	16	8	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.98	1.00	1.00	0.99
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1463	2990		1459	3528		1534	1647	1301	1517	1541	1156
Flt Permitted	0.54	1.00		0.44	1.00		0.69	1.00	1.00	0.45	1.00	1.00
Satd. Flow (perm)	829	2990		669	3528		1116	1647	1301	720	1541	1156
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	93	477	32	19	314	43	58	337	42	42	102	10
RTOR Reduction (vph)	0	7	0	0	16	0	0	0	22	0	0	6
Lane Group Flow (vph)	93	502	0	19	341	0	58	337	20	42	102	4
Confl. Peds. (#/hr)	16		9	9		16	1		5	5		1
Heavy Vehicles (%)	8%	6%	0%	13%	8%	3%	4%	2%	8%	5%	9%	22%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Effective Green, g (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	395	1426		319	1683		446	659	520	288	616	462
v/s Ratio Prot		c0.17			0.10			c0.20			0.07	
v/s Ratio Perm	0.11			0.03			0.05		0.02	0.06		0.00
v/c Ratio	0.24	0.35		0.06	0.20		0.13	0.51	0.04	0.15	0.17	0.01
Uniform Delay, d1	10.0	10.7		9.2	9.8		12.3	14.7	11.9	12.4	12.5	11.7
Progression Factor	1.00	1.00		1.00	1.00		0.61	0.76	0.33	0.51	0.52	0.28
Incremental Delay, d2	1.4	0.7		0.4	0.3		0.6	2.8	0.1	1.1	0.6	0.0
Delay (s)	11.4	11.4		9.5	10.1		8.2	13.9	4.1	7.4	7.1	3.3
Level of Service	B	B		A	B		A	B	A	A	A	A
Approach Delay (s)		11.4			10.1			12.2			7.0	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	10.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

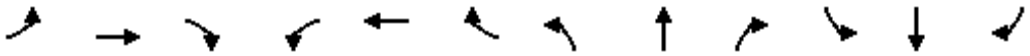


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	96	409	83	44	265	65	64	371	44	57	143	47
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	11	10	11	11	10	11	11	10	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.96	1.00		1.00	1.00		0.98	1.00		0.97	1.00	
Frt	1.00	0.97		1.00	0.97		1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1463	3059		1588	3002		1541	3022		1403	2791	
Flt Permitted	0.54	1.00		0.42	1.00		0.63	1.00		0.46	1.00	
Satd. Flow (perm)	828	3059		707	3002		1015	3022		678	2791	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	101	431	87	46	279	68	67	391	46	60	151	49
RTOR Reduction (vph)	0	0	0	0	0	0	0	12	0	0	29	0
Lane Group Flow (vph)	101	518	0	46	347	0	67	425	0	60	171	0
Confl. Peds. (#/hr)	98		10	10		98	28		52	52		28
Heavy Vehicles (%)	5%	5%	4%	0%	5%	7%	2%	6%	13%	10%	11%	20%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.41	0.41		0.41	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	397	1468		339	1441		420	1249		280	1154	
v/s Ratio Prot		c0.17			0.12			c0.14			0.06	
v/s Ratio Perm	0.12			0.07			0.07			0.09		
v/c Ratio	0.25	0.35		0.14	0.24		0.16	0.34		0.21	0.15	
Uniform Delay, d1	11.6	12.2		10.8	11.5		13.8	15.0		14.2	13.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.5	0.7		0.8	0.4		0.8	0.7		1.7	0.3	
Delay (s)	13.1	12.9		11.7	11.9		14.6	15.8		15.9	14.0	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		12.9			11.8			15.6			14.5	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	49.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	109	327	37	23	321	47	64	412	26	43	206	46
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	8	16	12	9	10	10	9	10	10
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1533	1576		1473	1841		1533	3073		1372	2893	
Flt Permitted	0.45	1.00		0.46	1.00		0.59	1.00		0.41	1.00	
Satd. Flow (perm)	731	1576		717	1841		949	3073		597	2893	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	115	344	39	24	338	49	67	434	27	45	217	48
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	115	383	0	24	387	0	67	461	0	45	265	0
Confl. Peds. (#/hr)	7		23	23		7	10		8	8		10
Confl. Bikes (#/hr)	1		2	2		1	1		1	1		1
Heavy Vehicles (%)	4%	8%	10%	0%	9%	5%	0%	3%	0%	12%	7%	6%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	47.0	41.8		40.6	38.6		26.8	22.2		23.6	20.6	
Effective Green, g (s)	47.0	39.8		40.6	36.6		26.8	20.2		23.6	18.6	
Actuated g/C Ratio	0.55	0.47		0.48	0.43		0.32	0.24		0.28	0.22	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	453	738		360	793		331	730		193	633	
v/s Ratio Prot	c0.02	c0.24		0.00	0.21		c0.01	c0.15		0.01	0.09	
v/s Ratio Perm	0.12			0.03			0.05			0.06		
v/c Ratio	0.25	0.52		0.07	0.49		0.20	0.63		0.23	0.42	
Uniform Delay, d1	13.3	15.9		14.9	17.4		21.4	29.1		26.1	28.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	2.6		0.1	2.1		0.3	4.1		0.6	2.0	
Delay (s)	13.6	18.5		15.0	19.6		21.7	33.2		26.8	30.6	
Level of Service	B	B		B	B		C	C		C	C	
Approach Delay (s)		17.3			19.3			31.7			30.0	
Approach LOS		B			B			C			C	

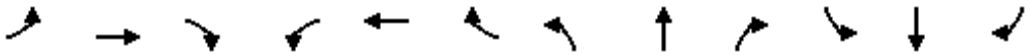
Intersection Summary			
HCM Average Control Delay	24.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	62.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	68	321	44	65	380	115	57	390	126	56	162	35
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	11	11	11	11	12	12	10	10	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		0.99	1.00	
Frt		0.98			0.97		1.00	0.96		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3493			2911		1614	3156		1581	2925	
Flt Permitted		0.78			0.84		0.61	1.00		0.38	1.00	
Satd. Flow (perm)		2757			2464		1044	3156		628	2925	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	76	357	49	72	422	128	63	433	140	62	180	39
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	482	0	0	622	0	63	573	0	62	219	0
Confl. Peds. (#/hr)	20		16	16		20	5		33	33		5
Confl. Bikes (#/hr)	2					2			2	2		
Heavy Vehicles (%)	9%	9%	0%	24%	7%	6%	2%	4%	2%	0%	5%	9%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.0			33.0		32.0	32.0		32.0	32.0	
Effective Green, g (s)		34.0			34.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio		0.45			0.45		0.44	0.44		0.44	0.44	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		1250			1117		459	1389		276	1287	
v/s Ratio Prot								c0.18			0.07	
v/s Ratio Perm		0.17			c0.25		0.06			0.10		
v/c Ratio		0.39			0.56		0.14	0.41		0.22	0.17	
Uniform Delay, d1		13.6			15.0		12.5	14.4		13.0	12.7	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.9			2.0		0.6	0.9		1.9	0.3	
Delay (s)		14.5			17.0		13.1	15.3		14.9	13.0	
Level of Service		B			B		B	B		B	B	
Approach Delay (s)		14.5			17.0			15.1			13.4	
Approach LOS		B			B			B			B	

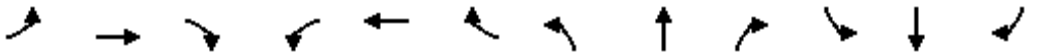
Intersection Summary			
HCM Average Control Delay	15.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	145	521	5	14	653	386	72	9	20	118	1	52
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	12	12	12	12	12	13	13	13
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	1.00		1.00	1.00	0.85		0.97			0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97			0.97	
Satd. Flow (prot)	1574	3144		1629	3257	1457		1611			3105	
Flt Permitted	0.35	1.00		0.42	1.00	1.00		0.69			0.75	
Satd. Flow (perm)	587	3144		722	3257	1457		1158			2398	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	161	579	6	16	726	429	80	10	22	131	1	58
RTOR Reduction (vph)	0	1	0	0	0	150	0	12	0	0	44	0
Lane Group Flow (vph)	161	584	0	16	726	279	0	100	0	0	146	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	46.0	46.0		46.0	46.0	46.0		16.7			16.7	
Effective Green, g (s)	46.0	46.0		46.0	46.0	46.0		16.7			16.7	
Actuated g/C Ratio	0.65	0.65		0.65	0.65	0.65		0.24			0.24	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		8.0			8.0	
Lane Grp Cap (vph)	382	2046		470	2119	948		274			566	
v/s Ratio Prot		0.19			0.22							
v/s Ratio Perm	c0.27			0.02		0.19		c0.09			0.06	
v/c Ratio	0.42	0.29		0.03	0.34	0.29		0.36			0.26	
Uniform Delay, d1	5.9	5.3		4.4	5.6	5.3		22.6			22.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	3.4	0.4		0.1	0.4	0.8		3.5			1.0	
Delay (s)	9.3	5.7		4.5	6.0	6.1		26.1			23.0	
Level of Service	A	A		A	A	A		C			C	
Approach Delay (s)		6.4			6.0			26.1			23.0	
Approach LOS		A			A			C			C	

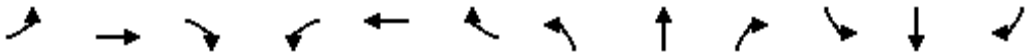
Intersection Summary			
HCM Average Control Delay	8.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	70.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	111	214	67	63	190	66	131	1972	88	70	499	40
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	9	12	10	10	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.96	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.96		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1548	1505		1547	1589		1493	3069	1271	1452	2983	1301
Flt Permitted	0.38	1.00		0.34	1.00		0.39	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	625	1505		547	1589		612	3069	1271	180	2983	1301
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	117	225	71	66	200	69	138	2076	93	74	525	42
RTOR Reduction (vph)	0	13	0	0	15	0	0	0	18	0	0	25
Lane Group Flow (vph)	117	283	0	66	254	0	138	2076	75	74	525	17
Confl. Peds. (#/hr)	4		9	9		4	6		16	16		6
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	3%	3%	4%	3%	1%	2%	3%	4%	4%	6%	7%	3%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	28.0	21.0		28.0	21.0		42.0	35.0	35.0	42.0	35.0	35.0
Effective Green, g (s)	26.0	22.0		26.0	22.0		40.0	35.0	35.0	40.0	35.0	35.0
Actuated g/C Ratio	0.31	0.26		0.31	0.26		0.47	0.41	0.41	0.47	0.41	0.41
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	256	390		238	411		350	1264	523	174	1228	536
v/s Ratio Prot	c0.03	c0.19		0.02	0.16		0.03	c0.68		c0.03	0.18	
v/s Ratio Perm	0.11			0.07			0.16		0.06	0.17		0.01
v/c Ratio	0.46	0.72		0.28	0.62		0.39	1.64	0.14	0.43	0.43	0.03
Uniform Delay, d1	22.5	28.7		21.8	27.8		13.3	25.0	15.6	18.1	17.8	14.9
Progression Factor	1.00	1.00		1.00	1.00		0.61	0.70	0.49	1.00	1.00	1.00
Incremental Delay, d2	5.8	11.1		2.9	6.8		2.7	292.0	0.5	7.4	1.1	0.1
Delay (s)	28.3	39.9		24.7	34.6		10.8	309.5	8.1	25.6	18.9	15.0
Level of Service	C	D		C	C		B	F	A	C	B	B
Approach Delay (s)		36.6			32.7			279.5			19.4	
Approach LOS		D			C			F			B	

Intersection Summary			
HCM Average Control Delay	184.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	96.4%	ICU Level of Service	F
Analysis Period (min)	15		

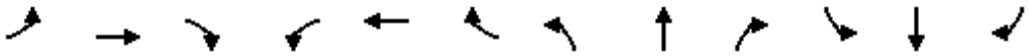
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	26	218	15	15	149	9	18	166	27	31	148	21
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	14	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.99			0.98			0.99	
Flt Protected		0.99			1.00			1.00			0.99	
Satd. Flow (prot)		1852			1848			1902			1932	
Flt Permitted		0.96			0.97			0.97			0.94	
Satd. Flow (perm)		1796			1800			1856			1830	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	27	225	15	15	154	9	19	171	28	32	153	22
RTOR Reduction (vph)	0	4	0	0	3	0	0	8	0	0	6	0
Lane Group Flow (vph)	0	263	0	0	175	0	0	210	0	0	201	0
Confl. Peds. (#/hr)	5		11	11		5	7		34	34		7
Confl. Bikes (#/hr)			3	3								
Heavy Vehicles (%)	4%	2%	0%	20%	1%	0%	12%	3%	8%	0%	3%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.42			0.42			0.46			0.46	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		746			748			857			845	
v/s Ratio Prot												
v/s Ratio Perm		c0.15			0.10			c0.11			0.11	
v/c Ratio		0.35			0.23			0.24			0.24	
Uniform Delay, d1		13.0			12.3			10.6			10.6	
Progression Factor		1.00			0.62			1.08			1.00	
Incremental Delay, d2		1.3			0.7			0.7			0.7	
Delay (s)		14.3			8.3			12.1			11.2	
Level of Service		B			A			B			B	
Approach Delay (s)		14.3			8.3			12.1			11.2	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	11.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.2%	ICU Level of Service	A
Analysis Period (min)	15		

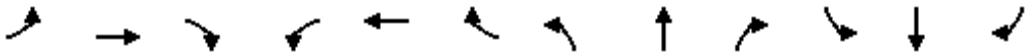
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	181	25	9	162	16	42	384	33	15	86	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.95	1.00		1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1465	3012		1302	3049		1529	3093		1492	2868	
Flt Permitted	0.63	1.00		0.61	1.00		0.68	1.00		0.48	1.00	
Satd. Flow (perm)	967	3012		835	3049		1093	3093		757	2868	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	201	28	10	180	18	47	427	37	17	96	19
RTOR Reduction (vph)	0	17	0	0	11	0	0	10	0	0	8	0
Lane Group Flow (vph)	27	212	0	10	187	0	47	454	0	17	107	0
Confl. Peds. (#/hr)	35		6	6		35	18					18
Confl. Bikes (#/hr)	14		32	32		14	23		7	7		23
Heavy Vehicles (%)	4%	4%	0%	22%	2%	6%	3%	2%	0%	7%	8%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0		39.0	39.0		39.0	39.0	
Effective Green, g (s)	19.0	19.0		19.0	19.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.58	0.58		0.58	0.58	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	283	880		244	891		639	1808		443	1677	
v/s Ratio Prot		c0.07			0.06			c0.15			0.04	
v/s Ratio Perm	0.03			0.01			0.04			0.02		
v/c Ratio	0.10	0.24		0.04	0.21		0.07	0.25		0.04	0.06	
Uniform Delay, d1	16.7	17.5		16.5	17.3		5.9	6.6		5.7	5.8	
Progression Factor	0.72	0.73		0.72	0.71		0.89	0.93		0.49	0.44	
Incremental Delay, d2	0.6	0.6		0.3	0.5		0.2	0.3		0.2	0.1	
Delay (s)	12.8	13.4		12.2	12.9		5.4	6.4		3.0	2.6	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		13.3			12.9			6.3			2.7	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	8.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.0%	ICU Level of Service	A
Analysis Period (min)	15		

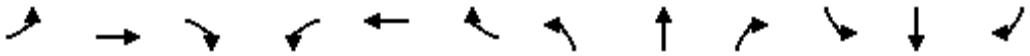
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	46	178	31	16	122	29	27	414	24	11	163	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	9	9	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.98		1.00	0.97			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1555	2962		1515	2886			1878			1805	
Flt Permitted	0.65	1.00		0.61	1.00			0.98			0.97	
Satd. Flow (perm)	1057	2962		968	2886			1840			1758	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	51	198	34	18	136	32	30	460	27	12	181	17
RTOR Reduction (vph)	0	20	0	0	19	0	0	3	0	0	5	0
Lane Group Flow (vph)	51	212	0	18	149	0	0	514	0	0	205	0
Confl. Peds. (#/hr)	10		29	29		10	17		10	10		17
Confl. Bikes (#/hr)									2	2		
Heavy Vehicles (%)	2%	4%	10%	0%	4%	0%	0%	8%	4%	0%	13%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Effective Green, g (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40			0.48			0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	423	1185		387	1154			878			838	
v/s Ratio Prot		c0.07			0.05							
v/s Ratio Perm	0.05			0.02				c0.28			0.12	
v/c Ratio	0.12	0.18		0.05	0.13			0.59			0.24	
Uniform Delay, d1	12.3	12.6		11.9	12.3			12.3			10.1	
Progression Factor	0.99	0.90		0.86	0.88			1.01			1.00	
Incremental Delay, d2	0.6	0.3		0.2	0.2			2.8			0.7	
Delay (s)	12.8	11.7		10.5	11.1			15.2			10.8	
Level of Service	B	B		B	B			B			B	
Approach Delay (s)		11.9			11.0			15.2			10.8	
Approach LOS		B			B			B			B	

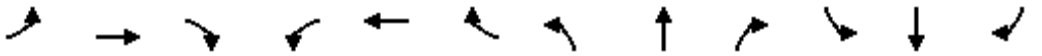
Intersection Summary			
HCM Average Control Delay	13.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	90	127	51	2	84	33	19	275	9	6	184	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	16	12	10	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.96		1.00	0.96			1.00			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1605	1890		1587	1873			1971			1933	
Flt Permitted	0.67	1.00		0.58	1.00			0.98			0.99	
Satd. Flow (perm)	1138	1890		975	1873			1933			1919	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	100	141	57	2	93	37	21	306	10	7	204	32
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	100	198	0	2	130	0	0	337	0	0	243	0
Confl. Peds. (#/hr)			8	8			1		8	8		1
Heavy Vehicles (%)	3%	3%	2%	0%	6%	0%	0%	3%	0%	0%	4%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Effective Green, g (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Actuated g/C Ratio	0.31	0.31		0.31	0.31			0.57			0.57	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	350	582		300	576			1100			1092	
v/s Ratio Prot		c0.10			0.07							
v/s Ratio Perm	0.09			0.00				c0.17			0.13	
v/c Ratio	0.29	0.34		0.01	0.23			0.31			0.22	
Uniform Delay, d1	17.1	17.4		15.6	16.7			7.3			6.9	
Progression Factor	0.90	0.88		0.85	0.92			0.93			1.00	
Incremental Delay, d2	2.0	1.6		0.0	0.9			0.7			0.5	
Delay (s)	17.3	16.9		13.4	16.3			7.5			7.4	
Level of Service	B	B		B	B			A			A	
Approach Delay (s)		17.1			16.2			7.5			7.4	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



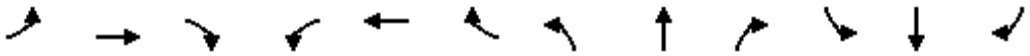
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	122	9	52	1	3	10	39	492	6	2	201	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	10	11	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.97		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	0.98	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.87		1.00	0.88		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1603	1673		1710	1413		1491	1631	1392	1649	1907	1427
Flt Permitted	0.75	1.00		0.71	1.00		0.62	1.00	1.00	0.37	1.00	1.00
Satd. Flow (perm)	1262	1673		1283	1413		971	1631	1392	648	1907	1427
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	136	10	58	1	3	11	43	547	7	2	223	56
RTOR Reduction (vph)	0	42	0	0	8	0	0	0	3	0	0	22
Lane Group Flow (vph)	136	26	0	1	6	0	43	547	4	2	223	34
Confl. Peds. (#/hr)	9					9	1		6	6		1
Heavy Vehicles (%)	5%	14%	5%	0%	67%	12%	7%	3%	0%	0%	7%	5%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	17.0	17.0		17.0	17.0		39.0	39.0	39.0	39.0	39.0	39.0
Effective Green, g (s)	18.0	18.0		18.0	18.0		39.0	39.0	39.0	39.0	39.0	39.0
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.60	0.60	0.60	0.60	0.60	0.60
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	349	463		355	391		583	979	835	389	1144	856
v/s Ratio Prot		0.02			0.00			c0.34			0.12	
v/s Ratio Perm	c0.11			0.00			0.04		0.00	0.00		0.02
v/c Ratio	0.39	0.06		0.00	0.02		0.07	0.56	0.01	0.01	0.19	0.04
Uniform Delay, d1	19.0	17.3		17.0	17.1		5.4	7.8	5.2	5.2	5.9	5.3
Progression Factor	1.48	2.42		1.00	1.00		1.17	1.10	1.34	1.00	1.00	1.00
Incremental Delay, d2	3.2	0.2		0.0	0.1		0.2	1.7	0.0	0.0	0.4	0.1
Delay (s)	31.4	42.1		17.0	17.1		6.6	10.3	7.0	5.2	6.3	5.4
Level of Service	C	D		B	B		A	B	A	A	A	A
Approach Delay (s)		34.9			17.1			10.0			6.1	
Approach LOS		C			B			A			A	

Intersection Summary			
HCM Average Control Delay	13.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	233	76	120	374	0	0	0	0	71	305	361
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)		4.0		3.0	3.0					5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	
Frpb, ped/bikes		0.99		1.00	1.00					1.00	0.99	
Flpb, ped/bikes		1.00		0.99	1.00					1.00	1.00	
Frt		0.96		1.00	1.00					1.00	0.92	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		2824		1620	3288					1574	2907	
Flt Permitted		1.00		0.50	1.00					0.95	1.00	
Satd. Flow (perm)		2824		860	3288					1574	2907	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	245	80	126	394	0	0	0	0	75	321	380
RTOR Reduction (vph)	0	31	0	0	0	0	0	0	0	0	214	0
Lane Group Flow (vph)	0	294	0	126	394	0	0	0	0	75	487	0
Confl. Peds. (#/hr)	14		32	32		14	14					14
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	9%	4%	5%	4%	0%	0%	0%	0%	5%	2%	4%
Turn Type				D.P+P						custom		
Protected Phases		8		7	7 8					6	6	
Permitted Phases				8						6		
Actuated Green, G (s)		33.0		56.0	59.0					32.0	32.0	
Effective Green, g (s)		33.0		56.0	59.0					32.0	32.0	
Actuated g/C Ratio		0.33		0.56	0.59					0.32	0.32	
Clearance Time (s)		4.0		3.0						5.0	5.0	
Lane Grp Cap (vph)		932		656	1940					504	930	
v/s Ratio Prot		c0.10		0.04	c0.12					0.05	c0.17	
v/s Ratio Perm				0.06								
v/c Ratio		0.31		0.19	0.20					0.15	0.52	
Uniform Delay, d1		25.0		10.5	9.5					24.3	27.8	
Progression Factor		1.00		1.94	2.06					1.00	1.00	
Incremental Delay, d2		0.9		0.6	0.2					0.6	2.1	
Delay (s)		25.9		21.0	19.8					24.9	29.9	
Level of Service		C		C	B					C	C	
Approach Delay (s)		25.9			20.1			0.0			29.4	
Approach LOS		C			C			A			C	

Intersection Summary			
HCM Average Control Delay	25.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	129	175	0	0	320	68	174	554	315	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	9	12	13	12	13	12	12	12
Total Lost time (s)	4.0	4.0			4.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.97		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1673	3054			2831		1750	1782	1514			
Flt Permitted	0.35	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	612	3054			2831		1750	1782	1514			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	136	184	0	0	337	72	183	583	332	0	0	0
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	222	0	0	0
Lane Group Flow (vph)	136	184	0	0	391	0	183	583	110	0	0	0
Confl. Peds. (#/hr)	14		16	16		14			1	1		
Confl. Bikes (#/hr)	1					1			1	1		
Heavy Vehicles (%)	2%	12%	0%	0%	5%	4%	1%	1%	3%	0%	0%	0%
Turn Type	pm+pt						custom		Perm			
Protected Phases	4	1 4			1		2	2				
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	54.0	58.0			21.0		33.0	33.0	33.0			
Effective Green, g (s)	54.0	58.0			21.0		33.0	33.0	33.0			
Actuated g/C Ratio	0.54	0.58			0.21		0.33	0.33	0.33			
Clearance Time (s)	4.0				4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	681	1771			595		578	588	500			
v/s Ratio Prot	c0.07	0.06			c0.14		0.10	c0.33				
v/s Ratio Perm	0.04								0.07			
v/c Ratio	0.20	0.10			0.66		0.32	0.99	0.22			
Uniform Delay, d1	11.8	9.4			36.2		25.1	33.4	24.2			
Progression Factor	0.25	0.25			1.00		0.75	0.79	1.93			
Incremental Delay, d2	0.6	0.1			5.6		0.9	27.7	0.6			
Delay (s)	3.6	2.5			41.8		19.7	54.1	47.2			
Level of Service	A	A			D		B	D	D			
Approach Delay (s)		3.0			41.8			46.3			0.0	
Approach LOS		A			D			D			A	

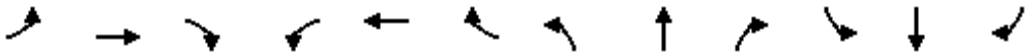
Intersection Summary			
HCM Average Control Delay	37.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	450	372	34	592	0	0	0	0	4	215	193
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	11	12	12	12	12	10	10	12
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	1.00
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.93		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3105		1613	3273					1596	3160	1443
Flt Permitted		1.00		0.17	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3105		290	3273					1596	3160	1443
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	469	388	35	617	0	0	0	0	4	224	201
RTOR Reduction (vph)	0	150	0	0	0	0	0	0	0	0	0	133
Lane Group Flow (vph)	0	707	0	35	617	0	0	0	0	4	224	68
Confl. Peds. (#/hr)	22		3	3		22						
Confl. Bikes (#/hr)	4					4			32	32		
Heavy Vehicles (%)	0%	2%	2%	6%	1%	0%	0%	0%	0%	0%	1%	6%
Turn Type				pm+pt						Split		Prot
Protected Phases		8		7	7 8					6	6	6
Permitted Phases				7 8								
Actuated Green, G (s)		36.0		54.0	58.0					34.0	34.0	34.0
Effective Green, g (s)		36.0		54.0	58.0					34.0	34.0	34.0
Actuated g/C Ratio		0.36		0.54	0.58					0.34	0.34	0.34
Clearance Time (s)		4.0		4.0						4.0	4.0	4.0
Lane Grp Cap (vph)		1118		395	1898					543	1074	491
v/s Ratio Prot		c0.23		0.02	c0.19					0.00	c0.07	0.05
v/s Ratio Perm				0.03								
v/c Ratio		0.63		0.09	0.33					0.01	0.21	0.14
Uniform Delay, d1		26.5		12.4	10.9					21.8	23.4	22.9
Progression Factor		1.00		0.55	0.69					0.74	0.79	0.93
Incremental Delay, d2		2.7		0.2	0.2					0.0	0.4	0.5
Delay (s)		29.2		7.0	7.6					16.1	18.9	21.8
Level of Service		C		A	A					B	B	C
Approach Delay (s)		29.2			7.6			0.0			20.2	
Approach LOS		C			A			A			C	

Intersection Summary			
HCM Average Control Delay	20.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.0%	ICU Level of Service	E
Analysis Period (min)	15		

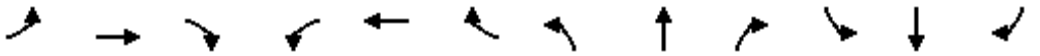
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	394	60	0	0	57	3	569	644	62	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	10	12	11	11	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	0.91	0.91			0.95		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Flpb, ped/bikes	0.99	0.99			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.99		1.00	1.00	0.85			
Flt Protected	0.95	0.96			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1444	3042			3098		1555	1637	1500			
Flt Permitted	0.71	0.74			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	1086	2344			3098		1555	1637	1500			
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	406	62	0	0	59	3	587	664	64	0	0	0
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	38	0	0	0
Lane Group Flow (vph)	203	265	0	0	59	0	587	664	26	0	0	0
Confl. Peds. (#/hr)	30		2	2		30			4	4		
Confl. Bikes (#/hr)	3					3			2	2		
Heavy Vehicles (%)	3%	2%	0%	0%	2%	0%	1%	1%	2%	0%	0%	0%
Turn Type	pm+pt						custom		custom			
Protected Phases	4	1 4			1		2	2	2			
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Effective Green, g (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Actuated g/C Ratio	0.51	0.51			0.15		0.37	0.37	0.37			
Clearance Time (s)	4.0				4.0		4.0	4.0	4.0			
Lane Grp Cap (vph)	683	1447			465		575	606	555			
v/s Ratio Prot	c0.11	0.07			0.02		0.38	c0.41	0.02			
v/s Ratio Perm	c0.04	0.03										
v/c Ratio	0.30	0.18			0.13		1.02	1.10	0.05			
Uniform Delay, d1	14.0	13.2			36.8		31.5	31.5	20.2			
Progression Factor	0.24	0.26			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.8	0.2			0.6		42.9	65.4	0.2			
Delay (s)	4.2	3.6			37.4		74.4	96.9	20.3			
Level of Service	A	A			D		E	F	C			
Approach Delay (s)		3.9			37.4			83.2			0.0	
Approach LOS		A			D			F			A	

Intersection Summary			
HCM Average Control Delay	61.5	HCM Level of Service	E
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.0%	ICU Level of Service	E
Analysis Period (min)	15		

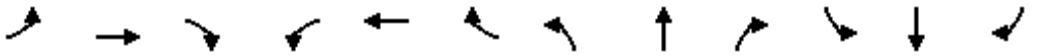
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	163	262	70	58	184	114	43	1151	62	88	476	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	9	10	9	9	10	9
Total Lost time (s)		4.0			4.0		4.0	3.5	4.0	4.0	3.5	4.0
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00			0.98		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.98			0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.98			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		2835			2770		1447	3069	1336	1494	2956	1270
Flt Permitted		0.66			0.80		0.39	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)		1916			2247		600	3069	1336	197	2956	1270
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	170	273	73	60	192	119	45	1199	65	92	496	44
RTOR Reduction (vph)	0	16	0	0	66	0	0	0	24	0	0	27
Lane Group Flow (vph)	0	500	0	0	305	0	45	1199	41	92	496	17
Confl. Peds. (#/hr)	49		20	20		49	26		8	8		26
Confl. Bikes (#/hr)	2					2						
Heavy Vehicles (%)	10%	7%	4%	9%	7%	5%	6%	4%	0%	3%	8%	5%
Turn Type	pm+pt			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		35.0			27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)		36.0			28.0		36.0	33.5	33.0	36.0	33.5	33.0
Actuated g/C Ratio		0.42			0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)		5.0			5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)		876			740		294	1210	519	144	1165	493
v/s Ratio Prot		c0.04					0.01	c0.39		c0.03	0.17	
v/s Ratio Perm		0.20			0.14		0.06		0.03	0.24		0.01
v/c Ratio		0.57			0.41		0.15	0.99	0.08	0.64	0.43	0.03
Uniform Delay, d1		18.6			22.1		14.7	25.6	16.4	19.0	18.7	16.1
Progression Factor		1.00			1.00		1.33	0.86	1.42	1.86	1.67	3.21
Incremental Delay, d2		2.7			1.7		0.6	17.7	0.2	18.1	1.0	0.1
Delay (s)		21.3			23.8		20.3	39.8	23.4	53.3	32.3	51.8
Level of Service		C			C		C	D	C	D	C	D
Approach Delay (s)		21.3			23.8			38.3			36.7	
Approach LOS		C			C			D			D	

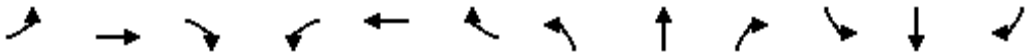
Intersection Summary			
HCM Average Control Delay	32.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	80.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	44	397	0	0	328	81	28	63	98	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.97			0.93				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		1706			1668			1582				
Flt Permitted		0.93			1.00			0.99				
Satd. Flow (perm)		1592			1668			1582				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	49	441	0	0	364	90	31	70	109	0	0	0
RTOR Reduction (vph)	0	0	0	0	14	0	0	60	0	0	0	0
Lane Group Flow (vph)	0	490	0	0	440	0	0	150	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		34.0			34.0			23.0				
Effective Green, g (s)		34.0			34.0			23.0				
Actuated g/C Ratio		0.52			0.52			0.35				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		833			872			560				
v/s Ratio Prot					0.26							
v/s Ratio Perm		c0.31						0.09				
v/c Ratio		0.59			0.50			0.27				
Uniform Delay, d1		10.7			10.0			15.0				
Progression Factor		1.00			0.50			1.00				
Incremental Delay, d2		3.0			1.9			1.2				
Delay (s)		13.7			6.9			16.2				
Level of Service		B			A			B				
Approach Delay (s)		13.7			6.9			16.2			0.0	
Approach LOS		B			A			B			A	

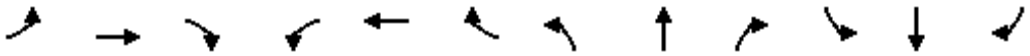
Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	45	397	31	20	340	49	16	175	35	51	107	19
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.98			0.98			0.98	
Flt Protected		1.00			1.00			1.00			0.99	
Satd. Flow (prot)		1887			1833			3185			3154	
Flt Permitted		0.93			0.97			0.93			0.83	
Satd. Flow (perm)		1763			1780			2981			2649	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	50	441	34	22	378	54	18	194	39	57	119	21
RTOR Reduction (vph)	0	4	0	0	8	0	0	23	0	0	12	0
Lane Group Flow (vph)	0	521	0	0	446	0	0	228	0	0	185	0
Confl. Peds. (#/hr)	29		16	16		29	28		14	14		28
Confl. Bikes (#/hr)	1					1	1					1
Heavy Vehicles (%)	3%	7%	4%	12%	8%	13%	0%	4%	4%	4%	4%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0			27.0			27.0	
Effective Green, g (s)		30.0			30.0			27.0			27.0	
Actuated g/C Ratio		0.46			0.46			0.42			0.42	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		814			822			1238			1100	
v/s Ratio Prot												
v/s Ratio Perm		c0.30			0.25			c0.08			0.07	
v/c Ratio		0.64			0.54			0.18			0.17	
Uniform Delay, d1		13.4			12.6			12.0			11.9	
Progression Factor		0.62			0.57			0.89			0.53	
Incremental Delay, d2		3.3			2.5			0.3			0.3	
Delay (s)		11.6			9.7			11.0			6.6	
Level of Service		B			A			B			A	
Approach Delay (s)		11.6			9.7			11.0			6.6	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM Average Control Delay	10.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	77.9%	ICU Level of Service	D
Analysis Period (min)	15		

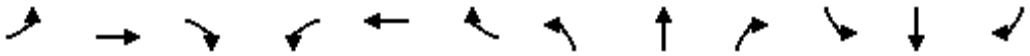
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	265	20	28	280	61	46	319	89	48	96	20
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	9	10	10	9	10	10	12	10	10	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.97		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1501	2938		1583	2932		1497	3034		1594	2943	
Flt Permitted	0.49	1.00		0.55	1.00		0.67	1.00		0.48	1.00	
Satd. Flow (perm)	781	2938		917	2932		1056	3034		809	2943	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	56	294	22	31	311	68	51	354	99	53	107	22
RTOR Reduction (vph)	0	9	0	0	28	0	0	39	0	0	10	0
Lane Group Flow (vph)	56	307	0	31	351	0	51	414	0	53	119	0
Confl. Peds. (#/hr)	25		14	14		25	12		4	4		12
Confl. Bikes (#/hr)	1					1			1	1		
Heavy Vehicles (%)	5%	7%	12%	0%	6%	2%	6%	1%	3%	0%	4%	12%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	264	994		310	992		569	1634		436	1585	
v/s Ratio Prot		0.10			c0.12			c0.14			0.04	
v/s Ratio Perm	0.07			0.03			0.05			0.07		
v/c Ratio	0.21	0.31		0.10	0.35		0.09	0.25		0.12	0.07	
Uniform Delay, d1	15.3	15.9		14.7	16.2		7.3	8.0		7.4	7.2	
Progression Factor	0.60	0.58		0.78	0.78		0.64	0.68		1.21	1.21	
Incremental Delay, d2	1.5	0.7		0.6	1.0		0.3	0.4		0.6	0.1	
Delay (s)	10.7	9.9		12.1	13.7		5.0	5.8		9.5	8.8	
Level of Service	B	A		B	B		A	A		A	A	
Approach Delay (s)		10.0			13.5			5.7			9.0	
Approach LOS		B			B			A			A	

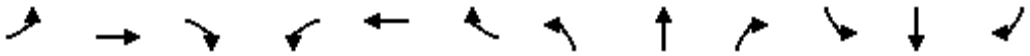
Intersection Summary					
HCM Average Control Delay	9.4	HCM Level of Service		A	
HCM Volume to Capacity ratio	0.29				
Actuated Cycle Length (s)	65.0	Sum of lost time (s)		8.0	
Intersection Capacity Utilization	46.7%	ICU Level of Service		A	
Analysis Period (min)	15				

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	83	380	26	37	316	82	11	308	44	41	118	38
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	9	10	9	9	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.98			1.00			0.99	
Flpb, ped/bikes	0.97	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.97			0.98			0.97	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1381	3014		1334	3524			3436			3308	
Flt Permitted	0.49	1.00		0.49	1.00			0.95			0.84	
Satd. Flow (perm)	719	3014		687	3524			3255			2814	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	87	400	27	39	333	86	12	324	46	43	124	40
RTOR Reduction (vph)	0	7	0	0	35	0	0	16	0	0	24	0
Lane Group Flow (vph)	87	420	0	39	384	0	0	366	0	0	183	0
Confl. Peds. (#/hr)	53		34	34		53	67		28	28		67
Heavy Vehicles (%)	8%	5%	0%	14%	6%	1%	0%	9%	20%	5%	15%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Effective Green, g (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48			0.40			0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	343	1437		328	1681			1302			1126	
v/s Ratio Prot		c0.14			0.11							
v/s Ratio Perm	0.12			0.06				c0.11			0.07	
v/c Ratio	0.25	0.29		0.12	0.23			0.28			0.16	
Uniform Delay, d1	10.1	10.3		9.4	10.0			13.2			12.5	
Progression Factor	1.58	1.62		0.83	0.81			0.52			0.64	
Incremental Delay, d2	1.7	0.5		0.7	0.3			0.5			0.3	
Delay (s)	17.7	17.3		8.4	8.4			7.3			8.3	
Level of Service	B	B		A	A			A			A	
Approach Delay (s)		17.4			8.4			7.3			8.3	
Approach LOS		B			A			A			A	

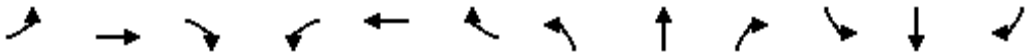
Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	98	293	98	104	314	104	79	84	88	88	84	79
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	16	12	12	16	12
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		0.95			1.00			1.00	
Frt		1.00	0.85		0.97			0.95			0.96	
Flt Protected		0.99	1.00		0.99			0.98			0.98	
Satd. Flow (prot)		1637	1409		3024			1822			1828	
Flt Permitted		0.75	1.00		0.76			0.81			0.78	
Satd. Flow (perm)		1247	1409		2316			1497			1448	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	109	326	109	116	349	116	88	93	98	98	93	88
RTOR Reduction (vph)	0	0	52	0	34	0	0	30	0	0	26	0
Lane Group Flow (vph)	0	435	57	0	547	0	0	249	0	0	253	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		34.0	34.0		34.0			21.0			21.0	
Effective Green, g (s)		34.0	34.0		34.0			21.0			21.0	
Actuated g/C Ratio		0.52	0.52		0.52			0.32			0.32	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Grp Cap (vph)		652	737		1211			484			468	
v/s Ratio Prot												
v/s Ratio Perm		c0.35	0.04		0.24			0.17			c0.17	
v/c Ratio		0.67	0.08		0.45			0.51			0.54	
Uniform Delay, d1		11.4	7.7		9.7			17.9			18.0	
Progression Factor		2.01	5.61		0.39			1.00			1.00	
Incremental Delay, d2		5.2	0.2		1.2			3.9			4.4	
Delay (s)		28.1	43.4		4.9			21.7			22.5	
Level of Service		C	D		A			C			C	
Approach Delay (s)		31.2			4.9			21.7			22.5	
Approach LOS		C			A			C			C	

Intersection Summary			
HCM Average Control Delay	19.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	70.8%	ICU Level of Service	C
Analysis Period (min)	15		

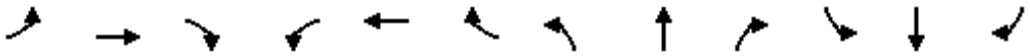
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	72	378	19	15	417	63	28	103	41	43	90	89
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	15	8	16	8	8	16	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00			0.99	
Flpb, ped/bikes	0.99	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.98			0.96			0.94	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1474	3019		1573	2999			3444			3420	
Flt Permitted	0.41	1.00		0.47	1.00			0.89			0.88	
Satd. Flow (perm)	633	3019		778	2999			3097			3029	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	80	420	21	17	463	70	31	114	46	48	100	99
RTOR Reduction (vph)	0	6	0	0	18	0	0	25	0	0	55	0
Lane Group Flow (vph)	80	435	0	17	515	0	0	166	0	0	192	0
Confl. Peds. (#/hr)	22		40	40		22	18		3	3		18
Confl. Bikes (#/hr)			2	2			1					1
Heavy Vehicles (%)	7%	5%	0%	0%	4%	2%	0%	3%	22%	0%	3%	8%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	28.0	28.0		28.0	28.0			29.0			29.0	
Effective Green, g (s)	28.0	28.0		28.0	28.0			29.0			29.0	
Actuated g/C Ratio	0.43	0.43		0.43	0.43			0.45			0.45	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	273	1300		335	1292			1382			1351	
v/s Ratio Prot		0.14			c0.17							
v/s Ratio Perm	0.13			0.02				0.05			c0.06	
v/c Ratio	0.29	0.33		0.05	0.40			0.12			0.14	
Uniform Delay, d1	12.1	12.3		10.8	12.7			10.5			10.6	
Progression Factor	1.00	1.02		1.14	0.98			1.00			0.71	
Incremental Delay, d2	2.1	0.5		0.1	0.5			0.2			0.2	
Delay (s)	14.1	13.2		12.4	12.9			10.7			7.8	
Level of Service	B	B		B	B			B			A	
Approach Delay (s)		13.3			12.9			10.7			7.8	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	11.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

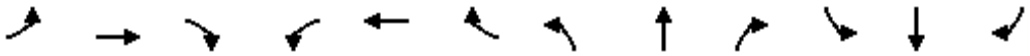


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	85	453	71	94	449	284	41	332	92	222	159	49
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.98			0.95			0.97			0.98	
Flt Protected		0.99			0.99			1.00			0.97	
Satd. Flow (prot)		3178			3072			3147			3121	
Flt Permitted		0.64			0.74			0.89			0.63	
Satd. Flow (perm)		2051			2284			2813			2013	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	94	503	79	104	499	316	46	369	102	247	177	54
RTOR Reduction (vph)	0	16	0	0	104	0	0	33	0	0	15	0
Lane Group Flow (vph)	0	660	0	0	815	0	0	484	0	0	463	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		26.0			26.0			29.0			20.0	
Effective Green, g (s)		26.0			26.0			29.0			20.0	
Actuated g/C Ratio		0.40			0.40			0.45			0.31	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		820			914			1286			619	
v/s Ratio Prot								c0.03				
v/s Ratio Perm		0.32			c0.36			0.13			c0.23	
v/c Ratio		0.81			0.89			0.38			0.96dl	
Uniform Delay, d1		17.3			18.2			12.0			20.2	
Progression Factor		1.74			1.00			1.00			0.89	
Incremental Delay, d2		8.2			12.8			0.8			8.0	
Delay (s)		38.1			31.0			12.8			26.0	
Level of Service		D			C			B			C	
Approach Delay (s)		38.1			31.0			12.8			26.0	
Approach LOS		D			C			B			C	

Intersection Summary			
HCM Average Control Delay	28.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	87.6%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

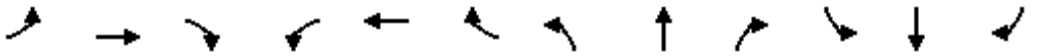
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	722	118	45	751	0	132	0	70	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	10	10	12	12	12	12	10	10	10
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			1.00				
Frt		0.98			1.00			0.95				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		2976			3031			1582				
Flt Permitted		1.00			0.84			0.80				
Satd. Flow (perm)		2976			2542			1311				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	802	131	50	834	0	147	0	78	0	0	0
RTOR Reduction (vph)	0	18	0	0	0	0	0	21	0	0	0	0
Lane Group Flow (vph)	0	915	0	0	884	0	0	204	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	custom			Perm			Perm			Perm		
Protected Phases		4 5 6 11			8			2			2	
Permitted Phases	4 6 11			8			2			2		
Actuated Green, G (s)		65.0			33.0			16.0				
Effective Green, g (s)		58.0			33.0			16.0				
Actuated g/C Ratio		0.64			0.37			0.18				
Clearance Time (s)					5.0			5.0				
Lane Grp Cap (vph)		1918			932			233				
v/s Ratio Prot		c0.31										
v/s Ratio Perm					c0.35			c0.16				
v/c Ratio		0.48			0.95			0.87				
Uniform Delay, d1		8.2			27.7			36.0				
Progression Factor		0.04			1.57			1.00				
Incremental Delay, d2		0.4			17.4			33.6				
Delay (s)		0.7			60.9			69.6				
Level of Service		A			E			E				
Approach Delay (s)		0.7			60.9			69.6			0.0	
Approach LOS		A			E			E			A	

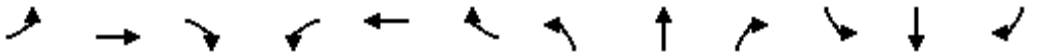
Intersection Summary			
HCM Average Control Delay	34.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	123	501	187	274	642	183	101	20	185	78	7	75
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	10	12	12	12	12	16	12	12	12	12
Total Lost time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	1.00
Frt	1.00	0.96		1.00	1.00	0.85		0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (prot)	1520	3020		1629	3257	1457		1755		1629	1714	1457
Flt Permitted	0.32	1.00		0.20	1.00	1.00		0.89		0.40	1.00	1.00
Satd. Flow (perm)	516	3020		342	3257	1457		1582		685	1714	1457
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	137	557	208	304	713	203	112	22	206	87	8	83
RTOR Reduction (vph)	0	42	0	0	0	104	0	75	0	0	0	45
Lane Group Flow (vph)	137	723	0	304	713	99	0	265	0	87	8	38
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	40.1	30.7		47.8	35.4	44.0		20.6		32.2	32.2	41.6
Effective Green, g (s)	40.1	30.7		47.8	35.4	44.0		20.6		32.2	32.2	41.6
Actuated g/C Ratio	0.45	0.34		0.53	0.39	0.49		0.23		0.36	0.36	0.46
Clearance Time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Vehicle Extension (s)	4.0	3.0		4.0	3.0	3.0		4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	335	1030		383	1281	712		362		335	613	673
v/s Ratio Prot	0.04	0.24		c0.12	0.22	0.01				c0.02	0.00	0.01
v/s Ratio Perm	0.14			c0.30		0.05		c0.17		0.07		0.02
v/c Ratio	0.41	0.70		0.79	0.56	0.14		0.73		0.26	0.01	0.06
Uniform Delay, d1	15.4	25.7		14.6	21.2	12.6		32.1		21.3	18.6	13.4
Progression Factor	1.90	1.58		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	1.0	3.6		11.4	1.7	0.1		7.9		0.4	0.0	0.0
Delay (s)	30.2	44.3		26.0	23.0	12.7		40.1		21.7	18.7	13.4
Level of Service	C	D		C	C	B		D		C	B	B
Approach Delay (s)		42.1			22.0			40.1			17.7	
Approach LOS		D			C			D			B	

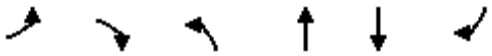
Intersection Summary			
HCM Average Control Delay	30.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	74.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	517	247	6	529	0	0	0	0	32	0	570
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	574	274	7	588	0	0	0	0	36	0	633
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		498										
pX, platoon unblocked												
vC, conflicting volume	588			574			882	1176	287	888	1176	294
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	588			574			882	1176	287	888	1176	294
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	100	100	85	100	9
cM capacity (veh/h)	963			974			20	184	701	232	184	694

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	287	287	274	203	392	36	633
Volume Left	0	0	0	7	0	36	0
Volume Right	0	0	274	0	0	0	633
cSH	1700	1700	1700	974	1700	232	694
Volume to Capacity	0.17	0.17	0.16	0.01	0.23	0.15	0.91
Queue Length 95th (ft)	0	0	0	1	0	13	302
Control Delay (s)	0.0	0.0	0.0	0.4	0.0	23.3	40.8
Lane LOS				A		C	E
Approach Delay (s)	0.0			0.1		39.9	
Approach LOS						E	

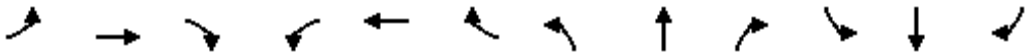
Intersection Summary				
Average Delay	12.7			
Intersection Capacity Utilization	59.5%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	549	0	535	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	610	0	594	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	305	305	594
Volume Left (vph)	305	305	594
Volume Right (vph)	0	0	0
Hadj (s)	0.58	0.58	0.29
Departure Headway (s)	6.9	6.9	5.8
Degree Utilization, x	0.59	0.59	0.95
Capacity (veh/h)	500	499	618
Control Delay (s)	18.2	18.2	48.3
Approach Delay (s)	18.2		48.3
Approach LOS	C		E

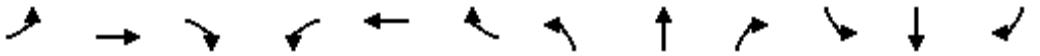
Intersection Summary			
Delay	33.1		
HCM Level of Service	D		
Intersection Capacity Utilization	54.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	340	46	126	323	0	0	0	0	72	15	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)		3.0		4.0	4.0						5.0	
Lane Util. Factor		0.95		1.00	0.95						0.95	
Frt		0.98		1.00	1.00						0.95	
Flt Protected		1.00		0.95	1.00						0.97	
Satd. Flow (prot)		3092		1574	3149						3014	
Flt Permitted		1.00		0.45	1.00						0.97	
Satd. Flow (perm)		3092		746	3149						3014	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	378	51	140	359	0	0	0	0	80	17	47
RTOR Reduction (vph)	0	12	0	0	0	0	0	0	0	0	32	0
Lane Group Flow (vph)	0	417	0	140	359	0	0	0	0	0	112	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type				pm+pt						Split		
Protected Phases		4		3	8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		36.0		49.0	49.0						27.0	
Effective Green, g (s)		36.0		49.0	49.0						27.0	
Actuated g/C Ratio		0.42		0.58	0.58						0.32	
Clearance Time (s)		3.0		4.0	4.0						5.0	
Lane Grp Cap (vph)		1310		527	1815						957	
v/s Ratio Prot		c0.13		c0.03	0.11						c0.04	
v/s Ratio Perm				0.12								
v/c Ratio		0.32		0.27	0.20						0.12	
Uniform Delay, d1		16.3		11.3	8.6						20.6	
Progression Factor		1.00		0.27	0.25						1.00	
Incremental Delay, d2		0.6		1.2	0.2						0.2	
Delay (s)		17.0		4.2	2.4						20.8	
Level of Service		B		A	A						C	
Approach Delay (s)		17.0			2.9			0.0			20.8	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	10.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.7%	ICU Level of Service	A
Analysis Period (min)	15		

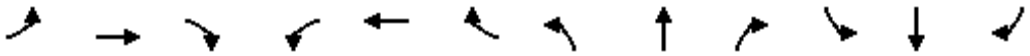
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	68	344	0	0	400	76	49	65	42	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	11	11	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0			3.0			5.0				
Lane Util. Factor	1.00	0.95			0.95			0.91				
Frt	1.00	1.00			0.98			0.96				
Flt Protected	0.95	1.00			1.00			0.98				
Satd. Flow (prot)	1629	3257			3073			4420				
Flt Permitted	0.38	1.00			1.00			0.98				
Satd. Flow (perm)	656	3257			3073			4420				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	76	382	0	0	444	84	54	72	47	0	0	0
RTOR Reduction (vph)	0	0	0	0	18	0	0	32	0	0	0	0
Lane Group Flow (vph)	76	382	0	0	510	0	0	141	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	pm+pt						Split					
Protected Phases	7	4			8		2	2				
Permitted Phases	4											
Actuated Green, G (s)	48.0	48.0			35.0			27.0				
Effective Green, g (s)	48.0	48.0			35.0			27.0				
Actuated g/C Ratio	0.56	0.56			0.41			0.32				
Clearance Time (s)	5.0	5.0			3.0			5.0				
Lane Grp Cap (vph)	485	1839			1265			1404				
v/s Ratio Prot	0.02	c0.12			c0.17			c0.03				
v/s Ratio Perm	0.07											
v/c Ratio	0.16	0.21			0.40			0.10				
Uniform Delay, d1	12.1	9.1			17.6			20.4				
Progression Factor	0.34	0.33			1.00			1.00				
Incremental Delay, d2	0.7	0.2			1.0			0.1				
Delay (s)	4.7	3.3			18.6			20.6				
Level of Service	A	A			B			C				
Approach Delay (s)		3.5			18.6			20.6			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM Average Control Delay	12.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.7%	ICU Level of Service	A
Analysis Period (min)	15		

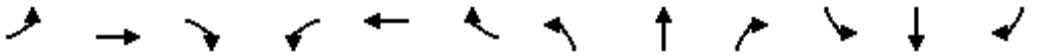
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	307	39	31	243	31	118	85	52	56	91	126
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	12	15	12	12	15	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		0.98			0.98			0.97			0.94	
Flt Protected		0.99			0.99			0.98			0.99	
Satd. Flow (prot)		2979			2979			1792			1750	
Flt Permitted		0.89			0.88			0.75			0.89	
Satd. Flow (perm)		2659			2645			1373			1569	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	43	341	43	34	270	34	131	94	58	62	101	140
RTOR Reduction (vph)	0	13	0	0	13	0	0	14	0	0	48	0
Lane Group Flow (vph)	0	414	0	0	325	0	0	269	0	0	255	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		23.0			23.0			32.0			32.0	
Effective Green, g (s)		23.0			23.0			32.0			32.0	
Actuated g/C Ratio		0.35			0.35			0.49			0.49	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		941			936			676			772	
v/s Ratio Prot												
v/s Ratio Perm		c0.16			0.12			c0.20			0.16	
v/c Ratio		0.44			0.35			0.40			0.33	
Uniform Delay, d1		16.1			15.5			10.4			10.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.5			1.0			1.7			1.1	
Delay (s)		17.6			16.5			12.2			11.2	
Level of Service		B			B			B			B	
Approach Delay (s)		17.6			16.5			12.2			11.2	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	14.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	63.1%	ICU Level of Service	B
Analysis Period (min)	15		

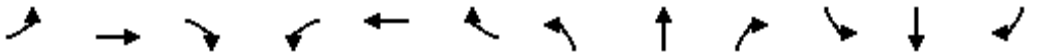
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	169	202	39	50	176	62	71	1001	70	75	428	80
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	12	10	16	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.96
Flpb, ped/bikes	0.99	1.00		1.00	1.00		0.99	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1548	3005		1592	3512		1486	3040	1347	1494	3011	1271
Flt Permitted	0.59	1.00		0.58	1.00		0.43	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	954	3005		975	3512		675	3040	1347	197	3011	1271
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	178	213	41	53	185	65	75	1054	74	79	451	84
RTOR Reduction (vph)	0	19	0	0	41	0	0	0	44	0	0	51
Lane Group Flow (vph)	178	235	0	53	209	0	75	1054	30	79	451	33
Confl. Peds. (#/hr)	31		7	7		31	37		12	12		37
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	2%	4%	0%	0%	6%	2%	3%	5%	0%	3%	6%	4%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	32.0	27.0		32.0	27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)	30.0	28.0		30.0	28.0		36.0	33.0	33.0	36.0	33.0	33.0
Actuated g/C Ratio	0.35	0.33		0.35	0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	365	990		373	1157		324	1180	523	144	1169	493
v/s Ratio Prot	c0.02	0.08		0.01	0.06		0.01	c0.35		c0.03	0.15	
v/s Ratio Perm	c0.15			0.04			0.09		0.02	0.21		0.03
v/c Ratio	0.49	0.24		0.14	0.18		0.23	0.89	0.06	0.55	0.39	0.07
Uniform Delay, d1	20.6	20.7		18.4	20.3		15.0	24.3	16.3	17.5	18.7	16.3
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	2.05	0.61	0.83
Incremental Delay, d2	4.6	0.6		0.8	0.3		1.7	10.5	0.2	13.0	0.9	0.2
Delay (s)	25.2	21.3		19.2	20.7		16.6	34.8	16.5	48.9	12.2	13.7
Level of Service	C	C		B	C		B	C	B	D	B	B
Approach Delay (s)		22.9			20.4			32.6			17.1	
Approach LOS		C			C			C			B	

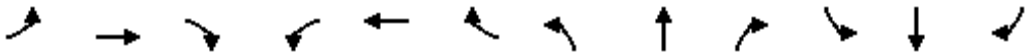
Intersection Summary			
HCM Average Control Delay	25.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	70.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	38	256	18	14	216	8	35	113	25	20	57	41
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	16	12	12	16	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00	0.99		1.00	0.98
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		0.99	1.00
Satd. Flow (prot)		1929	1382		1950	1331		1970	1452		1928	1430
Flt Permitted		0.94	1.00		0.98	1.00		0.93	1.00		0.93	1.00
Satd. Flow (perm)		1829	1382		1910	1331		1860	1452		1811	1430
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	40	269	19	15	227	8	37	119	26	21	60	43
RTOR Reduction (vph)	0	0	10	0	0	4	0	0	15	0	0	25
Lane Group Flow (vph)	0	309	9	0	242	4	0	156	11	0	81	18
Confl. Peds. (#/hr)	5		21	21		5	9		1	1		9
Heavy Vehicles (%)	5%	5%	6%	7%	4%	12%	6%	1%	4%	0%	6%	5%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Effective Green, g (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Actuated g/C Ratio		0.46	0.46		0.46	0.46		0.42	0.42		0.42	0.42
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		844	638		882	614		773	603		752	594
v/s Ratio Prot												
v/s Ratio Perm		c0.17	0.01		0.13	0.00		c0.08	0.01		0.04	0.01
v/c Ratio		0.37	0.01		0.27	0.01		0.20	0.02		0.11	0.03
Uniform Delay, d1		11.3	9.5		10.8	9.4		12.1	11.2		11.6	11.2
Progression Factor		1.00	1.00		0.48	0.39		1.38	1.85		0.94	0.85
Incremental Delay, d2		1.2	0.0		0.8	0.0		0.6	0.1		0.3	0.1
Delay (s)		12.6	9.5		5.9	3.7		17.3	20.8		11.2	9.6
Level of Service		B	A		A	A		B	C		B	A
Approach Delay (s)		12.4			5.8			17.8			10.6	
Approach LOS		B			A			B			B	

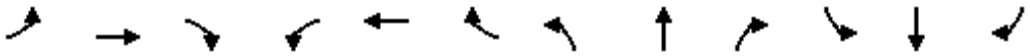
Intersection Summary			
HCM Average Control Delay	11.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	66	242	10	15	200	30	13	247	26	30	70	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.98		1.00	0.99		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1520	3022		1520	2981		1520	2996		1520	2904	
Flt Permitted	0.95	1.00		0.58	1.00		0.68	1.00		0.55	1.00	
Satd. Flow (perm)	1520	3022		928	2981		1091	2996		884	2904	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	73	269	11	17	222	33	14	274	29	33	78	33
RTOR Reduction (vph)	0	5	0	0	18	0	0	12	0	0	19	0
Lane Group Flow (vph)	73	275	0	17	237	0	14	291	0	33	92	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Prot			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Effective Green, g (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.11	0.49		0.34	0.34		0.42	0.42		0.42	0.42	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	164	1488		314	1009		453	1244		367	1206	
v/s Ratio Prot	c0.05	0.09			c0.08			c0.10			0.03	
v/s Ratio Perm				0.02			0.01			0.04		
v/c Ratio	0.45	0.19		0.05	0.24		0.03	0.23		0.09	0.08	
Uniform Delay, d1	27.2	9.2		14.5	15.5		11.3	12.3		11.5	11.5	
Progression Factor	0.83	0.42		0.83	0.75		0.58	0.65		1.08	1.11	
Incremental Delay, d2	8.3	0.3		0.3	0.5		0.1	0.4		0.5	0.1	
Delay (s)	30.9	4.1		12.4	12.2		6.7	8.4		13.0	12.8	
Level of Service	C	A		B	B		A	A		B	B	
Approach Delay (s)		9.7			12.2			8.3			12.9	
Approach LOS		A			B			A			B	

Intersection Summary			
HCM Average Control Delay	10.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	35.5%	ICU Level of Service	A
Analysis Period (min)	15		

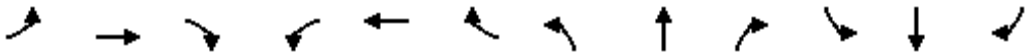
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	37	253	16	97	216	43	26	286	20	25	143	25
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.99		1.00	0.97			0.99			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1520	3013		1520	2964			3215			3173	
Flt Permitted	0.58	1.00		0.95	1.00			0.92			0.89	
Satd. Flow (perm)	921	3013		1520	2964			2980			2839	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	41	281	18	108	240	48	29	318	22	28	159	28
RTOR Reduction (vph)	0	7	0	0	25	0	0	7	0	0	17	0
Lane Group Flow (vph)	41	292	0	108	263	0	0	362	0	0	198	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Prot			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4						2			6		
Actuated Green, G (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Effective Green, g (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Actuated g/C Ratio	0.31	0.31		0.09	0.45			0.38			0.38	
Clearance Time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	283	927		140	1322			1146			1092	
v/s Ratio Prot		c0.10		c0.07	0.09							
v/s Ratio Perm	0.04							c0.12			0.07	
v/c Ratio	0.14	0.32		0.77	0.20			0.32			0.18	
Uniform Delay, d1	16.3	17.2		28.8	10.9			14.0			13.2	
Progression Factor	0.61	0.60		1.35	0.97			0.72			0.76	
Incremental Delay, d2	1.1	0.9		28.9	0.3			0.7			0.4	
Delay (s)	11.0	11.2		67.9	10.9			10.7			10.4	
Level of Service	B	B		E	B			B			B	
Approach Delay (s)		11.2			26.4			10.7			10.4	
Approach LOS		B			C			B			B	

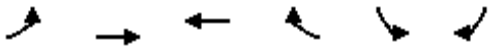
Intersection Summary			
HCM Average Control Delay	15.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	42.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	14	264	14	70	330	70	25	94	162	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	14	12	10	15	10
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			0.95				
Frt		0.99			0.98			0.91				
Flt Protected		1.00			0.99			1.00				
Satd. Flow (prot)		1585			1556			3159				
Flt Permitted		0.97			0.91			1.00				
Satd. Flow (perm)		1548			1425			3159				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	16	293	16	78	367	78	28	104	180	0	0	0
RTOR Reduction (vph)	0	2	0	0	8	0	0	140	0	0	0	0
Lane Group Flow (vph)	0	323	0	0	515	0	0	172	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		42.4			42.4			14.6				
Effective Green, g (s)		42.4			42.4			14.6				
Actuated g/C Ratio		0.65			0.65			0.22				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		3.0			3.0			8.0				
Lane Grp Cap (vph)		1010			930			710				
v/s Ratio Prot												
v/s Ratio Perm		0.21			c0.36			0.05				
v/c Ratio		0.32			0.55			0.24				
Uniform Delay, d1		5.0			6.2			20.7				
Progression Factor		2.07			1.00			1.00				
Incremental Delay, d2		0.8			2.4			0.8				
Delay (s)		11.1			8.5			21.4				
Level of Service		B			A			C				
Approach Delay (s)		11.1			8.5			21.4			0.0	
Approach LOS		B			A			C			A	

Intersection Summary			
HCM Average Control Delay	12.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	81	345	392	44	66	75
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	85	363	413	46	69	79
Pedestrians		3	5		21	
Lane Width (ft)		16.0	16.0		10.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1319	491			
pX, platoon unblocked	0.87				0.87	0.87
vC, conflicting volume	480				995	460
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	325				919	302
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	92				70	87
cM capacity (veh/h)	1010				235	629

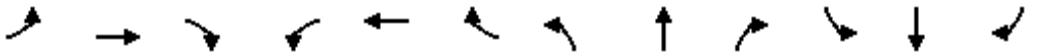
Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	448	459	69	79
Volume Left	85	0	69	0
Volume Right	0	46	0	79
cSH	1010	1700	235	629
Volume to Capacity	0.08	0.27	0.30	0.13
Queue Length 95th (ft)	7	0	30	11
Control Delay (s)	2.5	0.0	26.7	11.5
Lane LOS	A		D	B
Approach Delay (s)	2.5	0.0	18.6	
Approach LOS			C	

Intersection Summary			
Average Delay	3.7		
Intersection Capacity Utilization	63.5%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	471	1	14	644	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0			4.0		
Lane Util. Factor	1.00			1.00		
Frt	1.00			1.00		
Flt Protected	1.00			1.00		
Satd. Flow (prot)	1714			1712		
Flt Permitted	1.00			0.99		
Satd. Flow (perm)	1714			1690		
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	523	1	16	716	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	524	0	0	732	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type			Perm			
Protected Phases	1 2 4			4	3	
Permitted Phases			4			
Actuated Green, G (s)	63.0			31.0		
Effective Green, g (s)	59.0			31.0		
Actuated g/C Ratio	0.69			0.36		
Clearance Time (s)				4.0		
Lane Grp Cap (vph)	1190			616		
v/s Ratio Prot	c0.31					
v/s Ratio Perm				c0.43		
v/c Ratio	0.44			1.19		
Uniform Delay, d1	5.7			27.0		
Progression Factor	0.05			1.00		
Incremental Delay, d2	0.3			100.3		
Delay (s)	0.6			127.3		
Level of Service	A			F		
Approach Delay (s)	0.6			127.3	0.0	
Approach LOS	A			F	A	

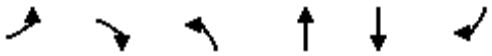
Intersection Summary			
HCM Average Control Delay	74.5	HCM Level of Service	E
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	51.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	182	191	25	552	0	0	0	0	3	0	254
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	202	212	28	613	0	0	0	0	3	0	282
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	613			202			977	977	207	770	871	613
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	613			202			977	977	207	770	871	613
tC, single (s)	4.1			5.5			7.5	6.5	6.9	7.5	6.5	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.9			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			100	100	100	99	100	34
cM capacity (veh/h)	976			988			70	246	805	287	283	430

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	135	280	641	3	282
Volume Left	0	0	28	3	0
Volume Right	0	212	0	0	282
cSH	1700	1700	988	287	430
Volume to Capacity	0.08	0.16	0.03	0.01	0.66
Queue Length 95th (ft)	0	0	2	1	115
Control Delay (s)	0.0	0.0	0.7	17.7	27.9
Lane LOS			A	C	D
Approach Delay (s)	0.0		0.7	27.8	
Approach LOS				D	

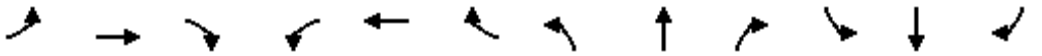
Intersection Summary			
Average Delay	6.3		
Intersection Capacity Utilization	57.2%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	185	0	577	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	206	0	641	0	0	0

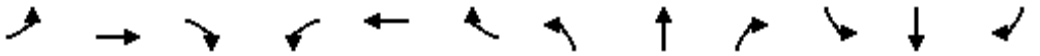
Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	103	103	641
Volume Left (vph)	103	103	641
Volume Right (vph)	0	0	0
Hadj (s)	0.58	0.58	0.29
Departure Headway (s)	6.8	6.8	4.8
Degree Utilization, x	0.19	0.19	0.86
Capacity (veh/h)	511	511	735
Control Delay (s)	10.2	10.2	30.0
Approach Delay (s)	10.2		30.0
Approach LOS	B		D

Intersection Summary			
Delay		25.2	
HCM Level of Service		D	
Intersection Capacity Utilization		46.0%	ICU Level of Service A
Analysis Period (min)		15	



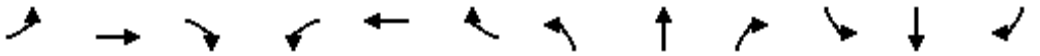
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	437	210	157	465	0	0	0	0	123	117	300
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	13	12	12	12	12	10	10	11
Total Lost time (s)		6.0	6.0		6.0					6.0	6.0	6.0
Lane Util. Factor		0.95	1.00		0.95					0.86	0.81	0.86
Frpb, ped/bikes		1.00	0.98		1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	0.93	0.85
Flt Protected		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (prot)		2978	1202		3372					1346	3691	1122
Flt Permitted		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (perm)		2978	1202		3372					1346	3691	1122
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	460	221	165	489	0	0	0	0	129	123	316
RTOR Reduction (vph)	0	0	160	0	0	0	0	0	0	0	101	94
Lane Group Flow (vph)	0	460	61	0	654	0	0	0	0	71	238	64
Confl. Peds. (#/hr)	5		3	3		5						
Heavy Vehicles (%)	0%	11%	9%	2%	4%	0%	0%	0%	0%	2%	2%	2%
Parking (#/hr)			0									0
Turn Type			Perm	Split						Split		custom
Protected Phases		2		10 12 14	10 12 14					4	4	
Permitted Phases			2									4 2
Actuated Green, G (s)		39.2	39.2		73.3					19.6	19.6	64.8
Effective Green, g (s)		39.2	39.2		73.3					19.6	19.6	64.8
Actuated g/C Ratio		0.25	0.25		0.46					0.12	0.12	0.40
Clearance Time (s)		6.0	6.0							6.0	6.0	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		730	294		1545					165	452	454
v/s Ratio Prot		c0.15			c0.19					0.05	c0.06	
v/s Ratio Perm			0.05									0.06
v/c Ratio		0.63	0.21		0.42					0.43	0.53	0.14
Uniform Delay, d1		53.9	48.0		29.1					65.0	65.8	30.0
Progression Factor		1.00	1.00		0.02					1.00	1.00	1.00
Incremental Delay, d2		4.1	1.6		0.1					1.8	1.1	0.1
Delay (s)		58.0	49.6		0.7					66.8	67.0	30.2
Level of Service		E	D		A					E	E	C
Approach Delay (s)		55.3			0.7			0.0			56.7	
Approach LOS		E			A			A			E	

Intersection Summary			
HCM Average Control Delay	36.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	29.9
Intersection Capacity Utilization	53.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



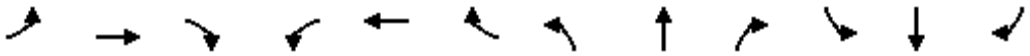
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	212	348	0	0	384	91	238	150	135	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	13	12	12	11	12	13	13	14	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0				
Lane Util. Factor	1.00	0.95			0.95	1.00	0.91	0.91				
Frt	1.00	1.00			1.00	0.85	1.00	0.94				
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (prot)	1574	3366			3149	1457	1531	3009				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (perm)	1574	3366			3149	1457	1531	3009				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	236	387	0	0	427	101	264	167	150	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	81	0	53	0	0	0	0
Lane Group Flow (vph)	236	387	0	0	427	20	198	330	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Split					Perm	Split					
Protected Phases	2 4 8	2 4 8			10		12	12				
Permitted Phases						10						
Actuated Green, G (s)	78.7	78.7			32.3	32.3	22.2	22.2				
Effective Green, g (s)	78.7	78.7			32.3	32.3	22.2	22.2				
Actuated g/C Ratio	0.49	0.49			0.20	0.20	0.14	0.14				
Clearance Time (s)					6.0	6.0	6.0	6.0				
Vehicle Extension (s)					3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	774	1656			636	294	212	417				
v/s Ratio Prot	c0.15	0.11			c0.14		c0.13	0.11				
v/s Ratio Perm						0.01						
v/c Ratio	0.30	0.23			0.67	0.07	0.93	0.79				
Uniform Delay, d1	24.3	23.3			59.0	51.7	68.2	66.7				
Progression Factor	0.07	0.08			1.00	1.00	1.00	1.00				
Incremental Delay, d2	0.2	0.1			2.8	0.1	43.4	9.9				
Delay (s)	2.0	1.9			61.7	51.8	111.5	76.6				
Level of Service	A	A			E	D	F	E				
Approach Delay (s)		1.9			59.8			88.5			0.0	
Approach LOS		A			E			F			A	

Intersection Summary			
HCM Average Control Delay	48.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	28.8
Intersection Capacity Utilization	49.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	220	273	75	35	141	45	88	824	62	59	448	104
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	14	12	10	10	12	9	10	12
Total Lost time (s)	4.0	4.0	5.0	4.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.99	1.00	1.00	1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1536	1556	1328	1595	1719		1525	2990		1509	2870	
Flt Permitted	0.52	1.00	1.00	0.50	1.00		0.34	1.00		0.15	1.00	
Satd. Flow (perm)	844	1556	1328	835	1719		539	2990		238	2870	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	232	287	79	37	148	47	93	867	65	62	472	109
RTOR Reduction (vph)	0	0	52	0	12	0	0	6	0	0	22	0
Lane Group Flow (vph)	232	287	27	37	183	0	93	926	0	62	559	0
Confl. Peds. (#/hr)	33		3	3		33	42		8	8		42
Confl. Bikes (#/hr)							1					1
Heavy Vehicles (%)	3%	8%	6%	0%	7%	5%	4%	5%	11%	2%	6%	9%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	38.2	31.2	31.2	32.4	28.3		39.6	34.1		39.6	34.1	
Effective Green, g (s)	36.2	32.2	31.2	30.4	28.3		37.6	34.1		37.6	34.1	
Actuated g/C Ratio	0.40	0.36	0.35	0.34	0.31		0.42	0.38		0.42	0.38	
Clearance Time (s)	3.0	5.0	5.0	3.0	5.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	386	557	461	309	541		275	1134		163	1089	
v/s Ratio Prot	c0.04	0.18		0.00	0.11		0.02	c0.31		c0.02	0.19	
v/s Ratio Perm	c0.20		0.02	0.04			0.12			0.14		
v/c Ratio	0.60	0.52	0.06	0.12	0.34		0.34	0.82		0.38	0.51	
Uniform Delay, d1	20.9	22.7	19.6	20.3	23.6		16.6	25.1		17.7	21.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.6	3.4	0.2	0.2	1.7		0.7	6.5		1.5	1.7	
Delay (s)	23.5	26.1	19.8	20.4	25.3		17.3	31.6		19.2	23.2	
Level of Service	C	C	B	C	C		B	C		B	C	
Approach Delay (s)		24.3			24.5			30.3			22.8	
Approach LOS		C			C			C			C	

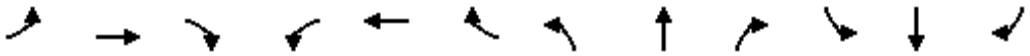
Intersection Summary			
HCM Average Control Delay	26.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	89.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	72.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	44	269	16	5	182	19	35	80	16	11	44	39
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	10	10	10	12	15	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Frpb, ped/bikes		1.00	0.97		1.00	0.97		1.00			0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.98			0.94	
Flt Protected		0.99	1.00		1.00	1.00		0.99			0.99	
Satd. Flow (prot)		1910	1482		1600	1198		1912			1848	
Flt Permitted		0.94	1.00		0.99	1.00		0.93			0.97	
Satd. Flow (perm)		1816	1482		1592	1198		1794			1810	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	46	283	17	5	192	20	37	84	17	12	46	41
RTOR Reduction (vph)	0	0	9	0	0	10	0	8	0	0	24	0
Lane Group Flow (vph)	0	329	8	0	197	10	0	130	0	0	75	0
Confl. Peds. (#/hr)	6		11	11		6	4		8	8		4
Confl. Bikes (#/hr)	1		1	1		1			1	1		
Heavy Vehicles (%)	0%	7%	0%	0%	5%	16%	0%	0%	0%	10%	0%	3%
Turn Type	Perm		Perm	Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Effective Green, g (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Actuated g/C Ratio		0.49	0.49		0.49	0.49		0.42			0.42	
Clearance Time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		894	730		784	590		745			752	
v/s Ratio Prot												
v/s Ratio Perm		c0.18	0.01		0.12	0.01		c0.07			0.04	
v/c Ratio		0.37	0.01		0.25	0.02		0.18			0.10	
Uniform Delay, d1		10.2	8.4		9.6	8.4		12.0			11.6	
Progression Factor		1.00	1.00		2.00	2.96		1.00			1.55	
Incremental Delay, d2		1.2	0.0		0.8	0.1		0.5			0.3	
Delay (s)		11.4	8.5		19.9	25.0		12.5			18.2	
Level of Service		B	A		B	C		B			B	
Approach Delay (s)		11.3			20.4			12.5			18.2	
Approach LOS		B			C			B			B	

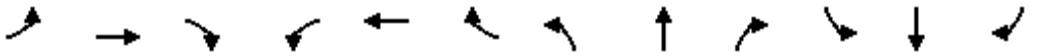
Intersection Summary			
HCM Average Control Delay	14.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	55.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	75	208	24	6	133	6	41	228	22	9	53	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.98		1.00	0.96		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.96	
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		1.00	
Satd. Flow (prot)		1663	1392		1604	1497		1755	1390		1653	
Flt Permitted		0.88	1.00		0.99	1.00		0.95	1.00		0.97	
Satd. Flow (perm)		1481	1392		1585	1497		1680	1390		1612	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	79	219	25	6	140	6	43	240	23	9	56	32
RTOR Reduction (vph)	0	0	16	0	0	4	0	0	12	0	16	0
Lane Group Flow (vph)	0	298	9	0	146	2	0	283	11	0	81	0
Confl. Peds. (#/hr)	11		17	17		11	4		17	17		4
Confl. Bikes (#/hr)	1		1	1		1	1					1
Heavy Vehicles (%)	0%	9%	5%	33%	11%	0%	6%	1%	6%	0%	0%	8%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Effective Green, g (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Actuated g/C Ratio		0.35	0.35		0.35	0.35		0.49	0.49		0.49	
Clearance Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Grp Cap (vph)		524	493		561	530		827	684		794	
v/s Ratio Prot												
v/s Ratio Perm		c0.20	0.01		0.09	0.00		c0.17	0.01		0.05	
v/c Ratio		0.57	0.02		0.26	0.00		0.34	0.02		0.10	
Uniform Delay, d1		17.0	13.7		14.9	13.6		10.1	8.4		8.8	
Progression Factor		1.90	3.09		0.92	0.93		0.32	0.30		1.02	
Incremental Delay, d2		4.2	0.1		1.1	0.0		0.9	0.0		0.3	
Delay (s)		36.6	42.2		14.9	12.7		4.1	2.5		9.3	
Level of Service		D	D		B	B		A	A		A	
Approach Delay (s)		37.0			14.8			4.0			9.3	
Approach LOS		D			B			A			A	

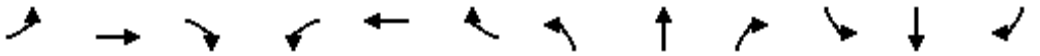
Intersection Summary			
HCM Average Control Delay	18.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	63.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	162	21	31	9	18	6	26	286	19	6	201	98
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.97		0.99			1.00			1.00	0.95
Flpb, ped/bikes		0.98	1.00		0.99			1.00			1.00	1.00
Frt		1.00	0.85		0.97			0.99			1.00	0.85
Flt Protected		0.96	1.00		0.99			1.00			1.00	1.00
Satd. Flow (prot)		1768	1390		1813			1974			1873	1328
Flt Permitted		0.80	1.00		0.93			0.97			0.99	1.00
Satd. Flow (perm)		1475	1390		1711			1923			1859	1328
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	180	23	34	10	20	7	29	318	21	7	223	109
RTOR Reduction (vph)	0	0	20	0	5	0	0	4	0	0	0	55
Lane Group Flow (vph)	0	203	14	0	32	0	0	364	0	0	230	54
Confl. Peds. (#/hr)	49		22	22		49	34		17	17		34
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	9%	0%	7%	0%	0%	0%	0%	2%	0%	0%	9%	9%
Turn Type	pm+pt		Perm	Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		27.0	27.0		17.0			32.0			32.0	32.0
Effective Green, g (s)		27.0	27.0		17.0			32.0			32.0	32.0
Actuated g/C Ratio		0.42	0.42		0.26			0.49			0.49	0.49
Clearance Time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		649	577		447			947			915	654
v/s Ratio Prot		c0.04										
v/s Ratio Perm		0.09	0.01		0.02			c0.19			0.12	0.04
v/c Ratio		0.31	0.02		0.07			0.38			0.25	0.08
Uniform Delay, d1		12.8	11.2		18.1			10.3			9.6	8.7
Progression Factor		0.77	1.28		1.00			0.54			0.49	0.34
Incremental Delay, d2		1.1	0.1		0.3			1.1			0.6	0.2
Delay (s)		10.9	14.4		18.4			6.7			5.3	3.2
Level of Service		B	B		B			A			A	A
Approach Delay (s)		11.4			18.4			6.7			4.6	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	7.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	59.4%	ICU Level of Service	B
Analysis Period (min)	15		

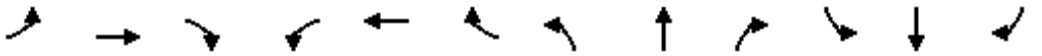
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	793	222	259	1100	0	0	0	0	275	201	376
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	11	8	8	8	11	12	14
Total Lost time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Lane Util. Factor		0.91		1.00	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00		1.00	1.00					1.00	0.99	0.99
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.97		1.00	1.00					1.00	0.94	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.99	1.00
Satd. Flow (prot)		4302		1589	3226					1419	2711	1355
Flt Permitted		1.00		0.19	1.00					0.95	0.99	1.00
Satd. Flow (perm)		4302		322	3226					1419	2711	1355
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	835	234	273	1158	0	0	0	0	289	212	396
RTOR Reduction (vph)	0	40	0	0	0	0	0	0	0	0	66	66
Lane Group Flow (vph)	0	1029	0	273	1158	0	0	0	0	234	387	144
Confl. Peds. (#/hr)	6		4	4		6	2					2
Heavy Vehicles (%)	0%	11%	7%	4%	6%	0%	0%	0%	0%	6%	4%	8%
Turn Type				pm+pt						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Actuated Green, G (s)		50.6		69.3	69.3					23.7	23.7	23.7
Effective Green, g (s)		50.6		69.3	69.3					23.7	23.7	23.7
Actuated g/C Ratio		0.48		0.66	0.66					0.23	0.23	0.23
Clearance Time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Vehicle Extension (s)		7.0		3.5	7.0					3.5	3.5	3.5
Lane Grp Cap (vph)		2073		384	2129					320	612	306
v/s Ratio Prot		0.24		c0.10	0.36							
v/s Ratio Perm				c0.37						c0.16	0.14	0.11
v/c Ratio		0.50		0.71	0.54					0.73	0.63	0.47
Uniform Delay, d1		18.5		9.8	9.5					37.7	36.7	35.2
Progression Factor		1.00		1.35	1.53					1.00	1.00	1.00
Incremental Delay, d2		0.9		3.8	0.6					8.6	2.2	1.4
Delay (s)		19.4		17.0	15.1					46.3	39.0	36.6
Level of Service		B		B	B					D	D	D
Approach Delay (s)		19.4			15.5			0.0			40.3	
Approach LOS		B			B			A			D	

Intersection Summary			
HCM Average Control Delay	23.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	97.9%	ICU Level of Service	F
Analysis Period (min)	15		

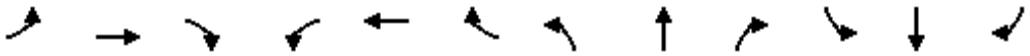
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	311	757	0	0	810	234	549	365	386	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	11	12	12	12	12	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0		6.0				
Lane Util. Factor	0.97	0.95			0.95	1.00		0.91				
Frpb, ped/bikes	1.00	1.00			1.00	0.99		1.00				
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00				
Frt	1.00	1.00			1.00	0.85		0.96				
Flt Protected	0.95	1.00			1.00	1.00		0.98				
Satd. Flow (prot)	2915	3138			3119	1449		4421				
Flt Permitted	0.20	1.00			1.00	1.00		0.98				
Satd. Flow (perm)	617	3138			3119	1449		4421				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	327	797	0	0	853	246	578	384	406	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	111	0	71	0	0	0	0
Lane Group Flow (vph)	327	797	0	0	853	135	0	1297	0	0	0	0
Confl. Peds. (#/hr)	4					4						
Heavy Vehicles (%)	10%	9%	0%	0%	6%	4%	4%	3%	5%	0%	0%	0%
Turn Type	pm+pt					Perm	Perm					
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8					
Actuated Green, G (s)	62.2	62.2			44.8	44.8		30.8				
Effective Green, g (s)	62.2	62.2			44.8	44.8		30.8				
Actuated g/C Ratio	0.59	0.59			0.43	0.43		0.29				
Clearance Time (s)	6.0	6.0			6.0	6.0		6.0				
Vehicle Extension (s)	3.5	7.0			7.0	7.0		5.0				
Lane Grp Cap (vph)	615	1859			1331	618		1297				
v/s Ratio Prot	c0.06	0.25			c0.27							
v/s Ratio Perm	0.26					0.09		0.29				
v/c Ratio	0.53	0.43			0.64	0.22		1.05dl				
Uniform Delay, d1	12.6	11.7			23.8	19.0		37.1				
Progression Factor	0.72	0.86			0.96	1.43		1.00				
Incremental Delay, d2	0.9	0.6			1.6	0.5		25.1				
Delay (s)	10.0	10.6			24.3	27.8		62.2				
Level of Service	B	B			C	C		E				
Approach Delay (s)		10.5			25.0			62.2			0.0	
Approach LOS		B			C			E			A	

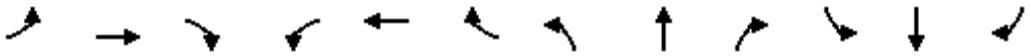
Intersection Summary			
HCM Average Control Delay	34.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	97.9%	ICU Level of Service	F
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	105	449	226	78	751	41	226	178	40	37	111	91
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	11	12	12	10	10	13	10	10	10
Total Lost time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.97		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1565	3061	1291	1601	3233		1446	3008		1544	2782	
Flt Permitted	0.14	1.00	1.00	0.48	1.00		0.52	1.00		0.61	1.00	
Satd. Flow (perm)	238	3061	1291	811	3233		789	3008		990	2782	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	111	473	238	82	791	43	238	187	42	39	117	96
RTOR Reduction (vph)	0	0	99	0	4	0	0	20	0	0	79	0
Lane Group Flow (vph)	111	473	139	82	830	0	238	209	0	39	134	0
Confl. Peds. (#/hr)	3		12	12		3	9		6	6		9
Heavy Vehicles (%)	2%	8%	5%	3%	5%	3%	10%	3%	2%	3%	7%	4%
Parking (#/hr)			0									
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	61.9	51.9	61.4	39.3	32.8		31.1	22.6		23.1	18.1	
Effective Green, g (s)	61.9	51.9	61.4	39.3	32.8		31.1	22.6		23.1	18.1	
Actuated g/C Ratio	0.59	0.49	0.58	0.37	0.31		0.30	0.22		0.22	0.17	
Clearance Time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0		3.0	7.0		3.0	7.0	
Lane Grp Cap (vph)	464	1513	755	352	1010		293	647		244	480	
v/s Ratio Prot	c0.06	c0.15	0.02	0.01	c0.26		c0.07	0.07		0.01	0.05	
v/s Ratio Perm	0.08		0.09	0.07			c0.17			0.03		
v/c Ratio	0.24	0.31	0.18	0.23	0.82		0.81	0.32		0.16	0.28	
Uniform Delay, d1	12.1	15.9	10.1	21.7	33.4		32.8	34.7		32.8	37.8	
Progression Factor	0.94	1.02	2.33	1.00	1.00		0.92	0.86		1.00	1.00	
Incremental Delay, d2	1.0	0.4	0.1	0.3	7.5		15.1	1.0		0.3	1.1	
Delay (s)	12.4	16.7	23.7	22.0	40.9		45.2	30.9		33.1	38.9	
Level of Service	B	B	C	C	D		D	C		C	D	
Approach Delay (s)		18.1			39.2			38.2			38.0	
Approach LOS		B			D			D			D	

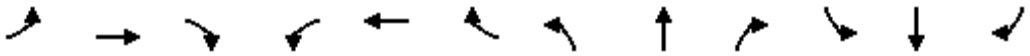
Intersection Summary			
HCM Average Control Delay	31.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	72.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	62	132	286	56	166	102	329	382	63	91	258	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	12	11	12	12	11	13	12	10	11	12
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.90		1.00	0.94		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1634	2807		1463	3015		1589	3257		1549	3135	
Flt Permitted	0.56	1.00		0.41	1.00		0.46	1.00		0.48	1.00	
Satd. Flow (perm)	966	2807		625	3015		772	3257		788	3135	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	65	139	301	59	175	107	346	402	66	96	272	57
RTOR Reduction (vph)	0	218	0	0	78	0	0	12	0	0	17	0
Lane Group Flow (vph)	65	222	0	59	204	0	346	456	0	96	312	0
Confl. Peds. (#/hr)	20					20	1		2	2		1
Heavy Vehicles (%)	4%	5%	6%	13%	6%	5%	4%	6%	5%	3%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	35.8	28.8		35.8	28.8		53.2	41.9		38.6	31.3	
Effective Green, g (s)	35.8	28.8		35.8	28.8		53.2	41.9		38.6	31.3	
Actuated g/C Ratio	0.34	0.27		0.34	0.27		0.51	0.40		0.37	0.30	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.5	7.0		3.5	7.0		3.5	7.0		3.5	7.0	
Lane Grp Cap (vph)	374	770		269	827		530	1300		343	935	
v/s Ratio Prot	0.01	c0.08		c0.01	0.07		c0.11	0.14		0.02	0.10	
v/s Ratio Perm	0.05			0.06			c0.22			0.08		
v/c Ratio	0.17	0.29		0.22	0.25		0.65	0.35		0.28	0.33	
Uniform Delay, d1	23.8	30.0		23.9	29.7		16.6	22.0		22.4	28.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.99	0.87	
Incremental Delay, d2	0.3	0.9		0.5	0.7		3.0	0.7		0.5	0.9	
Delay (s)	24.0	31.0		24.4	30.4		19.6	22.8		22.8	26.0	
Level of Service	C	C		C	C		B	C		C	C	
Approach Delay (s)		30.1			29.3			21.4			25.2	
Approach LOS		C			C			C			C	

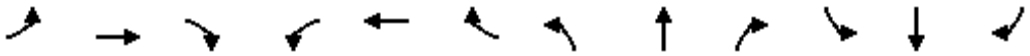
Intersection Summary			
HCM Average Control Delay	25.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	66.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	169	402	81	6	409	110	68	602	7	84	326	105
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	9	11	12	9	9	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.97		1.00	1.00		1.00	0.96	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		2890			2888		1436	3186		1451	2788	
Flt Permitted		0.58			0.95		0.41	1.00		0.28	1.00	
Satd. Flow (perm)		1692			2733		624	3186		421	2788	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	188	447	90	7	454	122	76	669	8	93	362	117
RTOR Reduction (vph)	0	17	0	0	37	0	0	1	0	0	48	0
Lane Group Flow (vph)	0	708	0	0	546	0	76	676	0	93	431	0
Confl. Peds. (#/hr)	9		11	11		9	11		14	14		11
Heavy Vehicles (%)	3%	6%	18%	50%	6%	6%	7%	3%	50%	6%	7%	2%
Turn Type	pm+pt			Perm			pm+pt			pm+pt		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			19.0		26.0	22.0		26.0	22.0	
Effective Green, g (s)		27.0			19.0		26.0	22.0		26.0	22.0	
Actuated g/C Ratio		0.42			0.29		0.40	0.34		0.40	0.34	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		777			799		300	1078		232	944	
v/s Ratio Prot		c0.06					0.02	c0.21		c0.02	0.15	
v/s Ratio Perm		c0.32			0.20		0.09			0.14		
v/c Ratio		0.91			0.68		0.25	0.63		0.40	0.46	
Uniform Delay, d1		17.9			20.3		12.4	18.1		12.9	16.8	
Progression Factor		1.00			1.57		0.92	0.71		1.00	1.00	
Incremental Delay, d2		16.8			2.3		1.8	2.5		5.1	1.6	
Delay (s)		34.6			34.3		13.2	15.3		18.0	18.4	
Level of Service		C			C		B	B		B	B	
Approach Delay (s)		34.6			34.3			15.1			18.3	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM Average Control Delay	25.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	71.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	52	117	48	70	132	13	38	661	81	10	378	45
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	0.99		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1665	1857		1612	1939		1658	3211		1138	3197	
Flt Permitted	0.66	1.00		0.65	1.00		0.50	1.00		0.31	1.00	
Satd. Flow (perm)	1161	1857		1102	1939		870	3211		366	3197	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	54	121	49	72	136	13	39	681	84	10	390	46
RTOR Reduction (vph)	0	23	0	0	5	0	0	15	0	0	14	0
Lane Group Flow (vph)	54	147	0	72	144	0	39	750	0	10	422	0
Confl. Peds. (#/hr)	10		16	16		10	4		6	6		4
Confl. Bikes (#/hr)			4	4								
Heavy Vehicles (%)	2%	4%	5%	5%	4%	0%	3%	4%	8%	50%	5%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.48	0.48		0.48	0.48	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	429	686		407	716		415	1531		175	1525	
v/s Ratio Prot		c0.08			0.07			c0.23			0.13	
v/s Ratio Perm	0.05			0.07			0.04			0.03		
v/c Ratio	0.13	0.21		0.18	0.20		0.09	0.49		0.06	0.28	
Uniform Delay, d1	13.6	14.0		13.8	14.0		9.3	11.6		9.1	10.2	
Progression Factor	1.00	1.00		1.72	1.77		1.00	1.00		0.49	0.49	
Incremental Delay, d2	0.6	0.7		0.7	0.4		0.4	1.1		0.5	0.4	
Delay (s)	14.2	14.8		24.4	25.2		9.8	12.7		5.0	5.4	
Level of Service	B	B		C	C		A	B		A	A	
Approach Delay (s)		14.6			24.9			12.6			5.4	
Approach LOS		B			C			B			A	

Intersection Summary				
HCM Average Control Delay	12.6	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.37			
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0	
Intersection Capacity Utilization	59.5%	ICU Level of Service	B	
Analysis Period (min)	15			

c Critical Lane Group

Movement	EBT	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR	SBR2
Lane Configurations												
Volume (vph)	427	164	570	14	3	14	3	47	10	0	2	4
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	12	12	16	12	12	16	12	12
Total Lost time (s)	5.0		5.0				4.0			4.0		
Lane Util. Factor	0.95		0.95				1.00			1.00		
Frpb, ped/bikes	1.00		1.00				1.00			0.99		
Flpb, ped/bikes	1.00		1.00				1.00			1.00		
Frt	1.00		1.00				0.91			0.95		
Flt Protected	1.00		0.99				0.99			0.97		
Satd. Flow (prot)	2956		2958				1732			1864		
Flt Permitted	1.00		0.67				0.94			0.87		
Satd. Flow (perm)	2956		1998				1650			1671		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	449	173	600	15	3	15	3	49	11	0	2	4
RTOR Reduction (vph)	0	0	2	0	0	0	38	0	0	3	0	0
Lane Group Flow (vph)	449	0	786	0	0	0	32	0	0	14	0	0
Confl. Peds. (#/hr)		7		6		3					3	
Confl. Bikes (#/hr)		1										
Heavy Vehicles (%)	8%	8%	6%	0%	0%	8%	0%	5%	0%	0%	0%	0%
Turn Type		custom			Perm	Perm			Perm			
Protected Phases	8	7	4				2			6		
Permitted Phases		4 7			2	2			6			
Actuated Green, G (s)	18.0		27.0				14.0			14.0		
Effective Green, g (s)	18.0		27.0				14.0			14.0		
Actuated g/C Ratio	0.28		0.42				0.22			0.22		
Clearance Time (s)	5.0		5.0				4.0			4.0		
Lane Grp Cap (vph)	819		919				355			360		
v/s Ratio Prot	0.15		c0.08									
v/s Ratio Perm			c0.28				c0.02			0.01		
v/c Ratio	0.55		0.85				0.09			0.04		
Uniform Delay, d1	20.0		17.2				20.4			20.2		
Progression Factor	1.33		0.75				1.00			1.00		
Incremental Delay, d2	1.4		9.6				0.5			0.2		
Delay (s)	28.2		22.4				20.9			20.4		
Level of Service	C		C				C			C		
Approach Delay (s)	28.2		22.4				20.9			20.4		
Approach LOS	C		C				C			C		

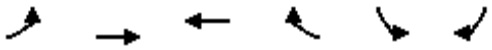
Intersection Summary			
HCM Average Control Delay	37.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	79.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



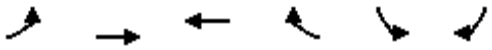
Movement	NEL	NER
Lane Configurations		
Volume (vph)	1	224
Ideal Flow (vphpl)	1800	1800
Lane Width	12	12
Total Lost time (s)	5.0	
Lane Util. Factor	1.00	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Frt	0.87	
Flt Protected	1.00	
Satd. Flow (prot)	1430	
Flt Permitted	1.00	
Satd. Flow (perm)	1430	
Peak-hour factor, PHF	0.95	0.95
Adj. Flow (vph)	1	236
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	237	0
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Heavy Vehicles (%)	0%	9%
Turn Type		
Protected Phases	3	
Permitted Phases		
Actuated Green, G (s)	10.0	
Effective Green, g (s)	10.0	
Actuated g/C Ratio	0.15	
Clearance Time (s)	5.0	
Lane Grp Cap (vph)	220	
v/s Ratio Prot	c0.17	
v/s Ratio Perm		
v/c Ratio	1.08	
Uniform Delay, d1	27.5	
Progression Factor	1.07	
Incremental Delay, d2	81.8	
Delay (s)	111.3	
Level of Service	F	
Approach Delay (s)	111.3	
Approach LOS	F	

Intersection Summary



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	194	581	594	66	41	156
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frt		1.00	0.99		1.00	0.85
Flt Protected		0.99	1.00		0.95	1.00
Satd. Flow (prot)		3217	3208		1629	1457
Flt Permitted		0.63	1.00		0.95	1.00
Satd. Flow (perm)		2042	3208		1629	1457
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	216	646	660	73	46	173
RTOR Reduction (vph)	0	0	13	0	0	128
Lane Group Flow (vph)	0	862	720	0	46	45
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		40.0	40.0		17.0	17.0
Effective Green, g (s)		40.0	40.0		17.0	17.0
Actuated g/C Ratio		0.62	0.62		0.26	0.26
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1257	1974		426	381
v/s Ratio Prot			0.22		0.03	
v/s Ratio Perm		c0.42				c0.03
v/c Ratio		0.69	0.36		0.11	0.12
Uniform Delay, d1		8.3	6.2		18.2	18.3
Progression Factor		1.43	1.23		0.93	0.87
Incremental Delay, d2		2.5	0.5		0.5	0.6
Delay (s)		14.3	8.1		17.6	16.5
Level of Service		B	A		B	B
Approach Delay (s)		14.3	8.1		16.7	
Approach LOS		B	A		B	

Intersection Summary			
HCM Average Control Delay	12.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	53	542	598	196	135	56
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	12	10	11	12	10	10
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frpb, ped/bikes		1.00	0.99		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.96		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2927	2906		1464	1373
Flt Permitted		0.83	1.00		0.95	1.00
Satd. Flow (perm)		2451	2906		1464	1373
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	56	571	629	206	142	59
RTOR Reduction (vph)	0	0	49	0	0	42
Lane Group Flow (vph)	0	627	786	0	142	17
Confl. Peds. (#/hr)	1			1		
Confl. Bikes (#/hr)	1			1		
Heavy Vehicles (%)	4%	9%	8%	12%	9%	4%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		38.0	38.0		19.0	19.0
Effective Green, g (s)		38.0	38.0		19.0	19.0
Actuated g/C Ratio		0.58	0.58		0.29	0.29
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1433	1699		428	401
v/s Ratio Prot			c0.27		c0.10	
v/s Ratio Perm		0.26				0.01
v/c Ratio		0.44	0.46		0.33	0.04
Uniform Delay, d1		7.5	7.7		18.0	16.5
Progression Factor		0.57	0.54		0.96	1.22
Incremental Delay, d2		0.7	0.7		2.0	0.2
Delay (s)		5.0	4.8		19.4	20.4
Level of Service		A	A		B	C
Approach Delay (s)		5.0	4.8		19.6	
Approach LOS		A	A		B	

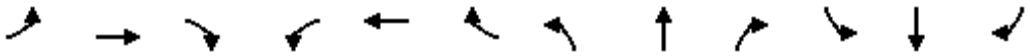
Intersection Summary			
HCM Average Control Delay	6.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



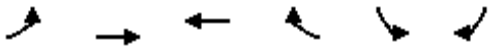
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	529	160	107	552	423	83
Ideal Flow (vphpl)	2300	1800	1800	2300	1800	1800
Lane Width	15	12	14	16	15	12
Total Lost time (s)	5.0		5.0	5.0	5.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	0.99		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.97		1.00	1.00	0.98	
Flt Protected	1.00		0.95	1.00	0.96	
Satd. Flow (prot)	2214		1769	2436	1817	
Flt Permitted	1.00		0.13	1.00	0.96	
Satd. Flow (perm)	2214		244	2436	1817	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	588	178	119	613	470	92
RTOR Reduction (vph)	17	0	0	0	11	0
Lane Group Flow (vph)	749	0	119	613	551	0
Confl. Peds. (#/hr)		4	4			8
Heavy Vehicles (%)	11%	7%	3%	7%	2%	2%
Turn Type			Perm			
Protected Phases	4			8	2	
Permitted Phases			8			
Actuated Green, G (s)	31.0		31.0	31.0	24.0	
Effective Green, g (s)	31.0		31.0	31.0	24.0	
Actuated g/C Ratio	0.48		0.48	0.48	0.37	
Clearance Time (s)	5.0		5.0	5.0	5.0	
Lane Grp Cap (vph)	1056		116	1162	671	
v/s Ratio Prot	0.34			0.25	c0.30	
v/s Ratio Perm			c0.49			
v/c Ratio	0.71		1.03	0.53	0.82	
Uniform Delay, d1	13.4		17.0	11.9	18.6	
Progression Factor	1.25		1.00	1.00	1.00	
Incremental Delay, d2	3.8		90.7	1.7	10.9	
Delay (s)	20.6		107.7	13.6	29.4	
Level of Service	C		F	B	C	
Approach Delay (s)	20.6			28.9	29.4	
Approach LOS	C			C	C	

Intersection Summary			
HCM Average Control Delay	25.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	80.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	590	89	258	629	9	72	0	187	1	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	15	13	11	11	12	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0	4.0	3.0	3.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00		0.95	
Satd. Flow (prot)	1881	3213	1422	1589	3138	1366		1642	1443		969	
Flt Permitted	0.39	1.00	1.00	0.35	1.00	1.00		0.76	1.00		0.70	
Satd. Flow (perm)	764	3213	1422	584	3138	1366		1309	1443		719	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	656	99	287	699	10	80	0	208	1	0	0
RTOR Reduction (vph)	0	0	40	0	0	2	0	0	182	0	0	0
Lane Group Flow (vph)	1	656	59	287	699	8	0	80	26	0	1	0
Heavy Vehicles (%)	0%	10%	4%	4%	9%	12%	18%	0%	6%	100%	0%	0%
Turn Type	Perm		Perm	custom		custom	Perm		Perm	Perm		
Protected Phases		4		3	3 8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)	50.8	50.8	50.8	66.4	66.4	66.4		10.6	10.6		10.6	
Effective Green, g (s)	50.8	50.8	50.8	66.4	66.4	66.4		10.6	10.6		10.6	
Actuated g/C Ratio	0.60	0.60	0.60	0.78	0.78	0.78		0.12	0.12		0.12	
Clearance Time (s)	4.0	4.0	4.0	3.0		4.0		4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0		3.0	
Lane Grp Cap (vph)	457	1920	850	605	2451	1067		163	180		90	
v/s Ratio Prot		0.20		c0.07	0.22							
v/s Ratio Perm	0.00		0.04	c0.30		0.01		c0.06	0.02		0.00	
v/c Ratio	0.00	0.34	0.07	0.47	0.29	0.01		0.49	0.14		0.01	
Uniform Delay, d1	6.9	8.6	7.2	3.0	2.6	2.0		34.7	33.2		32.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	0.0	0.5	0.2	0.6	0.1	0.0		2.3	0.4		0.0	
Delay (s)	6.9	9.1	7.3	3.6	2.7	2.1		37.0	33.5		32.7	
Level of Service	A	A	A	A	A	A		D	C		C	
Approach Delay (s)		8.9			2.9			34.5			32.7	
Approach LOS		A			A			C			C	

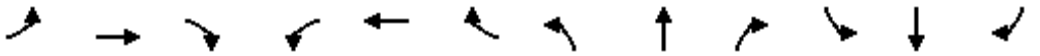
Intersection Summary			
HCM Average Control Delay	9.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	47.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	13	816	838	45	24	9
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	12	10	10
Total Lost time (s)		5.0	5.0		3.0	
Lane Util. Factor		0.95	0.95		1.00	
Frt		1.00	0.99		0.96	
Flt Protected		1.00	1.00		0.96	
Satd. Flow (prot)		3038	3017		1487	
Flt Permitted		0.93	1.00		0.96	
Satd. Flow (perm)		2835	3017		1487	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	14	907	931	50	27	10
RTOR Reduction (vph)	0	0	4	0	9	0
Lane Group Flow (vph)	0	921	977	0	28	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type	Perm					
Protected Phases		4	8 2 11		5	
Permitted Phases	4					
Actuated Green, G (s)		33.0	64.0		7.0	
Effective Green, g (s)		33.0	64.0		7.0	
Actuated g/C Ratio		0.37	0.71		0.08	
Clearance Time (s)		5.0			3.0	
Lane Grp Cap (vph)		1040	2145		116	
v/s Ratio Prot			c0.32		c0.02	
v/s Ratio Perm		c0.32				
v/c Ratio		0.89	0.46		0.24	
Uniform Delay, d1		26.7	5.6		39.0	
Progression Factor		1.00	0.00		1.00	
Incremental Delay, d2		11.0	0.2		4.8	
Delay (s)		37.8	0.3		43.8	
Level of Service		D	A		D	
Approach Delay (s)		37.8	0.3		43.8	
Approach LOS		D	A		D	

Intersection Summary			
HCM Average Control Delay	18.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	44.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	75	426	1	14	550	80	0	0	1	45	3	77
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12	12	11	12	11
Total Lost time (s)		4.0			4.0			3.0			3.0	3.0
Lane Util. Factor		1.00			0.95			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			0.92			1.00	0.96
Flpb, ped/bikes		1.00			1.00			1.00			0.98	1.00
Frt		1.00			0.98			0.86			1.00	0.85
Flt Protected		0.99			1.00			1.00			0.95	1.00
Satd. Flow (prot)		1729			3229			1432			1610	1282
Flt Permitted		0.81			0.95			1.00			0.93	1.00
Satd. Flow (perm)		1405			3069			1432			1569	1282
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	83	473	1	16	611	89	0	0	1	50	3	86
RTOR Reduction (vph)	0	0	0	0	13	0	0	1	0	0	0	58
Lane Group Flow (vph)	0	557	0	0	703	0	0	0	0	0	53	28
Confl. Peds. (#/hr)	33		13	13		33	29		13	13		29
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	4%	3%	0%	0%	4%	0%	0%	0%	0%	5%	0%	11%
Turn Type	Perm			Prot			Perm			pm+pt		Perm
Protected Phases		4		3	3 4			1		2	1 2	
Permitted Phases	4				3		1	1		1 2		1 2
Actuated Green, G (s)		31.0			45.0			9.0			25.0	28.0
Effective Green, g (s)		31.0			45.0			9.0			25.0	28.0
Actuated g/C Ratio		0.36			0.53			0.11			0.29	0.33
Clearance Time (s)		4.0						3.0				
Lane Grp Cap (vph)		512			1651			152			469	422
v/s Ratio Prot					c0.07			0.00			c0.02	
v/s Ratio Perm		c0.40			0.16						c0.01	0.02
v/c Ratio		1.09			0.43			0.00			0.11	0.07
Uniform Delay, d1		27.0			12.1			34.0			21.9	19.5
Progression Factor		1.00			1.73			1.00			1.00	1.00
Incremental Delay, d2		65.7			0.1			0.0			0.5	0.3
Delay (s)		92.7			21.0			34.0			22.4	19.9
Level of Service		F			C			C			C	B
Approach Delay (s)		92.7			21.0			34.0			20.8	
Approach LOS		F			C			C			C	

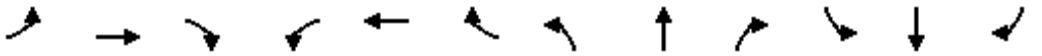
Intersection Summary			
HCM Average Control Delay	49.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	71.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	598	27	35	1014	58	34	17	48	23	22	87
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	16	10	10	16	8	15	8	8	14	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			0.98	
Flpb, ped/bikes	0.98	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.99			0.93			0.91	
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.99	
Satd. Flow (prot)	1557	3022		1587	3022			1787			1700	
Flt Permitted	0.17	1.00		0.37	1.00			0.89			0.95	
Satd. Flow (perm)	283	3022		610	3022			1613			1628	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	41	623	28	36	1056	60	35	18	50	24	23	91
RTOR Reduction (vph)	0	5	0	0	6	0	0	32	0	0	22	0
Lane Group Flow (vph)	41	646	0	36	1110	0	0	71	0	0	116	0
Confl. Peds. (#/hr)	145		16	16		145	17		19	19		17
Confl. Bikes (#/hr)	5					5			2	2		
Heavy Vehicles (%)	0%	5%	0%	0%	4%	2%	0%	0%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			22.0			22.0	
Effective Green, g (s)	34.0	34.0		34.0	34.0			23.0			23.0	
Actuated g/C Ratio	0.52	0.52		0.52	0.52			0.35			0.35	
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0			5.0	
Lane Grp Cap (vph)	148	1581		319	1581			571			576	
v/s Ratio Prot		0.21			c0.37							
v/s Ratio Perm	0.14			0.06				0.04			c0.07	
v/c Ratio	0.28	0.41		0.11	0.70			0.12			0.20	
Uniform Delay, d1	8.6	9.4		7.9	11.7			14.2			14.6	
Progression Factor	1.00	1.00		0.69	1.41			1.00			1.00	
Incremental Delay, d2	4.6	0.8		0.6	2.3			0.4			0.8	
Delay (s)	13.2	10.2		6.1	18.8			14.6			15.4	
Level of Service	B	B		A	B			B			B	
Approach Delay (s)		10.4			18.4			14.6			15.4	
Approach LOS		B			B			B			B	

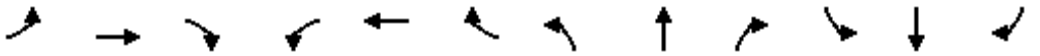
Intersection Summary			
HCM Average Control Delay	15.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	789	5	32	637	41	0	0	0	586	89	379
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00				0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.67				1.00	1.00	0.98
Flpb, ped/bikes	0.93	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	793	3379		1710	3226	514				3285	1731	1481
Flt Permitted	0.40	1.00		0.14	1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	331	3379		248	3226	514				3285	1731	1481
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	26	831	5	34	671	43	0	0	0	617	94	399
RTOR Reduction (vph)	0	0	0	0	0	19	0	0	0	0	0	166
Lane Group Flow (vph)	26	836	0	34	671	24	0	0	0	617	94	233
Confl. Peds. (#/hr)	350		4	4		350	8		6	6		8
Confl. Bikes (#/hr)	7		1	1		7						
Heavy Vehicles (%)	100%	1%	20%	0%	6%	100%	0%	0%	0%	1%	4%	1%
Turn Type	pm+pt			pm+pt		Perm				Split		Perm
Protected Phases	7	4		3	8					6	6	
Permitted Phases	4			8		8						6
Actuated Green, G (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Effective Green, g (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Actuated g/C Ratio	0.33	0.33		0.56	0.56	0.56				0.23	0.23	0.23
Clearance Time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Grp Cap (vph)	159	1118		634	1812	289				758	399	342
v/s Ratio Prot	0.02	c0.25		0.02	c0.21					c0.19	0.05	
v/s Ratio Perm	0.04			0.01		0.05						0.16
v/c Ratio	0.16	0.75		0.05	0.37	0.08				0.81	0.24	0.68
Uniform Delay, d1	31.6	38.7		15.2	15.8	13.1				47.4	40.7	45.6
Progression Factor	0.84	0.86		0.33	0.75	1.24				1.00	1.00	1.00
Incremental Delay, d2	2.1	4.4		0.1	0.4	0.4				9.3	1.4	10.5
Delay (s)	28.6	37.5		5.1	12.2	16.6				56.7	42.1	56.1
Level of Service	C	D		A	B	B				E	D	E
Approach Delay (s)		37.3			12.2			0.0			55.2	
Approach LOS		D			B			A			E	

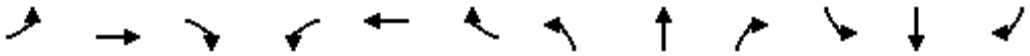
Intersection Summary			
HCM Average Control Delay	37.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	53.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	340	815	220	54	578	287	102	251	55	39	0	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.67		1.00	0.91	1.00		0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.97		1.00	1.00	0.85		1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (prot)	3285	3262		1710	3138	1018		3301	1359	855		734
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (perm)	3285	3262		1710	3138	1018		3301	1359	855		734
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	358	858	232	57	608	302	107	264	58	41	0	32
RTOR Reduction (vph)	0	18	0	0	0	228	0	0	42	0	0	30
Lane Group Flow (vph)	358	1072	0	57	608	74	0	371	16	41	0	2
Confl. Peds. (#/hr)	327		13	13		327	6		60	60		6
Confl. Bikes (#/hr)	6					6						
Heavy Vehicles (%)	1%	1%	0%	0%	9%	1%	0%	3%	2%	100%	0%	100%
Turn Type	Prot			Prot		Perm	Split		Perm	Prot		custom
Protected Phases	7	4		3	8		2	2		6		
Permitted Phases						8			2			6
Actuated Green, G (s)	44.0	68.0		8.0	32.0	32.0		28.0	28.0	8.0		8.0
Effective Green, g (s)	44.0	68.0		8.0	32.0	32.0		28.0	28.0	8.0		8.0
Actuated g/C Ratio	0.34	0.52		0.06	0.25	0.25		0.22	0.22	0.06		0.06
Clearance Time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	1112	1706		105	772	251		711	293	53		45
v/s Ratio Prot	0.11	c0.33		0.03	c0.19			c0.11		c0.05		
v/s Ratio Perm						0.07			0.01			0.00
v/c Ratio	0.32	0.63		0.54	0.79	0.30		0.52	0.06	0.77		0.04
Uniform Delay, d1	31.9	22.0		59.2	45.8	39.8		45.1	40.5	60.1		57.4
Progression Factor	0.95	0.16		1.00	1.00	1.00		0.94	0.99	1.00		1.00
Incremental Delay, d2	0.5	1.1		18.7	8.0	3.0		2.7	0.4	49.7		0.4
Delay (s)	30.7	4.7		77.9	53.8	42.8		45.2	40.3	109.9		57.8
Level of Service	C	A		E	D	D		D	D	F		E
Approach Delay (s)		11.1			51.8			44.5			87.0	
Approach LOS		B			D			D			F	

Intersection Summary			
HCM Average Control Delay	31.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	68.3%	ICU Level of Service	C
Analysis Period (min)	15		

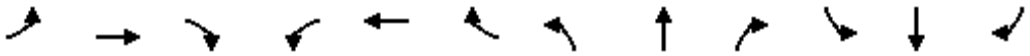
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	893	166	104	839	0	74	0	79	9	14	7
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	11	11	8	12	12	12	14	15	12
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes		0.99		1.00	1.00		1.00		0.98	1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00		0.97		1.00	0.99	1.00	
Frt		0.98		1.00	1.00		1.00		0.85	1.00	0.95	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		2997		1648	3149		1387		1451	1803	1857	
Flt Permitted		1.00		0.19	1.00		0.74		1.00	0.95	1.00	
Satd. Flow (perm)		2997		336	3149		1085		1451	1803	1857	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	930	173	108	874	0	77	0	82	9	15	7
RTOR Reduction (vph)	0	15	0	0	0	0	0	0	56	0	5	0
Lane Group Flow (vph)	0	1088	0	108	874	0	77	0	26	9	17	0
Confl. Peds. (#/hr)	67		19	19		67	38		12	12		38
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	2%	11%	0%	5%	0%	19%	0%	3%	0%	0%	0%
Turn Type				Perm			custom		custom	Perm		
Protected Phases		4			8						6	
Permitted Phases				8			2		2	6		
Actuated Green, G (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Effective Green, g (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Actuated g/C Ratio		0.60		0.60	0.60		0.32		0.32	0.32	0.32	
Clearance Time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)		1798		202	1889		347		464	577	594	
v/s Ratio Prot		c0.36			0.28						0.01	
v/s Ratio Perm				0.32			c0.07		0.02	0.00		
v/c Ratio		0.61		0.53	0.46		0.22		0.06	0.02	0.03	
Uniform Delay, d1		12.6		11.8	11.1		24.9		23.5	23.2	23.3	
Progression Factor		1.00		1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		1.5		9.8	0.8		1.5		0.2	0.0	0.1	
Delay (s)		14.1		21.6	11.9		26.4		23.8	23.3	23.4	
Level of Service		B		C	B		C		C	C	C	
Approach Delay (s)		14.1			13.0			25.0			23.4	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	14.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.3%	ICU Level of Service	B
Analysis Period (min)	15		

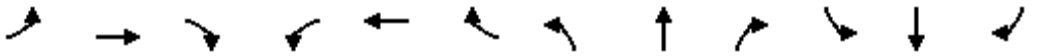
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	300	0	1230	209	662	0	0	787	490
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	12	10	10	12	12	11	12
Total Lost time (s)				4.0		5.0	3.0	4.0			4.0	
Lane Util. Factor				0.95		1.00	1.00	0.91			0.91	
Frpb, ped/bikes				1.00		1.00	1.00	1.00			0.98	
Flpb, ped/bikes				1.00		1.00	1.00	1.00			1.00	
Frt				1.00		0.85	1.00	1.00			0.94	
Flt Protected				0.95		1.00	0.95	1.00			1.00	
Satd. Flow (prot)				1540		1530	1535	4327			4269	
Flt Permitted				0.95		1.00	0.95	1.00			1.00	
Satd. Flow (perm)				1540		1530	1535	4327			4269	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	0	0	309	0	1268	215	682	0	0	811	505
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	309	0	1268	215	682	0	0	1316	0
Confl. Peds. (#/hr)	2					2	18		3	3		18
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%	4%	6%	0%	0%	4%	1%
Turn Type				Split		Prot	Prot					
Protected Phases				8	8	8	5	2			6	
Permitted Phases												
Actuated Green, G (s)				30.0		30.0	32.0	66.0			31.0	
Effective Green, g (s)				31.0		30.0	32.0	66.0			31.0	
Actuated g/C Ratio				0.30		0.29	0.30	0.63			0.30	
Clearance Time (s)				5.0		5.0	3.0	4.0			4.0	
Lane Grp Cap (vph)				455		437	468	2720			1260	
v/s Ratio Prot				0.20		c0.83	c0.14	0.16			c0.31	
v/s Ratio Perm												
v/c Ratio				0.68		2.90	0.46	0.25			1.17dr	
Uniform Delay, d1				32.6		37.5	29.5	8.6			37.0	
Progression Factor				1.00		1.00	0.63	2.07			1.00	
Incremental Delay, d2				7.9		862.0	2.7	0.2			37.8	
Delay (s)				40.6		899.5	21.4	18.0			74.8	
Level of Service				D		F	C	B			E	
Approach Delay (s)		0.0			731.2			18.8			74.8	
Approach LOS		A			F			B			E	

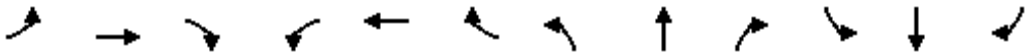
Intersection Summary			
HCM Average Control Delay	334.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.44		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	101.6%	ICU Level of Service	G
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	322	770	144	0	0	0	0	549	408	359	728	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	13	12	12	12	12	12	10	10	8	12	12	12
Total Lost time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Util. Factor	0.91	0.91						0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00						1.00	1.00	1.00	1.00	
Flpb, ped/bikes	0.99	1.00						1.00	1.00	1.00	1.00	
Frt	1.00	0.98						1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1509	3157						4368	2244	1598	4680	
Flt Permitted	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1509	3157						4368	2244	1598	4680	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	339	811	152	0	0	0	0	578	429	378	766	0
RTOR Reduction (vph)	0	13	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	305	984	0	0	0	0	0	578	429	378	766	0
Confl. Peds. (#/hr)	6		1	1		6	6					6
Heavy Vehicles (%)	6%	1%	0%	0%	0%	0%	0%	5%	4%	7%	5%	0%
Turn Type	Perm								Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Actuated Green, G (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Effective Green, g (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Actuated g/C Ratio	0.32	0.32						0.27	0.27	0.30	0.59	
Clearance Time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Grp Cap (vph)	489	1022						1165	598	472	2763	
v/s Ratio Prot								0.13		c0.24	0.16	
v/s Ratio Perm	0.20	0.31							c0.19			
v/c Ratio	0.62	0.96						0.50	0.72	0.80	0.28	
Uniform Delay, d1	30.1	34.9						32.5	34.9	34.2	10.5	
Progression Factor	1.00	1.00						1.14	1.14	0.87	0.23	
Incremental Delay, d2	5.9	20.5						1.4	6.5	5.4	0.1	
Delay (s)	36.0	55.4						38.4	46.2	35.0	2.5	
Level of Service	D	E						D	D	D	A	
Approach Delay (s)		50.9			0.0			41.7			13.3	
Approach LOS		D			A			D			B	

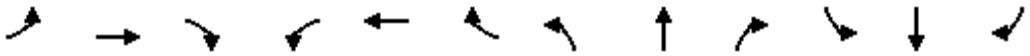
Intersection Summary			
HCM Average Control Delay	35.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	101.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	289	25	24	11	144	0	0	144	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	14	12	12	16	12
Total Lost time (s)				4.0	4.0		4.0	4.0			-3.0	
Lane Util. Factor				1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes				1.00	0.99		1.00	1.00			1.00	
Flpb, ped/bikes				1.00	1.00		1.00	1.00			1.00	
Frt				1.00	0.93		1.00	1.00			1.00	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1688	3133		1710	1846			1956	
Flt Permitted				0.95	1.00		0.55	1.00			1.00	
Satd. Flow (perm)				1688	3133		998	1846			1956	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	304	26	25	12	152	0	0	152	5
RTOR Reduction (vph)	0	0	0	0	17	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	304	34	0	12	152	0	0	156	0
Confl. Peds. (#/hr)	2		2	2		2			6	6		
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	0%	4%	0%	0%	4%	0%
Turn Type				Perm			pm+pt					
Protected Phases					8		7	2			6	
Permitted Phases				8			2					
Actuated Green, G (s)				27.0	27.0		50.0	50.0			40.0	
Effective Green, g (s)				27.0	27.0		50.0	50.0			46.0	
Actuated g/C Ratio				0.32	0.32		0.59	0.59			0.54	
Clearance Time (s)				4.0	4.0		4.0	4.0			3.0	
Lane Grp Cap (vph)				536	995		646	1086			1059	
v/s Ratio Prot					0.01		0.00	c0.08			c0.08	
v/s Ratio Perm				c0.18			0.01					
v/c Ratio				0.57	0.03		0.02	0.14			0.15	
Uniform Delay, d1				24.1	20.0		10.3	7.9			9.7	
Progression Factor				1.00	1.00		1.06	1.18			1.00	
Incremental Delay, d2				4.3	0.1		0.1	0.3			0.3	
Delay (s)				28.4	20.1		11.0	9.5			10.0	
Level of Service				C	C		B	A			B	
Approach Delay (s)		0.0			27.2			9.6			10.0	
Approach LOS		A			C			A			B	

Intersection Summary			
HCM Average Control Delay	19.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	1.0
Intersection Capacity Utilization	36.9%	ICU Level of Service	A
Analysis Period (min)	15		

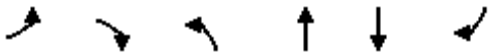
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	12	11	23	3	0	14	0	129	33	46	387	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	16	15	12	8	12	8	12	12	12	10	13	12
Total Lost time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.97			0.98			0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00			1.00		1.00	1.00	
Frt	1.00	0.90			0.89			0.97		1.00	1.00	
Flt Protected	0.95	1.00			0.99			1.00		0.95	1.00	
Satd. Flow (prot)	1935	1729			1550			1725		1590	1860	
Flt Permitted	0.75	1.00			0.98			1.00		0.61	1.00	
Satd. Flow (perm)	1517	1729			1533			1725		1027	1860	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	13	12	26	3	0	16	0	143	37	51	430	0
RTOR Reduction (vph)	0	18	0	0	11	0	0	11	0	0	0	0
Lane Group Flow (vph)	13	20	0	0	8	0	0	169	0	51	430	0
Confl. Peds. (#/hr)	1		11	11		1	1		10	10		1
Confl. Bikes (#/hr)			2	2			1		2	2		1
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Turn Type	Perm			Perm						pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Effective Green, g (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Actuated g/C Ratio	0.32	0.32			0.32			0.47		0.59	0.59	
Clearance Time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Grp Cap (vph)	482	549			487			812		650	1094	
v/s Ratio Prot		c0.01						0.10		0.01	c0.23	
v/s Ratio Perm	0.01				0.01					0.04		
v/c Ratio	0.03	0.04			0.02			0.21		0.08	0.39	
Uniform Delay, d1	20.0	20.0			19.9			13.2		8.5	9.4	
Progression Factor	1.00	1.00			1.00			1.00		0.96	0.85	
Incremental Delay, d2	0.1	0.1			0.1			0.6		0.2	1.0	
Delay (s)	20.1	20.1			20.0			13.8		8.3	9.0	
Level of Service	C	C			B			B		A	A	
Approach Delay (s)		20.1			20.0			13.8			8.9	
Approach LOS		C			B			B			A	

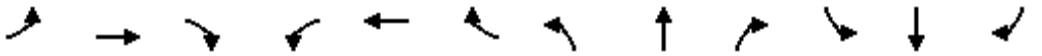
Intersection Summary			
HCM Average Control Delay	11.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	41.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



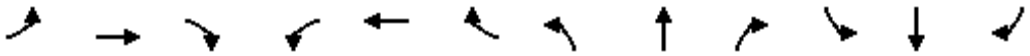
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	48	41	10	193	288	28
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	14	12	13	12	10	12
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.94		1.00	1.00	0.99	
Flt Protected	0.97		0.95	1.00	1.00	
Satd. Flow (prot)	1753		1765	1782	1657	
Flt Permitted	0.97		0.50	1.00	1.00	
Satd. Flow (perm)	1753		937	1782	1657	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	53	46	11	214	320	31
RTOR Reduction (vph)	31	0	0	0	5	0
Lane Group Flow (vph)	68	0	11	214	346	0
Confl. Peds. (#/hr)			2			2
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.0		36.0	36.0	36.0	
Effective Green, g (s)	21.0		36.0	36.0	36.0	
Actuated g/C Ratio	0.32		0.55	0.55	0.55	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	566		519	987	918	
v/s Ratio Prot	c0.04			0.12	c0.21	
v/s Ratio Perm			0.01			
v/c Ratio	0.12		0.02	0.22	0.38	
Uniform Delay, d1	15.5		6.5	7.4	8.2	
Progression Factor	1.00		0.46	0.61	1.43	
Incremental Delay, d2	0.4		0.1	0.5	1.0	
Delay (s)	15.9		3.1	5.0	12.7	
Level of Service	B		A	A	B	
Approach Delay (s)	15.9			4.9	12.7	
Approach LOS	B			A	B	

Intersection Summary			
HCM Average Control Delay	10.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	29.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



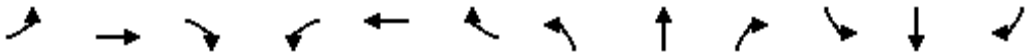
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	30	268	9	258	122	0	0	281	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	14	16	12	12	15	12	12	13	10
Total Lost time (s)					4.0		4.0	4.0			3.0	3.0
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Frt					1.00		1.00	1.00			1.00	0.85
Flt Protected					1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3773		1693	1678			1738	1428
Flt Permitted					1.00		0.49	1.00			1.00	1.00
Satd. Flow (perm)					3773		875	1678			1738	1428
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	32	282	9	272	128	0	0	296	18
RTOR Reduction (vph)	0	0	0	0	2	0	0	0	0	0	0	10
Lane Group Flow (vph)	0	0	0	0	321	0	272	128	0	0	296	8
Confl. Peds. (#/hr)	1					1			5	5		
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	1%	18%	0%	0%	7%	0%
Turn Type				Split			pm+pt					Perm
Protected Phases				8	8		7	2			6	
Permitted Phases							2					6
Actuated Green, G (s)					26.0		51.0	51.0			38.0	38.0
Effective Green, g (s)					26.0		51.0	51.0			38.0	38.0
Actuated g/C Ratio					0.31		0.60	0.60			0.45	0.45
Clearance Time (s)					4.0		4.0	4.0			3.0	3.0
Lane Grp Cap (vph)					1154		621	1007			777	638
v/s Ratio Prot					c0.09		c0.05	0.08			0.17	
v/s Ratio Perm							c0.21					0.01
v/c Ratio					0.28		0.44	0.13			0.38	0.01
Uniform Delay, d1					22.4		12.9	7.4			15.7	13.1
Progression Factor					1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2					0.6		2.2	0.3			1.4	0.0
Delay (s)					23.0		15.2	7.6			17.1	13.1
Level of Service					C		B	A			B	B
Approach Delay (s)		0.0			23.0			12.8			16.9	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM Average Control Delay	17.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	95	94	38	133	203	30	59	702	44
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	15	12	12	12	12	12	13	12
Total Lost time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.98		1.00	0.98		1.00	0.99	
Flt Protected					0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1896		1710	3286		1707	3467	
Flt Permitted					0.98		0.25	1.00		0.59	1.00	
Satd. Flow (perm)					1896		447	3286		1063	3467	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	106	104	42	148	226	33	66	780	49
RTOR Reduction (vph)	0	0	0	0	10	0	0	15	0	0	6	0
Lane Group Flow (vph)	0	0	0	0	242	0	148	244	0	66	823	0
Confl. Peds. (#/hr)							5		5	5		5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	1%	0%
Turn Type				Split			pm+pt			pm+pt		
Protected Phases				8	8		5	2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)					23.0		41.0	34.0		41.0	34.0	
Effective Green, g (s)					23.0		41.0	34.0		41.0	34.0	
Actuated g/C Ratio					0.31		0.55	0.45		0.55	0.45	
Clearance Time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Grp Cap (vph)					581		362	1490		641	1572	
v/s Ratio Prot					c0.13		c0.04	0.07		0.01	c0.24	
v/s Ratio Perm							0.19			0.05		
v/c Ratio					0.42		0.41	0.16		0.10	0.52	
Uniform Delay, d1					20.7		16.4	12.1		8.2	14.7	
Progression Factor					1.00		0.83	0.80		1.00	1.00	
Incremental Delay, d2					2.2		3.4	0.2		0.3	1.3	
Delay (s)					22.9		17.0	9.9		8.5	15.9	
Level of Service					C		B	A		A	B	
Approach Delay (s)		0.0			22.9			12.5			15.4	
Approach LOS		A			C			B			B	

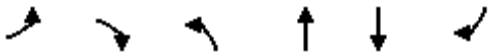
Intersection Summary			
HCM Average Control Delay	15.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	53.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	32	49	12	8	63	63	5	271	20	159	588	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	16	12	12	10	11	12	12	11	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.94		1.00	0.99		1.00	0.99	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1967			1654		1595	3178		1704	3231	
Flt Permitted		0.88			0.99		0.34	1.00		0.56	1.00	
Satd. Flow (perm)		1765			1638		571	3178		998	3231	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	36	54	13	9	70	70	6	301	22	177	653	56
RTOR Reduction (vph)	0	7	0	0	43	0	0	7	0	0	8	0
Lane Group Flow (vph)	0	96	0	0	106	0	6	316	0	177	701	0
Confl. Peds. (#/hr)	2					2	1		6	6		1
Confl. Bikes (#/hr)			1	1			3					3
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	0%	3%	0%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Effective Green, g (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Actuated g/C Ratio		0.33			0.33		0.56	0.56		0.56	0.56	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		588			546		320	1780		559	1809	
v/s Ratio Prot								0.10			c0.22	
v/s Ratio Perm		0.05			c0.06		0.01			0.18		
v/c Ratio		0.16			0.19		0.02	0.18		0.32	0.39	
Uniform Delay, d1		17.6			17.8		7.3	8.1		8.8	9.3	
Progression Factor		1.00			1.00		1.00	1.00		0.27	0.25	
Incremental Delay, d2		0.6			0.8		0.1	0.2		1.3	0.5	
Delay (s)		18.2			18.6		7.4	8.3		3.7	2.9	
Level of Service		B			B		A	A		A	A	
Approach Delay (s)		18.2			18.6			8.3			3.0	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	6.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	49.2%	ICU Level of Service	A
Analysis Period (min)	15		

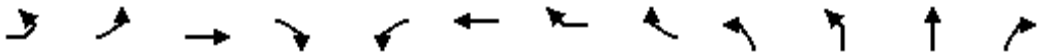
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	37	192	67	249	587	81
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	39	202	71	262	618	85

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	241	158	175	412	291
Volume Left (vph)	39	71	0	0	0
Volume Right (vph)	202	0	0	0	85
Hadj (s)	-0.42	0.27	0.05	0.05	-0.15
Departure Headway (s)	5.6	6.4	6.2	5.8	5.6
Degree Utilization, x	0.38	0.28	0.30	0.66	0.45
Capacity (veh/h)	600	538	557	612	633
Control Delay (s)	12.0	10.7	10.6	18.0	11.8
Approach Delay (s)	12.0	10.7		15.5	
Approach LOS	B	B		C	

Intersection Summary			
Delay	13.6		
HCM Level of Service	B		
Intersection Capacity Utilization	53.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	32	35	371	18	18	385	66	74	55	68	354	31
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	0.95	
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.93			1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Frt		1.00	1.00	0.85	1.00	1.00	0.85			1.00	0.99	
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	
Satd. Flow (prot)		1611	1731	1530	1710	1731	1421			1710	3253	
Flt Permitted		0.14	1.00	1.00	0.52	1.00	1.00			0.14	1.00	
Satd. Flow (perm)		238	1731	1530	937	1731	1421			257	3253	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	36	39	412	20	20	428	73	82	61	76	393	34
RTOR Reduction (vph)	0	0	0	12	0	0	39	0	0	0	6	0
Lane Group Flow (vph)	0	75	412	8	20	428	116	0	0	137	421	0
Confl. Peds. (#/hr)		25					25					3
Heavy Vehicles (%)	6%	6%	4%	0%	0%	4%	0%	0%	0%	0%	4%	0%
Turn Type	Perm	pm+pt		Perm	Perm		Perm		Perm	Perm		
Protected Phases		7	4			8					2	
Permitted Phases	4	4		4	8		8		2	2		
Actuated Green, G (s)		44.0	44.0	44.0	25.0	25.0	25.0			28.0	28.0	
Effective Green, g (s)		44.0	44.0	44.0	25.0	25.0	25.0			28.0	28.0	
Actuated g/C Ratio		0.42	0.42	0.42	0.24	0.24	0.24			0.27	0.27	
Clearance Time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Grp Cap (vph)		302	725	641	223	412	338			69	867	
v/s Ratio Prot		0.04	c0.24			c0.25					0.13	
v/s Ratio Perm		0.07		0.01	0.02		0.08			c0.53		
v/c Ratio		0.25	0.57	0.01	0.09	1.04	0.34			1.99	0.49	
Uniform Delay, d1		21.6	23.3	17.8	31.1	40.0	33.2			38.5	32.4	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Incremental Delay, d2		2.0	3.2	0.0	0.8	54.8	2.8			491.0	1.9	
Delay (s)		23.5	26.5	17.9	31.9	94.8	36.0			529.5	34.4	
Level of Service		C	C	B	C	F	D			F	C	
Approach Delay (s)			25.7			77.6					154.6	
Approach LOS			C			E					F	

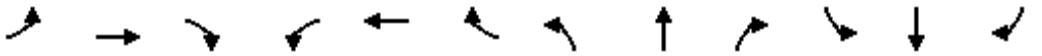
Intersection Summary			
HCM Average Control Delay	145.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.42		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	102.6%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations								
Volume (vph)	105	571	82	103	4	112	607	197
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5				4.5	4.5	
Lane Util. Factor	1.00	0.95				1.00	0.88	
Frpb, ped/bikes	1.00	1.00				1.00	1.00	
Flpb, ped/bikes	1.00	1.00				1.00	1.00	
Frt	1.00	0.96				1.00	0.85	
Flt Protected	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1705	3246				1710	2633	
Flt Permitted	0.38	1.00				0.95	1.00	
Satd. Flow (perm)	674	3246				1710	2633	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	117	634	91	114	4	124	674	219
RTOR Reduction (vph)	0	12	0	0	0	0	26	0
Lane Group Flow (vph)	117	827	0	0	0	128	867	0
Confl. Peds. (#/hr)	3							
Heavy Vehicles (%)	0%	2%	0%	0%	0%	0%	3%	0%
Turn Type	Perm				Split		Perm	
Protected Phases		6			9	9		
Permitted Phases	6						9	
Actuated Green, G (s)	27.5	27.5				20.5	20.5	
Effective Green, g (s)	27.5	27.5				20.5	20.5	
Actuated g/C Ratio	0.26	0.26				0.20	0.20	
Clearance Time (s)	4.5	4.5				4.5	4.5	
Lane Grp Cap (vph)	177	850				334	514	
v/s Ratio Prot		0.25				0.07		
v/s Ratio Perm	0.17						c0.33	
v/c Ratio	0.66	0.97				0.38	1.69	
Uniform Delay, d1	34.6	38.4				36.8	42.2	
Progression Factor	1.00	1.00				1.00	1.00	
Incremental Delay, d2	17.8	25.0				3.3	317.6	
Delay (s)	52.4	63.4				40.1	359.9	
Level of Service	D	E				D	F	
Approach Delay (s)		62.0				319.8		
Approach LOS		E				F		

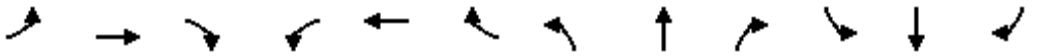
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	65	590	0	0	451	50	85	52	17	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	11	11	16	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.99			0.98				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		1681			1954			1843				
Flt Permitted		0.91			1.00			0.97				
Satd. Flow (perm)		1544			1954			1843				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	68	621	0	0	475	53	89	55	18	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	689	0	0	528	0	0	162	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		40.0			40.0			17.0				
Effective Green, g (s)		40.0			40.0			17.0				
Actuated g/C Ratio		0.62			0.62			0.26				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		950			1202			482				
v/s Ratio Prot					0.27							
v/s Ratio Perm		c0.45						0.09				
v/c Ratio		0.73			0.44			0.34				
Uniform Delay, d1		8.7			6.6			19.4				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		4.8			1.2			1.9				
Delay (s)		13.5			7.8			21.3				
Level of Service		B			A			C				
Approach Delay (s)		13.5			7.8			21.3			0.0	
Approach LOS		B			A			C			A	

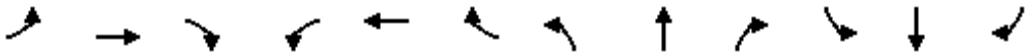
Intersection Summary			
HCM Average Control Delay	12.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	83.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	71	326	152	117	307	125	105	639	84	137	759	94
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	9	9	10	9
Total Lost time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.96	1.00	1.00	0.95	1.00	1.00	0.94
Flpb, ped/bikes		1.00	1.00		0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1981	1434		1945	1444	1546	3040	1296	1506	3069	1252
Flt Permitted		0.43	1.00		0.73	1.00	0.23	1.00	1.00	0.29	1.00	1.00
Satd. Flow (perm)		860	1434		1445	1444	373	3040	1296	455	3069	1252
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	75	343	160	123	323	132	111	673	88	144	799	99
RTOR Reduction (vph)	0	0	94	0	0	94	0	0	53	0	0	49
Lane Group Flow (vph)	0	418	66	0	446	38	111	673	35	144	799	50
Confl. Peds. (#/hr)	24		45	45		24	36		24	24		36
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	2%	2%	2%	2%	3%	2%	3%	5%	1%	2%	4%	3%
Turn Type	pm+pt		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		43.0	43.0		30.0	30.0	50.6	42.3	42.3	51.4	42.7	42.7
Effective Green, g (s)		43.0	43.0		30.0	30.0	50.6	42.3	42.3	51.4	42.7	42.7
Actuated g/C Ratio		0.41	0.41		0.29	0.29	0.48	0.40	0.40	0.49	0.41	0.41
Clearance Time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		459	587		413	413	272	1225	522	310	1248	509
v/s Ratio Prot		c0.09					0.03	0.22		c0.04	c0.26	
v/s Ratio Perm		0.29	0.05		c0.31	0.03	0.16		0.03	0.19		0.04
v/c Ratio		0.91	0.11		1.08	0.09	0.41	0.55	0.07	0.46	0.64	0.10
Uniform Delay, d1		29.2	19.2		37.5	27.5	16.4	24.0	19.2	16.0	25.0	19.2
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.75	1.54	2.62
Incremental Delay, d2		24.7	0.4		67.4	0.4	1.0	1.8	0.3	1.1	2.4	0.4
Delay (s)		53.9	19.6		104.9	27.9	17.4	25.8	19.5	29.0	41.0	50.9
Level of Service		D	B		F	C	B	C	B	C	D	D
Approach Delay (s)		44.4			87.3			24.1			40.2	
Approach LOS		D			F			C			D	

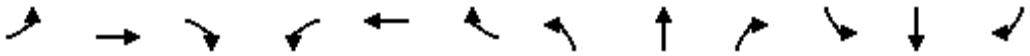
Intersection Summary			
HCM Average Control Delay	45.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	87.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	85	399	85	94	444	94	51	61	69	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		0.98			0.98			0.95				
Flt Protected		0.99			0.99			0.99				
Satd. Flow (prot)		1643			1643			1798				
Flt Permitted		0.84			0.85			0.99				
Satd. Flow (perm)		1392			1406			1798				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	89	420	89	99	467	99	54	64	73	0	0	0
RTOR Reduction (vph)	0	10	0	0	10	0	0	34	0	0	0	0
Lane Group Flow (vph)	0	588	0	0	655	0	0	157	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		40.0			40.0			17.0				
Effective Green, g (s)		40.0			40.0			17.0				
Actuated g/C Ratio		0.62			0.62			0.26				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		857			865			470				
v/s Ratio Prot												
v/s Ratio Perm		0.42			c0.47			0.09				
v/c Ratio		0.69			0.76			0.33				
Uniform Delay, d1		8.3			9.0			19.4				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		4.5			6.2			1.9				
Delay (s)		12.8			15.2			21.3				
Level of Service		B			B			C				
Approach Delay (s)		12.8			15.2			21.3			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM Average Control Delay	15.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	65.8%	ICU Level of Service	C
Analysis Period (min)	15		

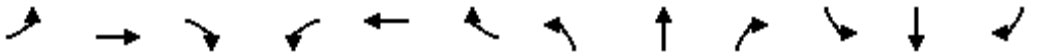
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	21	439	73	76	511	37	37	76	72	54	238	47
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	11	12	12	15	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.96		1.00	0.96		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		0.99	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.98	
Flt Protected		1.00	1.00		0.99	1.00		0.98	1.00		0.99	
Satd. Flow (prot)		1687	1382		1712	1417		1686	1455		1887	
Flt Permitted		0.97	1.00		0.89	1.00		0.84	1.00		0.94	
Satd. Flow (perm)		1634	1382		1533	1417		1432	1455		1779	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	22	462	77	80	538	39	39	80	76	57	251	49
RTOR Reduction (vph)	0	0	33	0	0	12	0	0	52	0	7	0
Lane Group Flow (vph)	0	484	44	0	618	27	0	119	24	0	350	0
Confl. Peds. (#/hr)	25		19	19		25	36		30	30		36
Confl. Bikes (#/hr)	1		2	2		1	3					3
Heavy Vehicles (%)	0%	3%	3%	0%	1%	0%	0%	1%	1%	0%	1%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Effective Green, g (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.32	0.32		0.32	
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Grp Cap (vph)		937	792		879	812		458	466		569	
v/s Ratio Prot												
v/s Ratio Perm		0.30	0.03		c0.40	0.02		0.08	0.02		c0.20	
v/c Ratio		0.52	0.06		0.70	0.03		0.26	0.05		0.61	
Uniform Delay, d1		9.7	7.1		11.4	7.0		18.9	17.6		21.6	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		2.0	0.1		4.7	0.1		1.4	0.2		4.9	
Delay (s)		11.7	7.2		16.1	7.0		20.3	17.8		26.5	
Level of Service		B	A		B	A		C	B		C	
Approach Delay (s)		11.1			15.6			19.3			26.5	
Approach LOS		B			B			B			C	

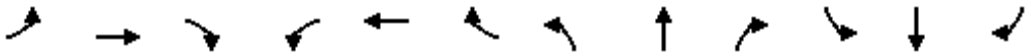
Intersection Summary			
HCM Average Control Delay	16.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	94.9%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	57	443	30	45	525	54	44	165	55	123	210	32
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	11	16	8	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	0.98	1.00		1.00	1.00		0.99	1.00	1.00	0.99	1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1531	3066		1651	3728		1585	1663	1370	1568	1680	1397
Flt Permitted	0.38	1.00		0.44	1.00		0.59	1.00	1.00	0.64	1.00	1.00
Satd. Flow (perm)	604	3066		769	3728		977	1663	1370	1061	1680	1397
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	60	466	32	47	553	57	46	174	58	129	221	34
RTOR Reduction (vph)	0	8	0	0	12	0	0	0	35	0	0	20
Lane Group Flow (vph)	60	490	0	47	598	0	46	174	23	129	221	14
Confl. Peds. (#/hr)	51		3	3		51	13		13	13		13
Heavy Vehicles (%)	2%	3%	3%	0%	2%	0%	0%	1%	2%	1%	0%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Effective Green, g (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	288	1462		367	1778		391	665	548	424	672	559
v/s Ratio Prot		0.16			c0.16			0.10			c0.13	
v/s Ratio Perm	0.10			0.06			0.05		0.02	0.12		0.01
v/c Ratio	0.21	0.34		0.13	0.34		0.12	0.26	0.04	0.30	0.33	0.02
Uniform Delay, d1	9.9	10.6		9.5	10.6		12.3	13.1	11.9	13.3	13.5	11.8
Progression Factor	1.00	1.00		1.00	1.00		0.86	0.91	0.80	0.55	0.56	0.25
Incremental Delay, d2	1.6	0.6		0.7	0.5		0.6	1.0	0.1	1.8	1.3	0.1
Delay (s)	11.5	11.2		10.2	11.1		11.2	12.9	9.6	9.1	8.8	3.0
Level of Service	B	B		B	B		B	B	A	A	A	A
Approach Delay (s)		11.2			11.0			11.9			8.4	
Approach LOS		B			B			B			A	

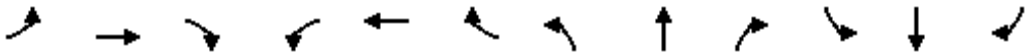
Intersection Summary			
HCM Average Control Delay	10.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	389	71	73	387	67	55	180	64	89	245	77
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	11	10	11	11	10	11	11	10	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	0.96	1.00		0.95	1.00		0.99	1.00		0.95	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.96		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1327	3143		1513	3126		1579	2919		1451	3002	
Flt Permitted	0.45	1.00		0.45	1.00		0.54	1.00		0.60	1.00	
Satd. Flow (perm)	634	3143		717	3126		895	2919		910	3002	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	52	401	73	75	399	69	57	186	66	92	253	79
RTOR Reduction (vph)	0	0	0	0	0	0	0	39	0	0	39	0
Lane Group Flow (vph)	52	474	0	75	468	0	57	213	0	92	293	0
Confl. Peds. (#/hr)	112		99	99		112	23		53	53		23
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	16%	1%	0%	0%	1%	9%	0%	8%	2%	5%	5%	7%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.41	0.41		0.41	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	304	1509		344	1500		370	1207		376	1241	
v/s Ratio Prot		c0.15			0.15			0.07			0.10	
v/s Ratio Perm	0.08			0.10			0.06			c0.10		
v/c Ratio	0.17	0.31		0.22	0.31		0.15	0.18		0.24	0.24	
Uniform Delay, d1	11.0	11.9		11.3	11.9		13.8	13.9		14.4	14.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.2	0.5		1.5	0.5		0.9	0.3		1.5	0.4	
Delay (s)	12.3	12.5		12.8	12.5		14.7	14.2		15.9	14.7	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		12.5			12.5			14.3			15.0	
Approach LOS		B			B			B			B	

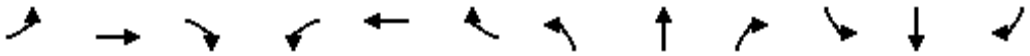
Intersection Summary			
HCM Average Control Delay	13.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	88	431	58	32	519	48	85	203	60	76	473	106
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	8	16	12	9	10	10	9	10	10
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1595	1654		1369	1973		1534	2998		1535	3016	
Flt Permitted	0.24	1.00		0.32	1.00		0.28	1.00		0.58	1.00	
Satd. Flow (perm)	411	1654		464	1973		457	2998		939	3016	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	93	454	61	34	546	51	89	214	63	80	498	112
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	93	515	0	34	597	0	89	277	0	80	610	0
Confl. Peds. (#/hr)	21		95	95		21	36		8	8		36
Confl. Bikes (#/hr)	2		3	3		2	2					2
Heavy Vehicles (%)	0%	2%	0%	7%	2%	0%	0%	3%	0%	0%	2%	1%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	44.0	39.4		40.8	37.8		26.6	21.8		26.6	21.8	
Effective Green, g (s)	44.0	37.4		40.8	35.8		26.6	19.8		26.6	19.8	
Actuated g/C Ratio	0.52	0.44		0.48	0.42		0.31	0.23		0.31	0.23	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	277	728		255	831		204	698		328	703	
v/s Ratio Prot	c0.02	c0.31		0.00	0.30		c0.02	0.09		0.01	c0.20	
v/s Ratio Perm	0.16			0.06			0.11			0.06		
v/c Ratio	0.34	0.71		0.13	0.72		0.44	0.40		0.24	0.87	
Uniform Delay, d1	23.0	19.4		19.6	20.4		29.1	27.6		21.9	31.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.7	5.7		0.2	5.3		1.5	1.7		0.4	13.7	
Delay (s)	23.7	25.1		19.8	25.7		30.6	29.2		22.3	45.0	
Level of Service	C	C		B	C		C	C		C	D	
Approach Delay (s)		24.9			25.4			29.6			42.4	
Approach LOS		C			C			C			D	

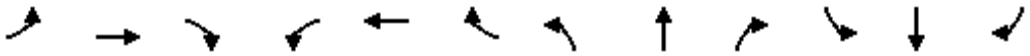
Intersection Summary			
HCM Average Control Delay	31.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	78.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	73	389	63	117	508	118	66	158	58	127	367	81
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	11	11	11	11	12	12	10	10	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		0.99	1.00	
Frt		0.98			0.98		1.00	0.96		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3682			3131		1652	3236		1549	3028	
Flt Permitted		0.74			0.75		0.44	1.00		0.61	1.00	
Satd. Flow (perm)		2746			2356		769	3236		995	3028	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	77	409	66	123	535	124	69	166	61	134	386	85
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	552	0	0	782	0	69	227	0	134	471	0
Confl. Peds. (#/hr)	23		30	30		23	1		20	20		1
Confl. Bikes (#/hr)	3					3						
Heavy Vehicles (%)	0%	3%	0%	2%	2%	0%	0%	1%	0%	2%	2%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.0			33.0		32.0	32.0		32.0	32.0	
Effective Green, g (s)		34.0			34.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio		0.45			0.45		0.44	0.44		0.44	0.44	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		1245			1068		338	1424		438	1332	
v/s Ratio Prot								0.07			c0.16	
v/s Ratio Perm		0.20			c0.33		0.09			0.13		
v/c Ratio		0.44			0.73		0.20	0.16		0.31	0.35	
Uniform Delay, d1		14.0			16.8		12.9	12.6		13.6	13.9	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.1			4.4		1.4	0.2		1.8	0.7	
Delay (s)		15.2			21.2		14.3	12.9		15.4	14.7	
Level of Service		B			C		B	B		B	B	
Approach Delay (s)		15.2			21.2			13.2			14.8	
Approach LOS		B			C			B			B	

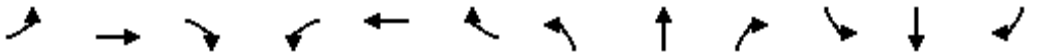
Intersection Summary			
HCM Average Control Delay	16.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	72.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	98	867	6	20	583	249	1	1	9	213	1	80
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	12	12	12	12	12	13	13	13
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	1.00		1.00	1.00	0.85		0.89			0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00		1.00			0.97	
Satd. Flow (prot)	1605	3207		1660	3320	1485		1548			3176	
Flt Permitted	0.40	1.00		0.27	1.00	1.00		0.98			0.77	
Satd. Flow (perm)	680	3207		475	3320	1485		1520			2537	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	103	913	6	21	614	262	1	1	9	224	1	84
RTOR Reduction (vph)	0	0	0	0	0	96	0	7	0	0	53	0
Lane Group Flow (vph)	103	919	0	21	614	166	0	4	0	0	256	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	46.1	46.1		46.1	46.1	46.1		18.6			18.6	
Effective Green, g (s)	46.1	46.1		46.1	46.1	46.1		18.6			18.6	
Actuated g/C Ratio	0.63	0.63		0.63	0.63	0.63		0.26			0.26	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		8.0			8.0	
Lane Grp Cap (vph)	431	2034		301	2105	942		389			649	
v/s Ratio Prot		c0.29			0.18							
v/s Ratio Perm	0.15			0.04		0.11		0.00			c0.10	
v/c Ratio	0.24	0.45		0.07	0.29	0.18		0.01			0.39	
Uniform Delay, d1	5.7	6.8		5.1	6.0	5.5		20.2			22.4	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	1.3	0.7		0.4	0.4	0.4		0.0			1.7	
Delay (s)	7.0	7.5		5.5	6.3	5.9		20.2			24.1	
Level of Service	A	A		A	A	A		C			C	
Approach Delay (s)		7.5			6.2			20.2			24.1	
Approach LOS		A			A			C			C	

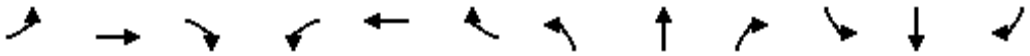
Intersection Summary			
HCM Average Control Delay	9.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	72.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	131	228	122	94	163	55	134	907	90	123	825	94
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	9	12	10	10	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.95		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1560	1506		1563	1586		1493	3069	1337	1523	3099	1318
Flt Permitted	0.45	1.00		0.21	1.00		0.20	1.00	1.00	0.16	1.00	1.00
Satd. Flow (perm)	746	1506		348	1586		317	3069	1337	263	3099	1318
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	138	240	128	99	172	58	141	955	95	129	868	99
RTOR Reduction (vph)	0	22	0	0	14	0	0	0	40	0	0	46
Lane Group Flow (vph)	138	346	0	99	216	0	141	955	55	129	868	53
Confl. Peds. (#/hr)	10		13	13		10	18		7	7		18
Confl. Bikes (#/hr)	2					2	2		1	1		2
Heavy Vehicles (%)	2%	1%	1%	2%	1%	2%	3%	4%	0%	1%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	28.0	21.0		28.0	21.0		42.0	35.0	35.0	42.0	35.0	35.0
Effective Green, g (s)	26.0	22.0		26.0	22.0		40.0	35.0	35.0	40.0	35.0	35.0
Actuated g/C Ratio	0.31	0.26		0.31	0.26		0.47	0.41	0.41	0.47	0.41	0.41
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	286	390		192	410		232	1264	551	213	1276	543
v/s Ratio Prot	0.03	c0.23		c0.04	0.14		c0.04	c0.31		0.04	0.28	
v/s Ratio Perm	0.11			0.12			0.24		0.04	0.24		0.04
v/c Ratio	0.48	0.89		0.52	0.53		0.61	0.76	0.10	0.61	0.68	0.10
Uniform Delay, d1	22.6	30.3		22.8	27.0		14.5	21.3	15.3	14.9	20.4	15.3
Progression Factor	1.00	1.00		1.00	1.00		0.64	0.79	0.52	1.00	1.00	1.00
Incremental Delay, d2	5.7	24.4		9.6	4.8		10.3	3.9	0.3	12.1	2.9	0.4
Delay (s)	28.4	54.7		32.4	31.8		19.6	20.7	8.3	27.1	23.4	15.7
Level of Service	C	D		C	C		B	C	A	C	C	B
Approach Delay (s)		47.5			32.0			19.6			23.1	
Approach LOS		D			C			B			C	

Intersection Summary			
HCM Average Control Delay	26.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	73.5%	ICU Level of Service	D
Analysis Period (min)	15		

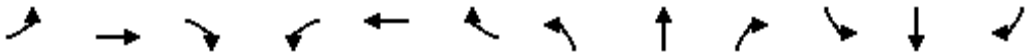
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	22	181	34	20	173	20	23	149	40	37	255	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	14	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.99			1.00			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.99			0.97			0.98	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1840			1851			1939			1976	
Flt Permitted		0.97			0.96			0.95			0.95	
Satd. Flow (perm)		1785			1793			1848			1893	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	23	191	36	21	182	21	24	157	42	39	268	53
RTOR Reduction (vph)	0	9	0	0	6	0	0	13	0	0	10	0
Lane Group Flow (vph)	0	241	0	0	218	0	0	210	0	0	350	0
Confl. Peds. (#/hr)	18		34	34		18	16		19	19		16
Confl. Bikes (#/hr)			6	6			1		4	4		1
Heavy Vehicles (%)	0%	1%	0%	5%	1%	0%	0%	2%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.42			0.42			0.46			0.46	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		741			745			853			874	
v/s Ratio Prot												
v/s Ratio Perm		c0.13			0.12			0.11			c0.19	
v/c Ratio		0.32			0.29			0.25			0.40	
Uniform Delay, d1		12.8			12.6			10.6			11.6	
Progression Factor		1.00			0.65			1.15			1.00	
Incremental Delay, d2		1.2			1.0			0.7			1.4	
Delay (s)		14.0			9.3			12.9			12.9	
Level of Service		B			A			B			B	
Approach Delay (s)		14.0			9.3			12.9			12.9	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	12.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.0%	ICU Level of Service	A
Analysis Period (min)	15		

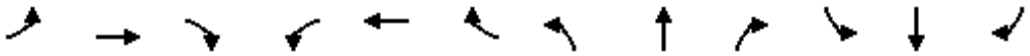
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	193	36	25	180	18	39	200	31	39	214	39
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.97	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1495	3063		1576	3122		1518	3118		1550	3075	
Flt Permitted	0.62	1.00		0.60	1.00		0.59	1.00		0.60	1.00	
Satd. Flow (perm)	978	3063		999	3122		939	3118		979	3075	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	25	203	38	26	189	19	41	211	33	41	225	41
RTOR Reduction (vph)	0	23	0	0	12	0	0	14	0	0	17	0
Lane Group Flow (vph)	25	218	0	26	196	0	41	230	0	41	249	0
Confl. Peds. (#/hr)	20		17	17		20	2					2
Confl. Bikes (#/hr)	32		36	36		32	22		25	25		22
Heavy Vehicles (%)	4%	1%	0%	0%	0%	0%	5%	0%	0%	3%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0		39.0	39.0		39.0	39.0	
Effective Green, g (s)	19.0	19.0		19.0	19.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.58	0.58		0.58	0.58	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	286	895		292	913		549	1823		572	1798	
v/s Ratio Prot		c0.07			0.06			0.07			c0.08	
v/s Ratio Perm	0.03			0.03			0.04			0.04		
v/c Ratio	0.09	0.24		0.09	0.21		0.07	0.13		0.07	0.14	
Uniform Delay, d1	16.7	17.5		16.7	17.4		5.9	6.1		5.9	6.1	
Progression Factor	0.89	0.91		0.73	0.72		1.25	1.26		0.38	0.34	
Incremental Delay, d2	0.6	0.6		0.6	0.5		0.3	0.1		0.2	0.2	
Delay (s)	15.4	16.6		12.8	13.0		7.6	7.7		2.4	2.2	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		16.5			13.0			7.7			2.2	
Approach LOS		B			B			A			A	

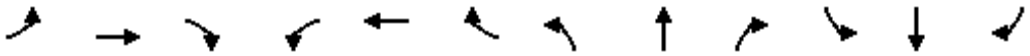
Intersection Summary			
HCM Average Control Delay	9.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.17		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



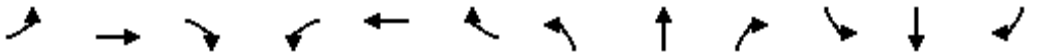
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	67	168	41	25	159	36	23	247	16	30	322	33
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	9	9	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.97		1.00	0.97			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1555	3058		1524	2941			1923			1938	
Flt Permitted	0.63	1.00		0.62	1.00			0.96			0.96	
Satd. Flow (perm)	1026	3058		992	2941			1853			1874	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	68	171	42	26	162	37	23	252	16	31	329	34
RTOR Reduction (vph)	0	25	0	0	22	0	0	3	0	0	5	0
Lane Group Flow (vph)	68	188	0	26	177	0	0	288	0	0	389	0
Confl. Peds. (#/hr)	11		17	17		11	26		7	7		26
Heavy Vehicles (%)	2%	1%	0%	0%	1%	3%	4%	5%	0%	0%	4%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Effective Green, g (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40			0.48			0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	410	1223		397	1176			884			894	
v/s Ratio Prot		0.06			0.06							
v/s Ratio Perm	c0.07			0.03				0.16			c0.21	
v/c Ratio	0.17	0.15		0.07	0.15			0.33			0.43	
Uniform Delay, d1	12.5	12.5		12.0	12.4			10.5			11.2	
Progression Factor	1.01	0.94		0.77	0.76			0.99			1.00	
Incremental Delay, d2	0.9	0.3		0.3	0.3			1.0			1.5	
Delay (s)	13.5	12.0		9.5	9.7			11.3			12.8	
Level of Service	B	B		A	A			B			B	
Approach Delay (s)		12.4			9.7			11.3			12.8	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	11.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



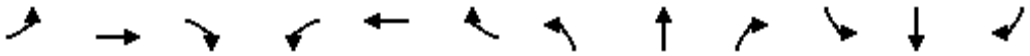
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	47	111	26	20	161	26	31	235	11	29	364	57
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	16	12	10	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.97		1.00	0.98			0.99			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			1.00	
Satd. Flow (prot)	1652	1973		1583	1977			1983			1979	
Flt Permitted	0.57	1.00		0.66	1.00			0.93			0.97	
Satd. Flow (perm)	989	1973		1092	1977			1850			1925	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	52	123	29	22	179	29	34	261	12	32	404	63
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	52	152	0	22	208	0	0	307	0	0	499	0
Confl. Peds. (#/hr)	1		10	10		1	2		5	5		2
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	2%	0%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Effective Green, g (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Actuated g/C Ratio	0.31	0.31		0.31	0.31			0.57			0.57	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	304	607		336	608			1053			1096	
v/s Ratio Prot		0.08			c0.11							
v/s Ratio Perm	0.05			0.02				0.17			c0.26	
v/c Ratio	0.17	0.25		0.07	0.34			0.29			0.46	
Uniform Delay, d1	16.4	16.9		15.9	17.4			7.2			8.1	
Progression Factor	0.81	0.79		0.93	0.92			0.97			1.00	
Incremental Delay, d2	1.2	1.0		0.4	1.5			0.7			1.4	
Delay (s)	14.5	14.3		15.1	17.6			7.7			9.5	
Level of Service	B	B		B	B			A			A	
Approach Delay (s)		14.4			17.3			7.7			9.5	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



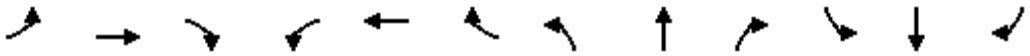
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	54	13	96	2	5	9	58	235	5	3	466	76
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	10	11	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98		1.00	0.98		1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.87		1.00	0.91		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1695	1727		1702	1815		1594	1647	1428	1653	2000	1496
Flt Permitted	0.75	1.00		0.68	1.00		0.39	1.00	1.00	0.59	1.00	1.00
Satd. Flow (perm)	1333	1727		1217	1815		660	1647	1428	1030	2000	1496
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	60	14	107	2	6	10	64	261	6	3	518	84
RTOR Reduction (vph)	0	77	0	0	7	0	0	0	2	0	0	28
Lane Group Flow (vph)	60	44	0	2	9	0	64	261	4	3	518	56
Confl. Peds. (#/hr)	5		5	5		5	3					3
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	0%	2%	0%	0%	2%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	17.0	17.0		17.0	17.0		39.0	39.0	39.0	39.0	39.0	39.0
Effective Green, g (s)	18.0	18.0		18.0	18.0		39.0	39.0	39.0	39.0	39.0	39.0
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.60	0.60	0.60	0.60	0.60	0.60
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	369	478		337	503		396	988	857	618	1200	898
v/s Ratio Prot		0.03			0.00			0.16			c0.26	
v/s Ratio Perm	c0.05			0.00			0.10		0.00	0.00		0.04
v/c Ratio	0.16	0.09		0.01	0.02		0.16	0.26	0.00	0.00	0.43	0.06
Uniform Delay, d1	17.8	17.4		17.0	17.1		5.8	6.2	5.2	5.2	7.0	5.4
Progression Factor	1.41	2.79		1.00	1.00		0.79	0.73	0.88	1.00	1.00	1.00
Incremental Delay, d2	0.9	0.4		0.0	0.1		0.7	0.5	0.0	0.0	1.1	0.1
Delay (s)	26.0	49.0		17.1	17.1		5.2	5.1	4.6	5.2	8.2	5.5
Level of Service	C	D		B	B		A	A	A	A	A	A
Approach Delay (s)		41.4			17.1			5.1			7.8	
Approach LOS		D			B			A			A	

Intersection Summary			
HCM Average Control Delay	12.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	251	163	158	196	0	0	0	0	109	470	377
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)		4.0		3.0	3.0					5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	
Frpb, ped/bikes		0.99		1.00	1.00					1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Frt		0.94		1.00	1.00					1.00	0.93	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		2904		1693	3288					1503	3021	
Flt Permitted		1.00		0.41	1.00					0.95	1.00	
Satd. Flow (perm)		2904		725	3288					1503	3021	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	264	172	166	206	0	0	0	0	115	495	397
RTOR Reduction (vph)	0	106	0	0	0	0	0	0	0	0	141	0
Lane Group Flow (vph)	0	330	0	166	206	0	0	0	0	115	751	0
Confl. Peds. (#/hr)	18		3	3		18	1					1
Heavy Vehicles (%)	0%	4%	1%	1%	4%	0%	0%	0%	0%	10%	2%	1%
Turn Type				D.P+P						Split		
Protected Phases		8		7	7 8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		33.0		53.0	56.0					37.0	37.0	
Effective Green, g (s)		33.0		53.0	56.0					37.0	37.0	
Actuated g/C Ratio		0.32		0.52	0.55					0.36	0.36	
Clearance Time (s)		4.0		3.0						5.0	5.0	
Lane Grp Cap (vph)		940		567	1805					545	1096	
v/s Ratio Prot		c0.11		c0.06	0.06					0.08	c0.25	
v/s Ratio Perm				0.09								
v/c Ratio		0.35		0.29	0.11					0.21	0.68	
Uniform Delay, d1		26.3		13.3	11.1					22.4	27.6	
Progression Factor		1.00		2.14	2.09					1.00	1.00	
Incremental Delay, d2		1.0		1.2	0.1					0.9	3.5	
Delay (s)		27.4		29.6	23.2					23.3	31.0	
Level of Service		C		C	C					C	C	
Approach Delay (s)		27.4			26.1			0.0			30.2	
Approach LOS		C			C			A			C	

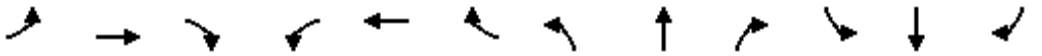
Intersection Summary			
HCM Average Control Delay	28.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	102.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	141	219	0	0	277	109	77	539	227	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	9	12	13	12	13	12	12	12
Total Lost time (s)	4.0	4.0			4.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.96		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1674	3196			2844		1767	1782	1560			
Flt Permitted	0.39	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	686	3196			2844		1767	1782	1560			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	148	231	0	0	292	115	81	567	239	0	0	0
RTOR Reduction (vph)	0	0	0	0	41	0	0	0	164	0	0	0
Lane Group Flow (vph)	148	231	0	0	366	0	81	567	75	0	0	0
Confl. Peds. (#/hr)	9		13	13		9			1	1		
Confl. Bikes (#/hr)	3					3						
Heavy Vehicles (%)	2%	7%	0%	0%	3%	1%	0%	1%	0%	0%	0%	0%
Turn Type	pm+pt						custom		Perm			
Protected Phases	4	1 4			1		2	2				
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	59.0	63.0			26.0		30.0	30.0	30.0			
Effective Green, g (s)	59.0	63.0			26.0		30.0	30.0	30.0			
Actuated g/C Ratio	0.58	0.62			0.25		0.29	0.29	0.29			
Clearance Time (s)	4.0				4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	716	1974			725		520	524	459			
v/s Ratio Prot	c0.07	0.07			c0.13		0.05	c0.32				
v/s Ratio Perm	0.05								0.05			
v/c Ratio	0.21	0.12			0.50		0.16	1.08	0.16			
Uniform Delay, d1	10.2	8.0			32.5		26.6	36.0	26.7			
Progression Factor	0.43	0.44			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.6	0.1			2.5		0.6	63.3	0.8			
Delay (s)	5.0	3.6			35.0		27.3	99.3	27.5			
Level of Service	A	A			C		C	F	C			
Approach Delay (s)		4.2			35.0			73.4			0.0	
Approach LOS		A			C			E			A	

Intersection Summary			
HCM Average Control Delay	48.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	102.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	62.4%	ICU Level of Service	B
Analysis Period (min)	15		

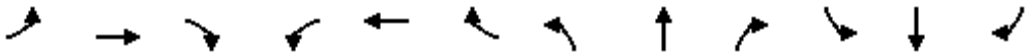
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	510	479	81	534	0	0	0	0	9	432	269
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	11	12	12	12	12	10	10	12
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	1.00
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.93		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3097		1710	3306					1596	3192	1530
Flt Permitted		1.00		0.11	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3097		200	3306					1596	3192	1530
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	537	504	85	562	0	0	0	0	9	455	283
RTOR Reduction (vph)	0	170	0	0	0	0	0	0	0	0	0	187
Lane Group Flow (vph)	0	871	0	85	562	0	0	0	0	9	455	96
Confl. Peds. (#/hr)	8		8	8		8	3					3
Confl. Bikes (#/hr)	9					9			61	61		
Heavy Vehicles (%)	0%	1%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type				pm+pt						Split		Prot
Protected Phases		8		7	7 8					6	6	6
Permitted Phases				7 8								
Actuated Green, G (s)		36.0		54.0	58.0					34.0	34.0	34.0
Effective Green, g (s)		36.0		54.0	58.0					34.0	34.0	34.0
Actuated g/C Ratio		0.36		0.54	0.58					0.34	0.34	0.34
Clearance Time (s)		4.0		4.0						4.0	4.0	4.0
Lane Grp Cap (vph)		1115		380	1917					543	1085	520
v/s Ratio Prot		c0.28		0.04	c0.17					0.01	c0.14	0.06
v/s Ratio Perm				0.08								
v/c Ratio		0.78		0.22	0.29					0.02	0.42	0.19
Uniform Delay, d1		28.5		14.5	10.6					21.9	25.4	23.2
Progression Factor		1.00		1.01	1.18					1.00	1.00	1.00
Incremental Delay, d2		5.5		0.9	0.3					0.1	1.2	0.8
Delay (s)		34.0		15.5	12.8					22.0	26.6	24.0
Level of Service		C		B	B					C	C	C
Approach Delay (s)		34.0			13.2			0.0			25.6	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM Average Control Delay	25.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	91.3%	ICU Level of Service	F
Analysis Period (min)	15		

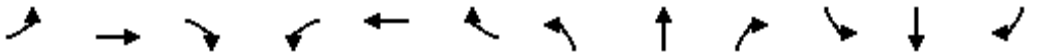
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	415	104	0	0	150	5	465	479	58	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	10	12	11	11	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	0.91	0.91			0.95		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			1.00		1.00	1.00	0.85			
Flt Protected	0.95	0.97			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1469	3109			3174		1555	1653	1530			
Flt Permitted	0.64	0.71			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	986	2282			3174		1555	1653	1530			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	437	109	0	0	158	5	489	504	61	0	0	0
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	38	0	0	0
Lane Group Flow (vph)	218	328	0	0	160	0	489	504	23	0	0	0
Confl. Peds. (#/hr)	13		6	6		13			8	8		
Confl. Bikes (#/hr)	1					1			2	2		
Heavy Vehicles (%)	2%	1%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%
Turn Type	pm+pt						custom		custom			
Protected Phases	4	1 4			1		2	2	2			
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Effective Green, g (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Actuated g/C Ratio	0.51	0.51			0.15		0.37	0.37	0.37			
Clearance Time (s)	4.0				4.0		4.0	4.0	4.0			
Lane Grp Cap (vph)	677	1462			476		575	612	566			
v/s Ratio Prot	c0.12	0.08			c0.05		c0.31	0.30	0.01			
v/s Ratio Perm	0.05	0.03										
v/c Ratio	0.32	0.22			0.34		0.85	0.82	0.04			
Uniform Delay, d1	14.1	13.6			38.0		29.0	28.5	20.1			
Progression Factor	0.24	0.25			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.7	0.2			1.9		14.6	11.9	0.1			
Delay (s)	4.1	3.6			40.0		43.6	40.5	20.3			
Level of Service	A	A			D		D	D	C			
Approach Delay (s)		3.8			40.0			40.7			0.0	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM Average Control Delay	29.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	91.3%	ICU Level of Service	F
Analysis Period (min)	15		

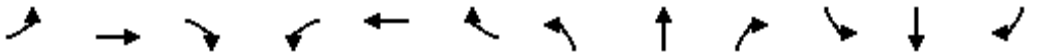
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	78	211	103	109	241	111	84	699	76	100	884	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	9	10	9	9	10	9
Total Lost time (s)		4.0			4.0		4.0	3.5	4.0	4.0	3.5	4.0
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		0.99			0.99		1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.96			0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		2936			2924		1508	3069	1309	1508	3099	1298
Flt Permitted		0.76			0.75		0.16	1.00	1.00	0.26	1.00	1.00
Satd. Flow (perm)		2259			2233		261	3069	1309	407	3099	1298
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	80	218	106	112	248	114	87	721	78	103	911	67
RTOR Reduction (vph)	0	42	0	0	36	0	0	0	48	0	0	33
Lane Group Flow (vph)	0	362	0	0	438	0	87	721	30	103	911	34
Confl. Peds. (#/hr)	35		30	30		35	34		8	8		34
Confl. Bikes (#/hr)	1					1	1					1
Heavy Vehicles (%)	1%	4%	0%	1%	3%	3%	2%	4%	2%	2%	3%	2%
Turn Type	pm+pt			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		35.0			27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)		36.0			28.0		36.0	33.5	33.0	36.0	33.5	33.0
Actuated g/C Ratio		0.42			0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)		5.0			5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)		1005			736		169	1210	508	224	1221	504
v/s Ratio Prot		c0.03					c0.02	0.23		0.02	c0.29	
v/s Ratio Perm		0.13			c0.20		0.19		0.02	0.17		0.03
v/c Ratio		0.36			0.60		0.51	0.60	0.06	0.46	0.75	0.07
Uniform Delay, d1		16.7			23.8		16.6	20.4	16.3	15.9	22.1	16.3
Progression Factor		1.00			1.00		1.35	0.68	0.62	1.11	1.17	1.76
Incremental Delay, d2		1.0			3.5		10.1	2.0	0.2	4.8	3.0	0.2
Delay (s)		17.7			27.3		32.5	15.9	10.3	22.4	28.8	28.9
Level of Service		B			C		C	B	B	C	C	C
Approach Delay (s)		17.7			27.3			17.1			28.2	
Approach LOS		B			C			B			C	

Intersection Summary			
HCM Average Control Delay	23.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	72.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



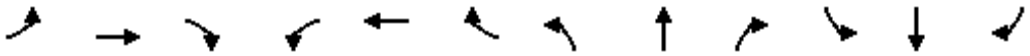
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	76	305	0	0	339	84	53	44	33	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.97			0.97				
Flt Protected		0.99			1.00			0.98				
Satd. Flow (prot)		1730			1701			1654				
Flt Permitted		0.85			1.00			0.98				
Satd. Flow (perm)		1493			1701			1654				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	80	321	0	0	357	88	56	46	35	0	0	0
RTOR Reduction (vph)	0	0	0	0	14	0	0	19	0	0	0	0
Lane Group Flow (vph)	0	401	0	0	431	0	0	118	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		38.0			38.0			19.0				
Effective Green, g (s)		38.0			38.0			19.0				
Actuated g/C Ratio		0.58			0.58			0.29				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		873			994			483				
v/s Ratio Prot					0.25							
v/s Ratio Perm		c0.27						0.07				
v/c Ratio		0.46			0.43			0.24				
Uniform Delay, d1		7.7			7.5			17.5				
Progression Factor		1.00			0.65			1.00				
Incremental Delay, d2		1.7			1.2			1.2				
Delay (s)		9.4			6.1			18.7				
Level of Service		A			A			B				
Approach Delay (s)		9.4			6.1			18.7			0.0	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM Average Control Delay	9.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	19	289	27	39	347	50	28	118	39	53	150	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	10	12	12	10	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			0.98	
Flpb, ped/bikes		1.00			1.00			0.99			1.00	
Frt		0.99			0.98			0.97			0.97	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1956			1938			2969			2988	
Flt Permitted		0.97			0.95			0.90			0.86	
Satd. Flow (perm)		1899			1846			2679			2606	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	20	304	28	41	365	53	29	124	41	56	158	44
RTOR Reduction (vph)	0	5	0	0	7	0	0	24	0	0	26	0
Lane Group Flow (vph)	0	347	0	0	452	0	0	170	0	0	232	0
Confl. Peds. (#/hr)	32		25	25		32	59		24	24		59
Confl. Bikes (#/hr)	3		2	2		3	4		2	2		4
Heavy Vehicles (%)	0%	3%	0%	3%	3%	0%	0%	0%	7%	4%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0			27.0			27.0	
Effective Green, g (s)		30.0			30.0			27.0			27.0	
Actuated g/C Ratio		0.46			0.46			0.42			0.42	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		876			852			1113			1082	
v/s Ratio Prot												
v/s Ratio Perm		0.18			c0.24			0.06			c0.09	
v/c Ratio		0.40			0.53			0.15			0.21	
Uniform Delay, d1		11.5			12.5			11.9			12.2	
Progression Factor		0.58			0.41			1.06			0.43	
Incremental Delay, d2		1.2			2.1			0.3			0.4	
Delay (s)		7.9			7.3			12.9			5.6	
Level of Service		A			A			B			A	
Approach Delay (s)		7.9			7.3			12.9			5.6	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM Average Control Delay	8.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		

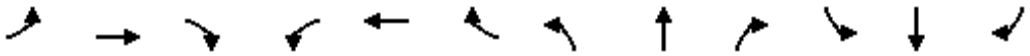
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	41	255	39	81	448	86	43	219	98	83	227	62
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	9	10	10	9	10	10	12	10	10	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00		0.99	1.00		0.99	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.95		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1509	3033		1568	3074		1587	2962		1585	3076	
Flt Permitted	0.35	1.00		0.56	1.00		0.57	1.00		0.55	1.00	
Satd. Flow (perm)	558	3033		919	3074		946	2962		918	3076	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	43	268	41	85	472	91	45	231	103	87	239	65
RTOR Reduction (vph)	0	19	0	0	24	0	0	48	0	0	30	0
Lane Group Flow (vph)	43	290	0	85	539	0	45	286	0	87	274	0
Confl. Peds. (#/hr)	20		31	31		20	16		20	20		16
Confl. Bikes (#/hr)							1		3	3		1
Heavy Vehicles (%)	5%	3%	0%	0%	1%	0%	0%	2%	2%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	189	1027		311	1040		509	1595		494	1656	
v/s Ratio Prot		0.10			c0.18			c0.10			0.09	
v/s Ratio Perm	0.08			0.09			0.05			0.09		
v/c Ratio	0.23	0.28		0.27	0.52		0.09	0.18		0.18	0.17	
Uniform Delay, d1	15.4	15.7		15.7	17.2		7.3	7.7		7.6	7.6	
Progression Factor	0.79	0.76		0.91	0.92		0.82	0.81		1.07	1.07	
Incremental Delay, d2	2.7	0.7		2.1	1.8		0.3	0.2		0.8	0.2	
Delay (s)	14.8	12.6		16.4	17.7		6.3	6.4		9.0	8.4	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		12.9			17.5			6.4			8.5	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	12.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.1%	ICU Level of Service	A
Analysis Period (min)	15		

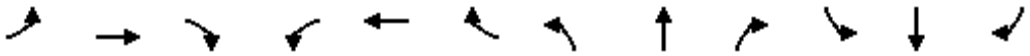
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	55	287	68	87	401	50	44	231	58	46	279	64
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	9	10	9	9	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			0.98	
Flpb, ped/bikes	0.98	1.00		0.99	1.00			0.99			1.00	
Frt	1.00	0.97		1.00	0.98			0.97			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1508	3013		1429	3720			3485			3521	
Flt Permitted	0.46	1.00		0.53	1.00			0.87			0.88	
Satd. Flow (perm)	726	3013		792	3720			3042			3120	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	58	302	72	92	422	53	46	243	61	48	294	67
RTOR Reduction (vph)	0	32	0	0	15	0	0	28	0	0	25	0
Lane Group Flow (vph)	58	342	0	92	460	0	0	322	0	0	384	0
Confl. Peds. (#/hr)	38		17	17		38	125		53	53		125
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	3%	0%	7%	2%	0%	0%	6%	10%	2%	5%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Effective Green, g (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48			0.40			0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	346	1437		378	1774			1217			1248	
v/s Ratio Prot		0.11			c0.12							
v/s Ratio Perm	0.08			0.12				0.11			c0.12	
v/c Ratio	0.17	0.24		0.24	0.26			0.26			0.31	
Uniform Delay, d1	9.7	10.0		10.1	10.1			13.1			13.3	
Progression Factor	1.52	1.66		1.12	1.12			0.47			0.68	
Incremental Delay, d2	1.0	0.4		1.4	0.3			0.5			0.6	
Delay (s)	15.8	17.0		12.7	11.7			6.7			9.7	
Level of Service	B	B		B	B			A			A	
Approach Delay (s)		16.8			11.9			6.7			9.7	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.4%	ICU Level of Service	B
Analysis Period (min)	15		

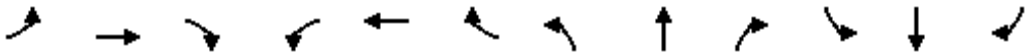
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	82	246	82	92	279	92	118	82	47	47	82	118
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	16	12	12	16	12
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		0.95			1.00			1.00	
Frt		1.00	0.85		0.97			0.97			0.94	
Flt Protected		0.99	1.00		0.99			0.98			0.99	
Satd. Flow (prot)		1669	1436		3083			1885			1835	
Flt Permitted		0.79	1.00		0.81			0.69			0.91	
Satd. Flow (perm)		1342	1436		2535			1338			1680	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	86	259	86	97	294	97	124	86	49	49	86	124
RTOR Reduction (vph)	0	0	41	0	33	0	0	13	0	0	51	0
Lane Group Flow (vph)	0	345	45	0	455	0	0	246	0	0	208	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		34.0	34.0		34.0			21.0			21.0	
Effective Green, g (s)		34.0	34.0		34.0			21.0			21.0	
Actuated g/C Ratio		0.52	0.52		0.52			0.32			0.32	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Grp Cap (vph)		702	751		1326			432			543	
v/s Ratio Prot												
v/s Ratio Perm		c0.26	0.03		0.18			c0.18			0.12	
v/c Ratio		0.49	0.06		0.34			0.57			0.38	
Uniform Delay, d1		10.0	7.6		9.0			18.3			17.0	
Progression Factor		1.82	4.36		0.51			1.00			1.00	
Incremental Delay, d2		2.4	0.1		0.7			5.4			2.0	
Delay (s)		20.5	33.4		5.3			23.6			19.0	
Level of Service		C	C		A			C			B	
Approach Delay (s)		23.1			5.3			23.6			19.0	
Approach LOS		C			A			C			B	

Intersection Summary			
HCM Average Control Delay	16.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	76.1%	ICU Level of Service	D
Analysis Period (min)	15		

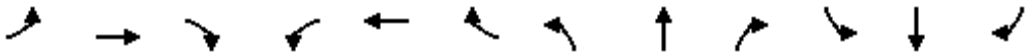
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	45	253	18	26	317	60	24	133	47	62	146	61
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	15	8	16	8	8	16	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.98			0.97			0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1443	3037		1563	3017			3582			3605	
Flt Permitted	0.51	1.00		0.58	1.00			0.91			0.85	
Satd. Flow (perm)	771	3037		949	3017			3268			3094	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	47	266	19	27	334	63	25	140	49	65	154	64
RTOR Reduction (vph)	0	8	0	0	24	0	0	29	0	0	37	0
Lane Group Flow (vph)	47	277	0	27	373	0	0	185	0	0	246	0
Confl. Peds. (#/hr)	24		47	47		24	9		36	36		9
Confl. Bikes (#/hr)			4	4			1					1
Heavy Vehicles (%)	9%	4%	0%	0%	3%	0%	0%	1%	10%	0%	0%	8%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	30.0	30.0		30.0	30.0			27.0			27.0	
Effective Green, g (s)	30.0	30.0		30.0	30.0			27.0			27.0	
Actuated g/C Ratio	0.46	0.46		0.46	0.46			0.42			0.42	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	356	1402		438	1392			1357			1285	
v/s Ratio Prot		0.09			c0.12							
v/s Ratio Perm	0.06			0.03				0.06			c0.08	
v/c Ratio	0.13	0.20		0.06	0.27			0.14			0.19	
Uniform Delay, d1	10.0	10.4		9.7	10.8			11.8			12.1	
Progression Factor	0.78	0.79		0.77	0.60			1.06			0.40	
Incremental Delay, d2	0.7	0.3		0.1	0.3			0.2			0.3	
Delay (s)	8.5	8.5		7.6	6.7			12.7			5.2	
Level of Service	A	A		A	A			B			A	
Approach Delay (s)		8.5			6.8			12.7			5.2	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM Average Control Delay	7.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

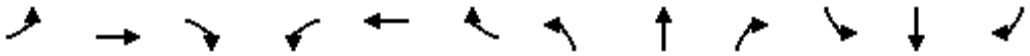


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	43	434	18	86	500	222	22	124	115	340	261	81
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.99			0.96			0.93			0.98	
Flt Protected		1.00			0.99			1.00			0.98	
Satd. Flow (prot)		3288			3167			3088			3182	
Flt Permitted		0.81			0.83			0.92			0.71	
Satd. Flow (perm)		2668			2627			2843			2309	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	45	457	19	91	526	234	23	131	121	358	275	85
RTOR Reduction (vph)	0	4	0	0	60	0	0	65	0	0	16	0
Lane Group Flow (vph)	0	517	0	0	791	0	0	210	0	0	702	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0			30.0			17.0	
Effective Green, g (s)		25.0			25.0			30.0			17.0	
Actuated g/C Ratio		0.38			0.38			0.46			0.26	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		1026			1010			1350			604	
v/s Ratio Prot								c0.02				
v/s Ratio Perm		0.19			c0.30			0.05			c0.30	
v/c Ratio		0.50			0.78			0.16			1.27dl	
Uniform Delay, d1		15.3			17.6			10.2			24.0	
Progression Factor		1.49			1.00			1.00			0.79	
Incremental Delay, d2		1.8			6.1			0.2			89.5	
Delay (s)		24.5			23.7			10.4			108.4	
Level of Service		C			C			B			F	
Approach Delay (s)		24.5			23.7			10.4			108.4	
Approach LOS		C			C			B			F	

Intersection Summary			
HCM Average Control Delay	48.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	84.9%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

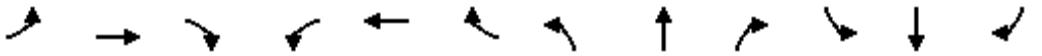
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	891	126	48	790	0	80	0	36	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	10	10	12	12	12	12	12	12	12
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			1.00				
Frt		0.98			1.00			0.96				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		3041			3090			1618				
Flt Permitted		1.00			0.81			0.79				
Satd. Flow (perm)		3041			2522			1329				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	938	133	51	832	0	84	0	38	0	0	0
RTOR Reduction (vph)	0	15	0	0	0	0	0	18	0	0	0	0
Lane Group Flow (vph)	0	1056	0	0	883	0	0	104	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	custom			Perm			Perm			Perm		
Protected Phases		4 5 6 11			8			2			2	
Permitted Phases	4 6 11			8			2			2		
Actuated Green, G (s)		65.0			33.0			16.0				
Effective Green, g (s)		58.0			33.0			16.0				
Actuated g/C Ratio		0.64			0.37			0.18				
Clearance Time (s)					5.0			5.0				
Lane Grp Cap (vph)		1960			925			236				
v/s Ratio Prot		c0.35										
v/s Ratio Perm					c0.35			c0.08				
v/c Ratio		0.54			0.95			0.44				
Uniform Delay, d1		8.7			27.8			33.0				
Progression Factor		0.08			1.40			1.00				
Incremental Delay, d2		0.4			19.6			5.9				
Delay (s)		1.1			58.4			38.9				
Level of Service		A			E			D				
Approach Delay (s)		1.1			58.4			38.9			0.0	
Approach LOS		A			E			D			A	

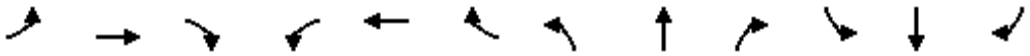
Intersection Summary			
HCM Average Control Delay	27.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	74.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	222	638	22	112	612	185	60	4	107	212	10	212
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	10	12	12	12	12	16	12	12	12	12
Total Lost time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85		0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (prot)	1550	3194		1660	3320	1485		1782		1660	1748	1485
Flt Permitted	0.31	1.00		0.36	1.00	1.00		0.88		0.43	1.00	1.00
Satd. Flow (perm)	513	3194		626	3320	1485		1594		758	1748	1485
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	234	672	23	118	644	195	63	4	113	223	11	223
RTOR Reduction (vph)	0	2	0	0	0	88	0	94	0	0	0	130
Lane Group Flow (vph)	234	693	0	118	644	107	0	86	0	223	11	93
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	55.7	43.5		48.8	39.6	49.6		11.3		24.3	24.3	37.4
Effective Green, g (s)	55.7	43.5		48.8	39.6	49.6		11.3		24.3	24.3	37.4
Actuated g/C Ratio	0.62	0.48		0.54	0.44	0.55		0.13		0.27	0.27	0.42
Clearance Time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Vehicle Extension (s)	4.0	3.0		4.0	3.0	3.0		4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	468	1544		445	1461	818		200		305	472	617
v/s Ratio Prot	c0.07	0.22		0.03	0.19	0.01				c0.08	0.01	0.02
v/s Ratio Perm	c0.24			0.12		0.06		0.05		c0.12		0.04
v/c Ratio	0.50	0.45		0.27	0.44	0.13		0.43		0.73	0.02	0.15
Uniform Delay, d1	8.5	15.3		10.2	17.5	9.8		36.4		28.5	24.1	16.4
Progression Factor	2.64	1.92		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	1.0	0.8		0.4	1.0	0.1		2.0		8.7	0.0	0.2
Delay (s)	23.5	30.3		10.6	18.5	9.8		38.4		37.2	24.2	16.5
Level of Service	C	C		B	B	A		D		D	C	B
Approach Delay (s)		28.6			15.8			38.4			26.8	
Approach LOS		C			B			D			C	

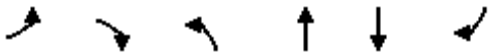
Intersection Summary			
HCM Average Control Delay	24.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	61.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	516	441	2	332	0	0	0	0	19	0	577
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	543	464	2	349	0	0	0	0	20	0	607
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		498										
pX, platoon unblocked												
vC, conflicting volume	349			543			722	897	272	625	897	175
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	349			543			722	897	272	625	897	175
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	95	100	27
cM capacity (veh/h)	1199			1015			85	276	723	366	276	835

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	272	272	464	119	233	20	607
Volume Left	0	0	0	2	0	20	0
Volume Right	0	0	464	0	0	0	607
cSH	1700	1700	1700	1015	1700	366	835
Volume to Capacity	0.16	0.16	0.27	0.00	0.14	0.05	0.73
Queue Length 95th (ft)	0	0	0	0	0	4	163
Control Delay (s)	0.0	0.0	0.0	0.2	0.0	15.4	19.9
Lane LOS				A		C	C
Approach Delay (s)	0.0			0.1		19.7	
Approach LOS						C	

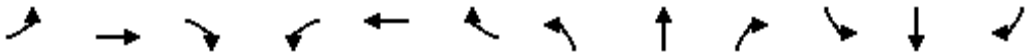
Intersection Summary				
Average Delay	6.2			
Intersection Capacity Utilization	54.1%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	535	0	334	0	0	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	563	0	352	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	282	282	352
Volume Left (vph)	282	282	352
Volume Right (vph)	0	0	0
Hadj (s)	0.55	0.55	0.25
Departure Headway (s)	6.1	6.1	5.5
Degree Utilization, x	0.48	0.48	0.54
Capacity (veh/h)	574	576	624
Control Delay (s)	13.3	13.3	14.7
Approach Delay (s)	13.3		14.7
Approach LOS	B		B

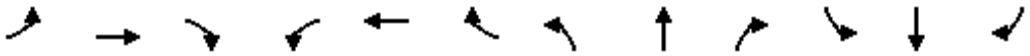
Intersection Summary			
Delay	13.9		
HCM Level of Service	B		
Intersection Capacity Utilization	42.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	472	64	192	495	0	0	0	0	101	21	58
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)		3.0		4.0	4.0						5.0	
Lane Util. Factor		0.95		1.00	0.95						0.95	
Frt		0.98		1.00	1.00						0.95	
Flt Protected		1.00		0.95	1.00						0.97	
Satd. Flow (prot)		3153		1605	3210						3073	
Flt Permitted		1.00		0.36	1.00						0.97	
Satd. Flow (perm)		3153		617	3210						3073	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	497	67	202	521	0	0	0	0	106	22	61
RTOR Reduction (vph)	0	12	0	0	0	0	0	0	0	0	42	0
Lane Group Flow (vph)	0	552	0	202	521	0	0	0	0	0	147	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type				pm+pt						Split		
Protected Phases		4		3	8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		36.0		49.0	49.0						27.0	
Effective Green, g (s)		36.0		49.0	49.0						27.0	
Actuated g/C Ratio		0.42		0.58	0.58						0.32	
Clearance Time (s)		3.0		4.0	4.0						5.0	
Lane Grp Cap (vph)		1335		472	1850						976	
v/s Ratio Prot		0.18		c0.05	0.16						c0.05	
v/s Ratio Perm				c0.20								
v/c Ratio		0.41		0.43	0.28						0.15	
Uniform Delay, d1		17.1		14.7	9.1						20.8	
Progression Factor		1.00		0.33	0.19						1.00	
Incremental Delay, d2		0.9		2.4	0.3						0.3	
Delay (s)		18.1		7.2	2.1						21.1	
Level of Service		B		A	A						C	
Approach Delay (s)		18.1			3.5			0.0			21.1	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	11.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	44.3%	ICU Level of Service	A
Analysis Period (min)	15		

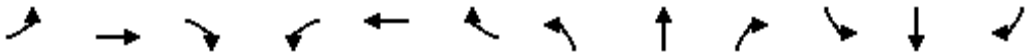
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	95	478	0	0	624	129	63	90	58	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	11	11	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0			3.0			5.0				
Lane Util. Factor	1.00	0.95			0.95			0.91				
Frt	1.00	1.00			0.97			0.96				
Flt Protected	0.95	1.00			1.00			0.99				
Satd. Flow (prot)	1660	3320			3127			4507				
Flt Permitted	0.24	1.00			1.00			0.99				
Satd. Flow (perm)	419	3320			3127			4507				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	100	503	0	0	657	136	66	95	61	0	0	0
RTOR Reduction (vph)	0	0	0	0	21	0	0	42	0	0	0	0
Lane Group Flow (vph)	100	503	0	0	772	0	0	180	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt						Split					
Protected Phases	7	4			8		2	2				
Permitted Phases	4											
Actuated Green, G (s)	48.0	48.0			35.0			27.0				
Effective Green, g (s)	48.0	48.0			35.0			27.0				
Actuated g/C Ratio	0.56	0.56			0.41			0.32				
Clearance Time (s)	5.0	5.0			3.0			5.0				
Lane Grp Cap (vph)	383	1875			1288			1432				
v/s Ratio Prot	0.03	c0.15			c0.25			c0.04				
v/s Ratio Perm	0.12											
v/c Ratio	0.26	0.27			0.60			0.13				
Uniform Delay, d1	16.9	9.5			19.5			20.6				
Progression Factor	0.39	0.32			1.00			1.00				
Incremental Delay, d2	1.6	0.3			2.1			0.2				
Delay (s)	8.2	3.3			21.6			20.8				
Level of Service	A	A			C			C				
Approach Delay (s)		4.1			21.6			20.8			0.0	
Approach LOS		A			C			C			A	

Intersection Summary			
HCM Average Control Delay	15.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	44.3%	ICU Level of Service	A
Analysis Period (min)	15		

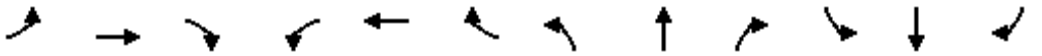
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	114	342	114	79	366	79	129	78	27	30	87	144
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	12	15	12	12	15	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		0.97			0.98			0.98			0.93	
Flt Protected		0.99			0.99			0.97			0.99	
Satd. Flow (prot)		2976			3006			1842			1769	
Flt Permitted		0.69			0.75			0.73			0.95	
Satd. Flow (perm)		2070			2273			1374			1689	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	120	360	120	83	385	83	136	82	28	32	92	152
RTOR Reduction (vph)	0	34	0	0	22	0	0	7	0	0	68	0
Lane Group Flow (vph)	0	566	0	0	529	0	0	239	0	0	208	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		23.0			23.0			32.0			32.0	
Effective Green, g (s)		23.0			23.0			32.0			32.0	
Actuated g/C Ratio		0.35			0.35			0.49			0.49	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		732			804			676			832	
v/s Ratio Prot												
v/s Ratio Perm		c0.27			0.23			c0.17			0.12	
v/c Ratio		0.77			0.66			0.35			0.25	
Uniform Delay, d1		18.7			17.7			10.1			9.6	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		7.8			4.2			1.4			0.7	
Delay (s)		26.5			21.9			11.6			10.3	
Level of Service		C			C			B			B	
Approach Delay (s)		26.5			21.9			11.6			10.3	
Approach LOS		C			C			B			B	

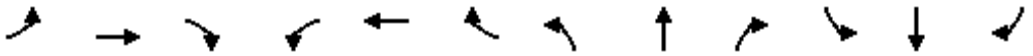
Intersection Summary			
HCM Average Control Delay	20.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	79.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	106	201	88	159	311	65	124	539	67	95	940	146
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	12	10	16	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.95		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1559	2980		1573	3683		1508	3069	1333	1520	3099	1336
Flt Permitted	0.45	1.00		0.53	1.00		0.13	1.00	1.00	0.34	1.00	1.00
Satd. Flow (perm)	739	2980		880	3683		212	3069	1333	545	3099	1336
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	112	212	93	167	327	68	131	567	71	100	989	154
RTOR Reduction (vph)	0	58	0	0	21	0	0	0	45	0	0	98
Lane Group Flow (vph)	112	247	0	167	374	0	131	567	26	100	989	56
Confl. Peds. (#/hr)	19		16	16		19	22		25	25		22
Heavy Vehicles (%)	2%	2%	0%	1%	2%	2%	2%	4%	0%	1%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	32.0	27.0		32.0	27.0		38.0	31.0	31.0	38.0	31.0	31.0
Effective Green, g (s)	30.0	28.0		30.0	28.0		36.0	31.0	31.0	36.0	31.0	31.0
Actuated g/C Ratio	0.35	0.33		0.35	0.33		0.42	0.36	0.36	0.42	0.36	0.36
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	299	982		343	1213		181	1119	486	300	1130	487
v/s Ratio Prot	0.02	0.08		c0.02	0.10		c0.05	0.18		0.02	c0.32	
v/s Ratio Perm	0.11			c0.15			0.26		0.02	0.12		0.04
v/c Ratio	0.37	0.25		0.49	0.31		0.72	0.51	0.05	0.33	0.88	0.12
Uniform Delay, d1	19.4	20.8		20.7	21.3		18.0	21.0	17.5	15.4	25.2	17.9
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.42	1.04	2.39
Incremental Delay, d2	3.6	0.6		4.9	0.7		22.1	1.6	0.2	2.3	7.6	0.4
Delay (s)	23.0	21.5		25.5	21.9		40.1	22.7	17.7	24.2	33.9	43.2
Level of Service	C	C		C	C		D	C	B	C	C	D
Approach Delay (s)		21.9			23.0			25.2			34.3	
Approach LOS		C			C			C			C	

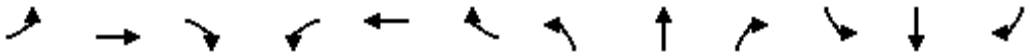
Intersection Summary			
HCM Average Control Delay	28.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	70.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	48	295	30	33	393	24	33	100	41	36	124	64
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	16	12	12	16	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00	0.98		1.00	0.99
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		0.99	1.00
Satd. Flow (prot)		1962	1466		1993	1480		2015	1506		2001	1511
Flt Permitted		0.90	1.00		0.96	1.00		0.91	1.00		0.92	1.00
Satd. Flow (perm)		1781	1466		1913	1480		1863	1506		1870	1511
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	51	311	32	35	414	25	35	105	43	38	131	67
RTOR Reduction (vph)	0	0	17	0	0	13	0	0	25	0	0	39
Lane Group Flow (vph)	0	362	15	0	449	12	0	140	18	0	169	28
Confl. Peds. (#/hr)	11		20	20		11	1		4	4		1
Confl. Bikes (#/hr)	1		1	1		1			1	1		
Heavy Vehicles (%)	4%	3%	0%	0%	2%	0%	0%	0%	0%	0%	1%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Effective Green, g (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Actuated g/C Ratio		0.46	0.46		0.46	0.46		0.42	0.42		0.42	0.42
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		822	677		883	683		774	626		777	628
v/s Ratio Prot												
v/s Ratio Perm		0.20	0.01		c0.23	0.01		0.08	0.01		c0.09	0.02
v/c Ratio		0.44	0.02		0.51	0.02		0.18	0.03		0.22	0.04
Uniform Delay, d1		11.8	9.5		12.3	9.5		12.0	11.2		12.2	11.3
Progression Factor		1.00	1.00		0.66	0.59		1.21	1.56		0.98	0.83
Incremental Delay, d2		1.7	0.1		2.1	0.0		0.5	0.1		0.6	0.1
Delay (s)		13.5	9.6		10.1	5.7		15.1	17.6		12.6	9.5
Level of Service		B	A		B	A		B	B		B	A
Approach Delay (s)		13.2			9.9			15.7			11.7	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	12.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.9%	ICU Level of Service	E
Analysis Period (min)	15		

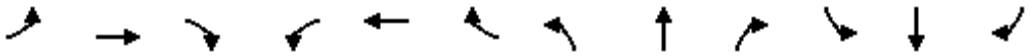
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	75	305	20	41	249	31	10	109	21	110	214	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.98		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1550	3070		1550	3047		1550	3024		1550	2991	
Flt Permitted	0.95	1.00		0.55	1.00		0.56	1.00		0.67	1.00	
Satd. Flow (perm)	1550	3070		891	3047		915	3024		1085	2991	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	79	321	21	43	262	33	11	115	22	116	225	68
RTOR Reduction (vph)	0	7	0	0	15	0	0	13	0	0	40	0
Lane Group Flow (vph)	79	335	0	43	280	0	11	124	0	116	253	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Prot			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Effective Green, g (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.11	0.49		0.34	0.34		0.42	0.42		0.42	0.42	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	167	1511		302	1031		380	1256		451	1242	
v/s Ratio Prot	c0.05	0.11			c0.09			0.04			0.08	
v/s Ratio Perm				0.05			0.01			c0.11		
v/c Ratio	0.47	0.22		0.14	0.27		0.03	0.10		0.26	0.20	
Uniform Delay, d1	27.3	9.4		14.9	15.7		11.2	11.6		12.4	12.1	
Progression Factor	0.92	0.50		0.76	0.73		0.86	0.90		1.10	1.10	
Incremental Delay, d2	8.9	0.3		1.0	0.6		0.1	0.2		1.4	0.4	
Delay (s)	34.0	5.1		12.3	12.1		9.8	10.6		15.1	13.7	
Level of Service	C	A		B	B		A	B		B	B	
Approach Delay (s)		10.5			12.1			10.5			14.1	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	12.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	38.0%	ICU Level of Service	A
Analysis Period (min)	15		

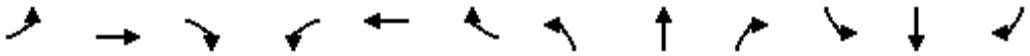
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	64	267	69	203	330	63	25	245	20	55	270	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.97		1.00	0.98			0.99			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1550	3003		1550	3025			3272			3230	
Flt Permitted	0.51	1.00		0.95	1.00			0.91			0.87	
Satd. Flow (perm)	832	3003		1550	3025			2982			2820	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	67	281	73	214	347	66	26	258	21	58	284	53
RTOR Reduction (vph)	0	36	0	0	24	0	0	9	0	0	19	0
Lane Group Flow (vph)	67	318	0	214	389	0	0	296	0	0	376	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Prot			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4						2			6		
Actuated Green, G (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Effective Green, g (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Actuated g/C Ratio	0.31	0.31		0.09	0.45			0.38			0.38	
Clearance Time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	256	924		143	1350			1147			1085	
v/s Ratio Prot		c0.11		c0.14	0.13							
v/s Ratio Perm	0.08							0.10			c0.13	
v/c Ratio	0.26	0.34		1.50	0.29			0.26			0.35	
Uniform Delay, d1	16.9	17.4		29.5	11.4			13.7			14.2	
Progression Factor	0.65	0.62		1.29	1.14			0.76			0.73	
Incremental Delay, d2	2.4	1.0		244.3	0.3			0.5			0.9	
Delay (s)	13.5	11.7		282.2	13.4			10.9			11.2	
Level of Service	B	B		F	B			B			B	
Approach Delay (s)		12.0			105.1			10.9			11.2	
Approach LOS		B			F			B			B	

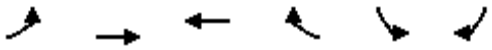
Intersection Summary			
HCM Average Control Delay	45.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	55.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	16	295	16	75	605	75	53	110	165	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	14	12	10	15	10
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			0.95				
Frt		0.99			0.99			0.92				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		1616			1601			3248				
Flt Permitted		0.96			0.93			0.99				
Satd. Flow (perm)		1556			1502			3248				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	17	311	17	79	637	79	56	116	174	0	0	0
RTOR Reduction (vph)	0	3	0	0	5	0	0	133	0	0	0	0
Lane Group Flow (vph)	0	342	0	0	790	0	0	213	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		41.6			41.6			15.4				
Effective Green, g (s)		41.6			41.6			15.4				
Actuated g/C Ratio		0.64			0.64			0.24				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		3.0			3.0			8.0				
Lane Grp Cap (vph)		996			961			770				
v/s Ratio Prot												
v/s Ratio Perm		0.22			c0.53			0.07				
v/c Ratio		0.34			0.82			0.28				
Uniform Delay, d1		5.4			8.9			20.3				
Progression Factor		1.59			1.00			1.00				
Incremental Delay, d2		0.9			7.9			0.8				
Delay (s)		9.5			16.8			21.1				
Level of Service		A			B			C				
Approach Delay (s)		9.5			16.8			21.1			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM Average Control Delay	16.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	81.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	73	375	588	39	119	159
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	81	417	653	43	132	177
Pedestrians		5	6		17	
Lane Width (ft)		16.0	16.0		10.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		1	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1319	491			
pX, platoon unblocked	0.83				0.83	0.83
vC, conflicting volume	714				1277	697
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	551				1231	531
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	90				9	61
cM capacity (veh/h)	822				145	450

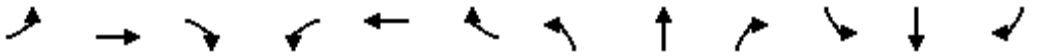
Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	498	697	132	177
Volume Left	81	0	132	0
Volume Right	0	43	0	177
cSH	822	1700	145	450
Volume to Capacity	0.10	0.41	0.91	0.39
Queue Length 95th (ft)	8	0	157	46
Control Delay (s)	2.7	0.0	112.8	18.1
Lane LOS	A		F	C
Approach Delay (s)	2.7	0.0	58.6	
Approach LOS			F	

Intersection Summary			
Average Delay	12.9		
Intersection Capacity Utilization	78.3%	ICU Level of Service	D
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	670	0	1	614	3	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frt	1.00			1.00	0.88	
Flt Protected	1.00			1.00	1.00	
Satd. Flow (prot)	1748			1747	1526	
Flt Permitted	1.00			1.00	1.00	
Satd. Flow (perm)	1748			1747	1526	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	705	0	1	646	3	31
RTOR Reduction (vph)	0	0	0	0	26	0
Lane Group Flow (vph)	705	0	0	647	8	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type			Perm			
Protected Phases	1 2 4			4	3	
Permitted Phases			4			
Actuated Green, G (s)	63.0			31.0	14.0	
Effective Green, g (s)	59.0			31.0	14.0	
Actuated g/C Ratio	0.69			0.36	0.16	
Clearance Time (s)				4.0	4.0	
Lane Grp Cap (vph)	1213			637	251	
v/s Ratio Prot	c0.40				c0.01	
v/s Ratio Perm				0.37		
v/c Ratio	0.58			1.02	0.03	
Uniform Delay, d1	6.7			27.0	29.8	
Progression Factor	0.06			1.00	1.00	
Incremental Delay, d2	1.3			39.6	0.2	
Delay (s)	1.7			66.6	30.1	
Level of Service	A			E	C	
Approach Delay (s)	1.7			66.6	30.1	
Approach LOS	A			E	C	

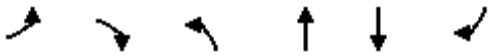
Intersection Summary			
HCM Average Control Delay	32.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	47.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	233	596	32	404	0	0	0	0	17	6	246
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	245	627	34	425	0	0	0	0	18	6	259
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	425			245			1055	1052	436	615	738	425
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	425			245			1055	1052	436	615	738	425
tC, single (s)	4.1			4.2			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			100	100	100	95	98	55
cM capacity (veh/h)	1145			1303			97	223	574	372	339	577

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	164	709	459	24	259
Volume Left	0	0	34	18	0
Volume Right	0	627	0	0	259
cSH	1700	1700	1303	363	577
Volume to Capacity	0.10	0.42	0.03	0.07	0.45
Queue Length 95th (ft)	0	0	2	5	58
Control Delay (s)	0.0	0.0	0.8	15.6	16.2
Lane LOS			A	C	C
Approach Delay (s)	0.0		0.8	16.2	
Approach LOS				C	

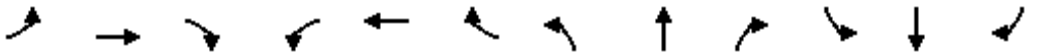
Intersection Summary				
Average Delay	3.1			
Intersection Capacity Utilization	60.3%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	250	0	436	0	0	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	263	0	459	0	0	0

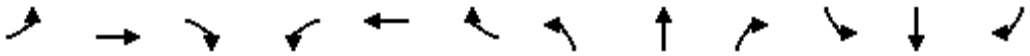
Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	132	132	459
Volume Left (vph)	132	132	459
Volume Right (vph)	0	0	0
Hadj (s)	0.55	0.55	0.25
Departure Headway (s)	6.3	6.3	4.9
Degree Utilization, x	0.23	0.23	0.63
Capacity (veh/h)	544	545	708
Control Delay (s)	9.9	9.9	15.8
Approach Delay (s)	9.9		15.8
Approach LOS	A		C

Intersection Summary			
Delay	13.6		
HCM Level of Service	B		
Intersection Capacity Utilization	39.7%	ICU Level of Service	A
Analysis Period (min)	15		



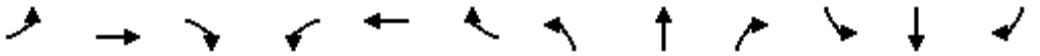
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	490	345	263	621	0	0	0	0	277	269	372
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	13	12	12	12	12	10	10	11
Total Lost time (s)		6.0	6.0		6.0					6.0	6.0	6.0
Lane Util. Factor		0.95	1.00		0.95					0.86	0.81	0.86
Frpb, ped/bikes		1.00	0.98		1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	0.95	0.85
Flt Protected		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (prot)		3179	1232		3424					1359	3806	1133
Flt Permitted		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (perm)		3179	1232		3424					1359	3806	1133
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	516	363	277	654	0	0	0	0	292	283	392
RTOR Reduction (vph)	0	0	234	0	0	0	0	0	0	0	54	113
Lane Group Flow (vph)	0	516	129	0	931	0	0	0	0	161	556	83
Confl. Peds. (#/hr)	4		6	6		4						
Heavy Vehicles (%)	0%	4%	6%	1%	2%	0%	0%	0%	0%	1%	1%	1%
Parking (#/hr)			0									0
Turn Type			Perm	Split						Split		custom
Protected Phases		2		10 12 14	10 12 14					4	4	
Permitted Phases			2									4 2
Actuated Green, G (s)		39.0	39.0		68.2					23.0	23.0	68.0
Effective Green, g (s)		39.0	39.0		68.2					23.0	23.0	68.0
Actuated g/C Ratio		0.24	0.24		0.43					0.14	0.14	0.42
Clearance Time (s)		6.0	6.0							6.0	6.0	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		775	300		1459					195	547	482
v/s Ratio Prot		c0.16			c0.27					0.12	c0.15	
v/s Ratio Perm			0.10									0.07
v/c Ratio		0.67	0.43		0.64					0.83	1.02	0.17
Uniform Delay, d1		54.6	51.1		36.2					66.6	68.5	28.5
Progression Factor		1.00	1.00		0.06					1.00	1.00	1.00
Incremental Delay, d2		4.5	4.4		0.1					23.9	42.7	0.2
Delay (s)		59.1	55.5		2.4					90.4	111.2	28.7
Level of Service		E	E		A					F	F	C
Approach Delay (s)		57.6			2.4			0.0			91.0	
Approach LOS		E			A			A			F	

Intersection Summary			
HCM Average Control Delay	50.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	31.8
Intersection Capacity Utilization	75.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



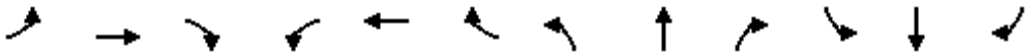
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	292	475	0	0	552	134	332	214	194	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	13	12	12	11	12	13	13	14	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0				
Lane Util. Factor	1.00	0.95			0.95	1.00	0.91	0.91				
Frt	1.00	1.00			1.00	0.85	1.00	0.94				
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (prot)	1605	3431			3210	1485	1561	3065				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (perm)	1605	3431			3210	1485	1561	3065				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	307	500	0	0	581	141	349	225	204	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	84	0	59	0	0	0	0
Lane Group Flow (vph)	307	500	0	0	581	57	265	454	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Split					Perm	Split					
Protected Phases	2 4 8	2 4 8			10		12	12				
Permitted Phases						10						
Actuated Green, G (s)	83.8	83.8			37.0	37.0	12.2	12.2				
Effective Green, g (s)	83.8	83.8			37.0	37.0	12.2	12.2				
Actuated g/C Ratio	0.52	0.52			0.23	0.23	0.08	0.08				
Clearance Time (s)					6.0	6.0	6.0	6.0				
Vehicle Extension (s)					3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	841	1797			742	343	119	234				
v/s Ratio Prot	c0.19	0.15			c0.18		c0.17	0.15				
v/s Ratio Perm						0.04						
v/c Ratio	0.37	0.28			0.78	0.17	2.23	1.94				
Uniform Delay, d1	22.4	21.2			57.7	49.2	73.9	73.9				
Progression Factor	0.01	0.02			1.00	1.00	1.00	1.00				
Incremental Delay, d2	0.2	0.1			5.4	0.2	578.3	438.2				
Delay (s)	0.5	0.4			63.1	49.4	652.2	512.1				
Level of Service	A	A			E	D	F	F				
Approach Delay (s)		0.4			60.5			559.8			0.0	
Approach LOS		A			E			F			A	

Intersection Summary			
HCM Average Control Delay	207.9	HCM Level of Service	F
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	29.0
Intersection Capacity Utilization	63.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	140	258	136	89	210	67	108	522	70	96	803	120
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	14	12	10	10	12	9	10	12
Total Lost time (s)	4.0	4.0	5.0	4.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.99	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1572	1600	1373	1593	1778		1578	3016		1537	3001	
Flt Permitted	0.42	1.00	1.00	0.49	1.00		0.15	1.00		0.32	1.00	
Satd. Flow (perm)	698	1600	1373	828	1778		246	3016		522	3001	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	143	263	139	91	214	68	110	533	71	98	819	122
RTOR Reduction (vph)	0	0	93	0	12	0	0	11	0	0	13	0
Lane Group Flow (vph)	143	263	46	91	270	0	110	593	0	98	928	0
Confl. Peds. (#/hr)	28		8	8		28	59		11	11		59
Confl. Bikes (#/hr)	3					3	1		2	2		1
Heavy Vehicles (%)	1%	5%	2%	0%	4%	0%	1%	4%	0%	0%	3%	3%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	36.3	29.3	29.3	33.3	27.8		39.6	34.1		39.6	34.1	
Effective Green, g (s)	34.3	30.3	29.3	31.3	27.8		37.6	34.1		37.6	34.1	
Actuated g/C Ratio	0.38	0.34	0.33	0.35	0.31		0.42	0.38		0.42	0.38	
Clearance Time (s)	3.0	5.0	5.0	3.0	5.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	326	542	450	328	553		171	1150		271	1145	
v/s Ratio Prot	c0.03	c0.16		0.01	0.15		c0.03	0.20		0.02	c0.31	
v/s Ratio Perm	0.14		0.03	0.08			0.24			0.13		
v/c Ratio	0.44	0.49	0.10	0.28	0.49		0.64	0.52		0.36	0.81	
Uniform Delay, d1	19.1	23.4	20.9	20.2	25.0		18.2	21.3		16.4	24.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.9	3.1	0.5	0.5	3.1		8.0	1.7		0.8	6.3	
Delay (s)	20.0	26.5	21.3	20.6	28.1		26.2	22.9		17.3	31.0	
Level of Service	C	C	C	C	C		C	C		B	C	
Approach Delay (s)		23.5			26.3			23.4			29.7	
Approach LOS		C			C			C			C	

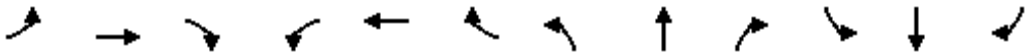
Intersection Summary			
HCM Average Control Delay	26.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	89.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	73.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	313	61	13	298	22	37	59	19	21	91	70
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	10	10	10	12	15	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00			0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.98			0.95	
Flt Protected		0.99	1.00		1.00	1.00		0.98			0.99	
Satd. Flow (prot)		1968	1467		1629	1381		1894			1870	
Flt Permitted		0.94	1.00		0.98	1.00		0.89			0.97	
Satd. Flow (perm)		1867	1467		1605	1381		1712			1824	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	41	329	64	14	314	23	39	62	20	22	96	74
RTOR Reduction (vph)	0	0	32	0	0	12	0	11	0	0	34	0
Lane Group Flow (vph)	0	370	32	0	328	11	0	110	0	0	158	0
Confl. Peds. (#/hr)	12		20	20		12	8		2	2		8
Confl. Bikes (#/hr)	1		2	2		1			1	1		
Heavy Vehicles (%)	3%	3%	0%	0%	3%	0%	0%	0%	0%	0%	1%	3%
Turn Type	Perm		Perm	Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Effective Green, g (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Actuated g/C Ratio		0.49	0.49		0.49	0.49		0.42			0.42	
Clearance Time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		919	722		790	680		711			758	
v/s Ratio Prot												
v/s Ratio Perm		0.20	0.02		c0.20	0.01		0.06			c0.09	
v/c Ratio		0.40	0.04		0.42	0.02		0.15			0.21	
Uniform Delay, d1		10.4	8.6		10.5	8.4		11.9			12.2	
Progression Factor		1.00	1.00		1.93	2.82		1.00			1.95	
Incremental Delay, d2		1.3	0.1		1.5	0.0		0.5			0.6	
Delay (s)		11.8	8.7		21.9	23.9		12.3			24.4	
Level of Service		B	A		C	C		B			C	
Approach Delay (s)		11.3			22.0			12.3			24.4	
Approach LOS		B			C			B			C	

Intersection Summary			
HCM Average Control Delay	17.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	61.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



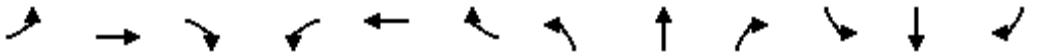
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	194	41	11	214	10	36	114	19	15	184	70
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.94		1.00	0.97		1.00	0.97		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.96	
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		1.00	
Satd. Flow (prot)		1748	1443		1728	1487		1713	1489		1712	
Flt Permitted		0.88	1.00		0.98	1.00		0.89	1.00		0.98	
Satd. Flow (perm)		1552	1443		1701	1487		1542	1489		1689	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	61	202	43	11	223	10	38	119	20	16	192	73
RTOR Reduction (vph)	0	0	28	0	0	6	0	0	10	0	19	0
Lane Group Flow (vph)	0	263	15	0	234	4	0	157	10	0	262	0
Confl. Peds. (#/hr)	19		25	25		19	3		6	6		3
Confl. Bikes (#/hr)	1		2	2		1			1	1		
Heavy Vehicles (%)	0%	2%	0%	0%	4%	0%	0%	5%	0%	0%	0%	2%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Effective Green, g (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Actuated g/C Ratio		0.35	0.35		0.35	0.35		0.49	0.49		0.49	
Clearance Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Grp Cap (vph)		549	511		602	526		759	733		832	
v/s Ratio Prot												
v/s Ratio Perm		c0.17	0.01		0.14	0.00		0.10	0.01		c0.15	
v/c Ratio		0.48	0.03		0.39	0.01		0.21	0.01		0.31	
Uniform Delay, d1		16.3	13.7		15.7	13.6		9.3	8.4		9.9	
Progression Factor		1.92	3.44		0.96	0.95		0.19	0.24		1.00	
Incremental Delay, d2		2.8	0.1		1.8	0.0		0.4	0.0		1.0	
Delay (s)		34.2	47.3		16.9	12.9		2.2	2.1		10.9	
Level of Service		C	D		B	B		A	A		B	
Approach Delay (s)		36.0			16.7			2.2			10.9	
Approach LOS		D			B			A			B	

Intersection Summary			
HCM Average Control Delay	18.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	62.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	147	35	76	8	14	9	38	225	8	21	481	204
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.95		0.98			1.00			1.00	0.94
Flpb, ped/bikes		0.98	1.00		0.99			1.00			1.00	1.00
Frt		1.00	0.85		0.96			1.00			1.00	0.85
Flt Protected		0.96	1.00		0.99			0.99			1.00	1.00
Satd. Flow (prot)		1871	1440		1776			1993			1976	1382
Flt Permitted		0.78	1.00		0.94			0.90			0.98	1.00
Satd. Flow (perm)		1509	1440		1693			1814			1948	1382
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	155	37	80	8	15	9	40	237	8	22	506	215
RTOR Reduction (vph)	0	0	47	0	7	0	0	2	0	0	0	90
Lane Group Flow (vph)	0	192	33	0	25	0	0	283	0	0	528	125
Confl. Peds. (#/hr)	37		53	53		37	39		54	54		39
Confl. Bikes (#/hr)							2					2
Heavy Vehicles (%)	4%	0%	1%	0%	0%	0%	0%	1%	0%	0%	3%	4%
Turn Type	pm+pt		Perm	Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		27.0	27.0		17.0			32.0			32.0	32.0
Effective Green, g (s)		27.0	27.0		17.0			32.0			32.0	32.0
Actuated g/C Ratio		0.42	0.42		0.26			0.49			0.49	0.49
Clearance Time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		671	598		443			893			959	680
v/s Ratio Prot		c0.04										
v/s Ratio Perm		0.08	0.02		0.01			0.16			c0.27	0.09
v/c Ratio		0.29	0.06		0.06			0.32			0.55	0.18
Uniform Delay, d1		12.6	11.4		18.0			9.9			11.5	9.2
Progression Factor		0.64	0.82		1.00			0.60			0.64	0.23
Incremental Delay, d2		1.0	0.2		0.2			0.8			1.8	0.5
Delay (s)		9.0	9.5		18.2			6.8			9.2	2.6
Level of Service		A	A		B			A			A	A
Approach Delay (s)		9.2			18.2			6.8			7.3	
Approach LOS		A			B			A			A	

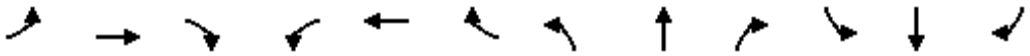
Intersection Summary			
HCM Average Control Delay	7.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	70.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	866	289	333	961	0	0	0	0	513	284	334
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	11	8	8	8	11	12	14
Total Lost time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Lane Util. Factor		0.91		1.00	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.96		1.00	1.00					1.00	0.98	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.98	1.00
Satd. Flow (prot)		4569		1620	3320					1489	2913	1442
Flt Permitted		1.00		0.14	1.00					0.95	0.98	1.00
Satd. Flow (perm)		4569		238	3320					1489	2913	1442
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	884	295	340	981	0	0	0	0	523	290	341
RTOR Reduction (vph)	0	44	0	0	0	0	0	0	0	0	9	105
Lane Group Flow (vph)	0	1135	0	340	981	0	0	0	0	298	584	158
Confl. Peds. (#/hr)	15		11	11		15						
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	0%	3%	3%	2%	3%	0%	0%	0%	0%	1%	3%	3%
Turn Type				pm+pt						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Actuated Green, G (s)		47.1		75.2	75.2					27.8	27.8	27.8
Effective Green, g (s)		47.1		75.2	75.2					27.8	27.8	27.8
Actuated g/C Ratio		0.41		0.65	0.65					0.24	0.24	0.24
Clearance Time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Vehicle Extension (s)		7.0		3.5	7.0					3.5	3.5	3.5
Lane Grp Cap (vph)		1871		439	2171					360	704	349
v/s Ratio Prot		0.25		c0.16	0.30							
v/s Ratio Perm				c0.35						0.20	0.20	0.11
v/c Ratio		0.61		0.77	0.45					0.83	0.83	0.45
Uniform Delay, d1		26.7		22.4	9.8					41.3	41.4	37.1
Progression Factor		1.00		1.05	1.59					1.00	1.00	1.00
Incremental Delay, d2		1.5		6.2	0.5					14.8	8.2	1.1
Delay (s)		28.1		29.6	16.0					56.1	49.6	38.2
Level of Service		C		C	B					E	D	D
Approach Delay (s)		28.1			19.5			0.0			48.7	
Approach LOS		C			B			A			D	

Intersection Summary			
HCM Average Control Delay	31.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	100.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



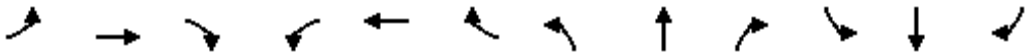
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	341	1038	0	0	864	271	430	351	308	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	11	12	12	12	12	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0		6.0				
Lane Util. Factor	0.97	0.95			0.95	1.00		0.91				
Frpb, ped/bikes	1.00	1.00			1.00	0.98		1.00				
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00				
Frt	1.00	1.00			1.00	0.85		0.96				
Flt Protected	0.95	1.00			1.00	1.00		0.98				
Satd. Flow (prot)	3144	3353			3241	1489		4526				
Flt Permitted	0.19	1.00			1.00	1.00		0.98				
Satd. Flow (perm)	615	3353			3241	1489		4526				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	359	1093	0	0	909	285	453	369	324	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	95	0	58	0	0	0	0
Lane Group Flow (vph)	359	1093	0	0	909	190	0	1088	0	0	0	0
Confl. Peds. (#/hr)	7		5	5		7						
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	2%	2%	0%	0%	2%	1%	2%	1%	3%	0%	0%	0%
Turn Type	pm+pt					Perm	Perm					
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8					
Actuated Green, G (s)	68.8	68.8			50.9	50.9		34.2				
Effective Green, g (s)	68.8	68.8			50.9	50.9		34.2				
Actuated g/C Ratio	0.60	0.60			0.44	0.44		0.30				
Clearance Time (s)	6.0	6.0			6.0	6.0		6.0				
Vehicle Extension (s)	3.5	7.0			7.0	7.0		5.0				
Lane Grp Cap (vph)	630	2006			1434	659		1346				
v/s Ratio Prot	0.06	c0.33			c0.28							
v/s Ratio Perm	0.28					0.13		0.24				
v/c Ratio	0.57	0.54			0.63	0.29		0.81				
Uniform Delay, d1	14.1	13.8			24.8	20.5		37.4				
Progression Factor	0.64	0.32			0.94	1.07		1.00				
Incremental Delay, d2	1.0	0.8			1.8	0.9		4.2				
Delay (s)	10.0	5.1			25.1	22.8		41.6				
Level of Service	A	A			C	C		D				
Approach Delay (s)		6.3			24.5			41.6			0.0	
Approach LOS		A			C			D			A	

Intersection Summary			
HCM Average Control Delay	22.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	100.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	135	633	408	104	626	53	227	179	66	74	162	121
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	11	12	12	10	10	13	10	10	10
Total Lost time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		0.99	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.96		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1564	3273	1313	1600	3283		1578	3002		1540	2941	
Flt Permitted	0.18	1.00	1.00	0.40	1.00		0.39	1.00		0.59	1.00	
Satd. Flow (perm)	296	3273	1313	671	3283		652	3002		961	2941	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	142	666	429	109	659	56	239	188	69	78	171	127
RTOR Reduction (vph)	0	0	173	0	6	0	0	38	0	0	107	0
Lane Group Flow (vph)	142	666	256	109	709	0	239	219	0	78	191	0
Confl. Peds. (#/hr)	11		23	23		11	8		12	12		8
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	2%	1%	3%	3%	3%	0%	1%	1%	2%	3%	0%	1%
Parking (#/hr)			0									
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	64.9	52.3	68.7	42.0	32.9		38.1	26.7		26.1	18.2	
Effective Green, g (s)	64.9	52.3	68.7	42.0	32.9		38.1	26.7		26.1	18.2	
Actuated g/C Ratio	0.56	0.45	0.60	0.37	0.29		0.33	0.23		0.23	0.16	
Clearance Time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0		3.0	7.0		3.0	7.0	
Lane Grp Cap (vph)	481	1489	784	319	939		348	697		258	465	
v/s Ratio Prot	0.07	c0.20	0.05	c0.03	c0.22		c0.10	0.07		0.02	0.06	
v/s Ratio Perm	0.09		0.15	0.10			c0.13			0.05		
v/c Ratio	0.30	0.45	0.33	0.34	0.76		0.69	0.31		0.30	0.41	
Uniform Delay, d1	14.1	21.5	11.6	24.9	37.4		30.6	36.6		36.2	43.6	
Progression Factor	0.67	0.81	2.63	1.00	1.00		0.86	0.94		1.00	1.00	
Incremental Delay, d2	1.3	0.8	0.2	0.6	5.6		5.4	0.9		0.7	2.1	
Delay (s)	10.8	18.1	30.6	25.5	43.0		31.8	35.1		36.9	45.7	
Level of Service	B	B	C	C	D		C	D		D	D	
Approach Delay (s)		21.6			40.7			33.5			43.8	
Approach LOS		C			D			C			D	

Intersection Summary			
HCM Average Control Delay	31.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	70.7%	ICU Level of Service	C
Analysis Period (min)	15		

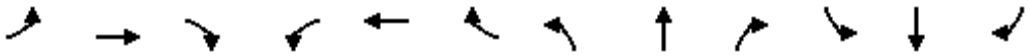
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	46	193	367	72	213	113	362	340	78	206	408	56
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	12	11	12	12	11	13	12	10	11	12
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.90		1.00	0.95		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1705	2894		1653	3184		1620	3407		1580	3183	
Flt Permitted	0.52	1.00		0.29	1.00		0.32	1.00		0.50	1.00	
Satd. Flow (perm)	934	2894		502	3184		544	3407		826	3183	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	48	203	386	76	224	119	381	358	82	217	429	59
RTOR Reduction (vph)	0	269	0	0	56	0	0	17	0	0	9	0
Lane Group Flow (vph)	48	320	0	76	287	0	381	423	0	217	479	0
Confl. Peds. (#/hr)	12		3	3		12	5					5
Heavy Vehicles (%)	0%	2%	2%	0%	1%	1%	2%	1%	0%	1%	2%	0%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	41.6	34.9		44.0	36.1		56.2	44.2		40.1	32.1	
Effective Green, g (s)	41.6	34.9		44.0	36.1		56.2	44.2		40.1	32.1	
Actuated g/C Ratio	0.36	0.30		0.38	0.31		0.49	0.38		0.35	0.28	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.5	7.0		3.5	7.0		3.5	7.0		3.5	7.0	
Lane Grp Cap (vph)	383	878		271	999		454	1309		340	888	
v/s Ratio Prot	0.01	c0.11		c0.02	0.09		c0.15	0.12		0.04	0.15	
v/s Ratio Perm	0.04			0.09			c0.26			0.18		
v/c Ratio	0.13	0.36		0.28	0.29		0.84	0.32		0.64	0.54	
Uniform Delay, d1	24.1	31.4		23.7	29.7		20.8	24.9		28.8	35.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.99	0.98	
Incremental Delay, d2	0.2	1.2		0.7	0.7		13.1	0.7		3.8	2.2	
Delay (s)	24.3	32.5		24.3	30.5		33.9	25.5		32.3	36.6	
Level of Service	C	C		C	C		C	C		C	D	
Approach Delay (s)		31.9			29.4			29.4			35.3	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM Average Control Delay	31.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	74.2%	ICU Level of Service	D
Analysis Period (min)	15		

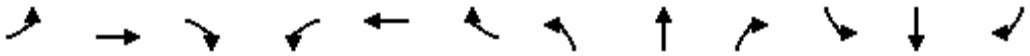
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	105	603	141	10	376	66	104	287	9	198	609	183
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	9	11	12	9	9	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.98		1.00	1.00		1.00	0.97	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3029			3035		1452	3228		1522	2872	
Flt Permitted		0.72			0.93		0.21	1.00		0.56	1.00	
Satd. Flow (perm)		2185			2822		318	3228		898	2872	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	111	635	148	11	396	69	109	302	9	208	641	193
RTOR Reduction (vph)	0	25	0	0	21	0	0	3	0	0	44	0
Lane Group Flow (vph)	0	869	0	0	455	0	109	308	0	208	790	0
Confl. Peds. (#/hr)	4		2	2		4	8		4	4		8
Confl. Bikes (#/hr)							2					2
Heavy Vehicles (%)	1%	2%	2%	0%	2%	6%	6%	2%	0%	1%	3%	3%
Turn Type	pm+pt			Perm			pm+pt			pm+pt		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			17.0		28.0	24.0		28.0	24.0	
Effective Green, g (s)		25.0			17.0		28.0	24.0		28.0	24.0	
Actuated g/C Ratio		0.38			0.26		0.43	0.37		0.43	0.37	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		892			738		207	1192		425	1060	
v/s Ratio Prot		c0.06					c0.03	0.10		0.03	c0.28	
v/s Ratio Perm		c0.31			0.16		0.19			0.18		
v/c Ratio		0.97			0.62		0.53	0.26		0.49	0.75	
Uniform Delay, d1		19.7			21.1		12.2	14.3		12.4	17.8	
Progression Factor		1.00			1.51		1.06	0.59		1.00	1.00	
Incremental Delay, d2		24.5			0.4		8.9	0.5		4.0	4.8	
Delay (s)		44.1			32.2		21.9	8.9		16.4	22.6	
Level of Service		D			C		C	A		B	C	
Approach Delay (s)		44.1			32.2			12.3			21.4	
Approach LOS		D			C			B			C	

Intersection Summary			
HCM Average Control Delay	29.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	82.7%	ICU Level of Service	E
Analysis Period (min)	15		

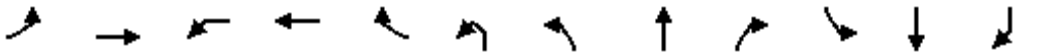
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	67	198	136	109	167	28	72	462	80	35	698	70
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.94		1.00	0.98		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1707	1885		1599	1993		1676	3221		1435	3273	
Flt Permitted	0.62	1.00		0.44	1.00		0.28	1.00		0.41	1.00	
Satd. Flow (perm)	1118	1885		736	1993		502	3221		623	3273	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	71	208	143	115	176	29	76	486	84	37	735	74
RTOR Reduction (vph)	0	38	0	0	9	0	0	21	0	0	12	0
Lane Group Flow (vph)	71	313	0	115	196	0	76	549	0	37	797	0
Confl. Peds. (#/hr)	3		20	20		3	2		3	3		2
Confl. Bikes (#/hr)			1	1			2		2	2		2
Heavy Vehicles (%)	0%	0%	1%	6%	0%	0%	2%	3%	6%	19%	3%	2%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.48	0.48		0.48	0.48	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	413	696		272	736		239	1536		297	1561	
v/s Ratio Prot		c0.17			0.10			0.17			c0.24	
v/s Ratio Perm	0.06			0.16			0.15			0.06		
v/c Ratio	0.17	0.45		0.42	0.27		0.32	0.36		0.12	0.51	
Uniform Delay, d1	13.8	15.5		15.3	14.3		10.5	10.7		9.5	11.8	
Progression Factor	1.00	1.00		1.30	1.31		1.00	1.00		1.12	0.91	
Incremental Delay, d2	0.9	2.1		3.0	0.5		3.5	0.6		0.6	0.8	
Delay (s)	14.7	17.6		22.9	19.4		14.0	11.4		11.1	11.5	
Level of Service	B	B		C	B		B	B		B	B	
Approach Delay (s)		17.1			20.7			11.7			11.5	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM Average Control Delay	13.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	70.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	785	227	550	18	3	10	9	47	9	0	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	10	10	10	12	12	16	12	12	16	12
Total Lost time (s)		5.0		5.0				4.0			4.0	
Lane Util. Factor		0.95		0.95				1.00			1.00	
Frpb, ped/bikes		1.00		1.00				0.99			0.98	
Flpb, ped/bikes		1.00		1.00				1.00			1.00	
Frt		1.00		1.00				0.91			0.94	
Flt Protected		1.00		0.99				0.99			0.97	
Satd. Flow (prot)		3160		3091				1810			1824	
Flt Permitted		0.95		0.56				0.96			0.89	
Satd. Flow (perm)		3012		1753				1750			1671	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	2	826	239	579	19	3	11	9	49	9	0	3
RTOR Reduction (vph)	0	0	0	2	0	0	0	38	0	0	4	0
Lane Group Flow (vph)	0	828	0	835	0	0	0	34	0	0	13	0
Confl. Peds. (#/hr)	7		4		7		7		2	2		7
Confl. Bikes (#/hr)							2		2	2		2
Heavy Vehicles (%)	0%	1%	2%	1%	6%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Perm		custom			Perm	Perm			Perm		
Protected Phases		8	7	4				2			6	
Permitted Phases	8		4 7			2	2			6		
Actuated Green, G (s)		18.0		27.0				14.0			14.0	
Effective Green, g (s)		18.0		27.0				14.0			14.0	
Actuated g/C Ratio		0.28		0.42				0.22			0.22	
Clearance Time (s)		5.0		5.0				4.0			4.0	
Lane Grp Cap (vph)		834		852				377			360	
v/s Ratio Prot				c0.09								
v/s Ratio Perm		0.27		c0.32				c0.02			0.01	
v/c Ratio		0.99		1.14dl				0.09			0.04	
Uniform Delay, d1		23.4		18.7				20.4			20.2	
Progression Factor		1.45		0.88				1.00			1.00	
Incremental Delay, d2		20.4		25.5				0.5			0.2	
Delay (s)		54.3		41.9				20.9			20.4	
Level of Service		D		D				C			C	
Approach Delay (s)		54.3		41.9				20.9			20.4	
Approach LOS		D		D				C			C	

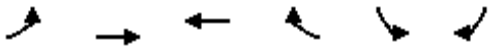
Intersection Summary			
HCM Average Control Delay	53.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	91.8%	ICU Level of Service	F
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group



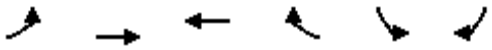
Movement	SBR2	NEL	NER
Lane Configurations			
Volume (vph)	5	3	242
Ideal Flow (vphpl)	1800	1800	1800
Lane Width	12	12	12
Total Lost time (s)		5.0	
Lane Util. Factor		1.00	
Frpb, ped/bikes		1.00	
Flpb, ped/bikes		1.00	
Frt		0.87	
Flt Protected		1.00	
Satd. Flow (prot)		1559	
Flt Permitted		1.00	
Satd. Flow (perm)		1559	
Peak-hour factor, PHF	0.95	0.95	0.95
Adj. Flow (vph)	5	3	255
RTOR Reduction (vph)	0	0	0
Lane Group Flow (vph)	0	258	0
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Heavy Vehicles (%)	0%	0%	0%
Turn Type			
Protected Phases		3	
Permitted Phases			
Actuated Green, G (s)		10.0	
Effective Green, g (s)		10.0	
Actuated g/C Ratio		0.15	
Clearance Time (s)		5.0	
Lane Grp Cap (vph)		240	
v/s Ratio Prot		c0.17	
v/s Ratio Perm			
v/c Ratio		1.07	
Uniform Delay, d1		27.5	
Progression Factor		0.87	
Incremental Delay, d2		77.3	
Delay (s)		101.4	
Level of Service		F	
Approach Delay (s)		101.4	
Approach LOS		F	

Intersection Summary



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	264	792	569	63	96	234
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frt		1.00	0.99		1.00	0.85
Flt Protected		0.99	1.00		0.95	1.00
Satd. Flow (prot)		3279	3271		1660	1485
Flt Permitted		0.65	1.00		0.95	1.00
Satd. Flow (perm)		2152	3271		1660	1485
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	278	834	599	66	101	246
RTOR Reduction (vph)	0	0	13	0	0	182
Lane Group Flow (vph)	0	1112	652	0	101	64
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		40.0	40.0		17.0	17.0
Effective Green, g (s)		40.0	40.0		17.0	17.0
Actuated g/C Ratio		0.62	0.62		0.26	0.26
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1324	2013		434	388
v/s Ratio Prot			0.20		c0.06	
v/s Ratio Perm		c0.52				0.04
v/c Ratio		0.84	0.32		0.23	0.17
Uniform Delay, d1		10.0	6.0		18.9	18.5
Progression Factor		1.20	1.19		1.29	2.46
Incremental Delay, d2		2.0	0.4		1.2	0.9
Delay (s)		13.9	7.5		25.6	46.4
Level of Service		B	A		C	D
Approach Delay (s)		13.9	7.5		40.4	
Approach LOS		B	A		D	

Intersection Summary			
HCM Average Control Delay	16.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	65.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



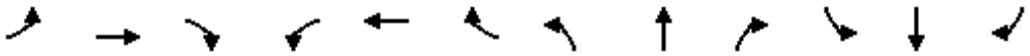
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	81	810	548	152	265	88
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	12	10	11	12	10	10
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frpb, ped/bikes		1.00	1.00		1.00	0.99
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.97		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3118	3068		1506	1343
Flt Permitted		0.82	1.00		0.95	1.00
Satd. Flow (perm)		2567	3068		1506	1343
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	85	853	577	160	279	93
RTOR Reduction (vph)	0	0	39	0	0	60
Lane Group Flow (vph)	0	938	698	0	279	33
Confl. Peds. (#/hr)	2			2		1
Heavy Vehicles (%)	1%	2%	2%	10%	6%	5%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		34.0	34.0		23.0	23.0
Effective Green, g (s)		34.0	34.0		23.0	23.0
Actuated g/C Ratio		0.52	0.52		0.35	0.35
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1343	1605		533	475
v/s Ratio Prot			0.23		c0.19	
v/s Ratio Perm		c0.37				0.02
v/c Ratio		0.70	0.44		0.52	0.07
Uniform Delay, d1		11.6	9.6		16.7	13.9
Progression Factor		1.08	1.11		1.65	3.36
Incremental Delay, d2		1.9	0.8		3.2	0.3
Delay (s)		14.5	11.4		30.8	46.9
Level of Service		B	B		C	D
Approach Delay (s)		14.5	11.4		34.8	
Approach LOS		B	B		C	

Intersection Summary			
HCM Average Control Delay	17.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	72.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



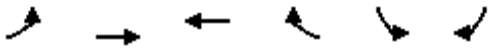
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	674	261	121	589	205	58
Ideal Flow (vphpl)	2300	1800	1800	2300	1800	1800
Lane Width	15	12	14	16	15	12
Total Lost time (s)	5.0		5.0	5.0	5.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.96		1.00	1.00	0.97	
Flt Protected	1.00		0.95	1.00	0.96	
Satd. Flow (prot)	2387		1788	2506	1748	
Flt Permitted	1.00		0.13	1.00	0.96	
Satd. Flow (perm)	2387		243	2506	1748	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	709	275	127	620	216	61
RTOR Reduction (vph)	21	0	0	0	16	0
Lane Group Flow (vph)	963	0	127	620	261	0
Confl. Peds. (#/hr)						1
Heavy Vehicles (%)	2%	2%	2%	4%	7%	0%
Turn Type			Perm			
Protected Phases	4			8	2	
Permitted Phases			8			
Actuated Green, G (s)	31.0		31.0	31.0	24.0	
Effective Green, g (s)	31.0		31.0	31.0	24.0	
Actuated g/C Ratio	0.48		0.48	0.48	0.37	
Clearance Time (s)	5.0		5.0	5.0	5.0	
Lane Grp Cap (vph)	1138		116	1195	645	
v/s Ratio Prot	0.40			0.25	c0.15	
v/s Ratio Perm			c0.52			
v/c Ratio	0.85		1.09	0.52	0.41	
Uniform Delay, d1	14.9		17.0	11.8	15.2	
Progression Factor	1.34		1.00	1.00	1.00	
Incremental Delay, d2	6.0		111.3	1.6	1.9	
Delay (s)	25.9		128.3	13.4	17.1	
Level of Service	C		F	B	B	
Approach Delay (s)	25.9			33.0	17.1	
Approach LOS	C			C	B	

Intersection Summary			
HCM Average Control Delay	27.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	77.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	995	38	112	704	1	62	0	157	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	15	13	11	11	12	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0	4.0	3.0	3.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00			
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1881	3431	1479	1589	3320	1530		1938	1500			
Flt Permitted	0.37	1.00	1.00	0.21	1.00	1.00		0.76	1.00			
Satd. Flow (perm)	739	3431	1479	356	3320	1530		1545	1500			
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	1	1036	40	117	733	1	65	0	164	0	0	0
RTOR Reduction (vph)	0	0	15	0	0	0	0	0	146	0	0	0
Lane Group Flow (vph)	1	1036	25	117	733	1	0	65	18	0	0	0
Heavy Vehicles (%)	0%	3%	0%	4%	3%	0%	0%	0%	2%	0%	0%	0%
Turn Type	Perm		Perm	custom		custom	Perm		Perm	Perm		
Protected Phases		4		3	3 8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)	53.0	53.0	53.0	67.9	67.9	67.9		9.1	9.1			
Effective Green, g (s)	53.0	53.0	53.0	67.9	67.9	67.9		9.1	9.1			
Actuated g/C Ratio	0.62	0.62	0.62	0.80	0.80	0.80		0.11	0.11			
Clearance Time (s)	4.0	4.0	4.0	3.0		4.0		4.0	4.0			
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0			
Lane Grp Cap (vph)	461	2139	922	457	2652	1222		165	161			
v/s Ratio Prot		c0.30		0.04	c0.22							
v/s Ratio Perm	0.00		0.02	0.17		0.00		c0.04	0.01			
v/c Ratio	0.00	0.48	0.03	0.26	0.28	0.00		0.39	0.11			
Uniform Delay, d1	6.0	8.6	6.1	3.2	2.2	1.7		35.4	34.3			
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00			
Incremental Delay, d2	0.0	0.8	0.1	0.3	0.1	0.0		1.6	0.3			
Delay (s)	6.0	9.4	6.2	3.5	2.3	1.7		36.9	34.6			
Level of Service	A	A	A	A	A	A		D	C			
Approach Delay (s)		9.3			2.4			35.3			0.0	
Approach LOS		A			A			D			A	

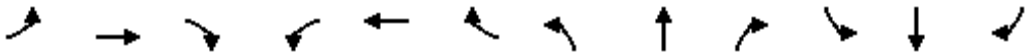
Intersection Summary			
HCM Average Control Delay	9.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	50.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	9	946	840	30	71	13
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10
Total Lost time (s)		5.0	5.0		3.0	
Lane Util. Factor		0.95	0.95		1.00	
Frt		1.00	0.99		0.98	
Flt Protected		1.00	1.00		0.96	
Satd. Flow (prot)		3098	3083		1532	
Flt Permitted		0.94	1.00		0.96	
Satd. Flow (perm)		2928	3083		1532	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	9	996	884	32	75	14
RTOR Reduction (vph)	0	0	3	0	7	0
Lane Group Flow (vph)	0	1005	913	0	82	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Perm					
Protected Phases		4	8 2 11		5	
Permitted Phases	4					
Actuated Green, G (s)		33.0	64.0		7.0	
Effective Green, g (s)		33.0	64.0		7.0	
Actuated g/C Ratio		0.37	0.71		0.08	
Clearance Time (s)		5.0			3.0	
Lane Grp Cap (vph)		1074	2192		119	
v/s Ratio Prot			c0.30		c0.05	
v/s Ratio Perm		c0.34				
v/c Ratio		0.94	0.42		0.69	
Uniform Delay, d1		27.5	5.3		40.4	
Progression Factor		1.00	0.01		1.00	
Incremental Delay, d2		15.8	0.2		27.6	
Delay (s)		43.3	0.3		68.1	
Level of Service		D	A		E	
Approach Delay (s)		43.3	0.3		68.1	
Approach LOS		D	A		E	

Intersection Summary			
HCM Average Control Delay	24.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	46.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	38	480	0	1	577	39	3	2	28	202	0	133
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12	12	11	12	11
Total Lost time (s)		4.0			4.0			3.0			3.0	3.0
Lane Util. Factor		1.00			0.95			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			0.94			1.00	0.98
Flpb, ped/bikes		1.00			1.00			1.00			0.99	1.00
Frt		1.00			0.99			0.88			1.00	0.85
Flt Protected		1.00			1.00			1.00			0.95	1.00
Satd. Flow (prot)		1774			3340			1467			1669	1348
Flt Permitted		0.92			0.95			0.93			0.89	1.00
Satd. Flow (perm)		1640			3190			1369			1568	1348
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	40	505	0	1	607	41	3	2	29	213	0	140
RTOR Reduction (vph)	0	0	0	0	6	0	0	26	0	0	0	94
Lane Group Flow (vph)	0	545	0	0	643	0	0	8	0	0	213	46
Confl. Peds. (#/hr)	60		44	44		60	14		10	10		14
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	0%	1%	0%	0%	1%	3%	20%	0%	0%	1%	0%	7%
Turn Type	Perm			Prot			Perm			pm+pt		Perm
Protected Phases		4		3	3 4			1		2	1 2	
Permitted Phases	4				3		1	1		1 2		1 2
Actuated Green, G (s)		31.0			45.0			9.0			25.0	28.0
Effective Green, g (s)		31.0			45.0			9.0			25.0	28.0
Actuated g/C Ratio		0.36			0.53			0.11			0.29	0.33
Clearance Time (s)		4.0						3.0				
Lane Grp Cap (vph)		598			1714			145			480	444
v/s Ratio Prot					c0.06						c0.08	
v/s Ratio Perm		c0.33			0.14			0.01			c0.05	0.03
v/c Ratio		0.91			0.38			0.06			0.44	0.10
Uniform Delay, d1		25.7			11.7			34.2			24.4	19.8
Progression Factor		1.00			1.19			1.00			1.00	1.00
Incremental Delay, d2		20.5			0.1			0.7			3.0	0.5
Delay (s)		46.2			14.0			34.9			27.3	20.3
Level of Service		D			B			C			C	C
Approach Delay (s)		46.2			14.0			34.9			24.5	
Approach LOS		D			B			C			C	

Intersection Summary			
HCM Average Control Delay	27.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	75.8%	ICU Level of Service	D
Analysis Period (min)	15		

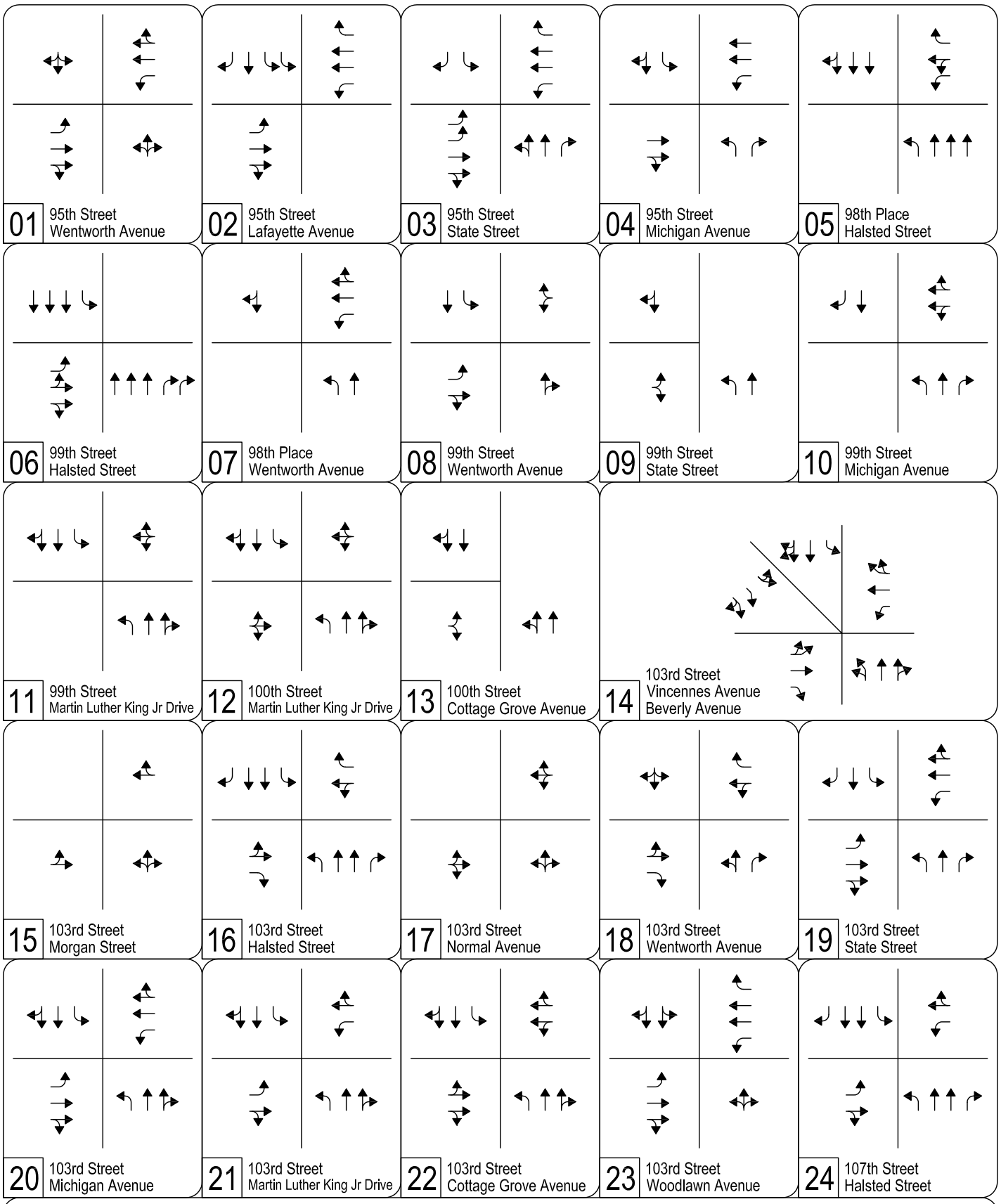
c Critical Lane Group

Appendix C
Bus Rapid Transit (BRT) Alternative

BRT Alternative Project Traffic Estimates

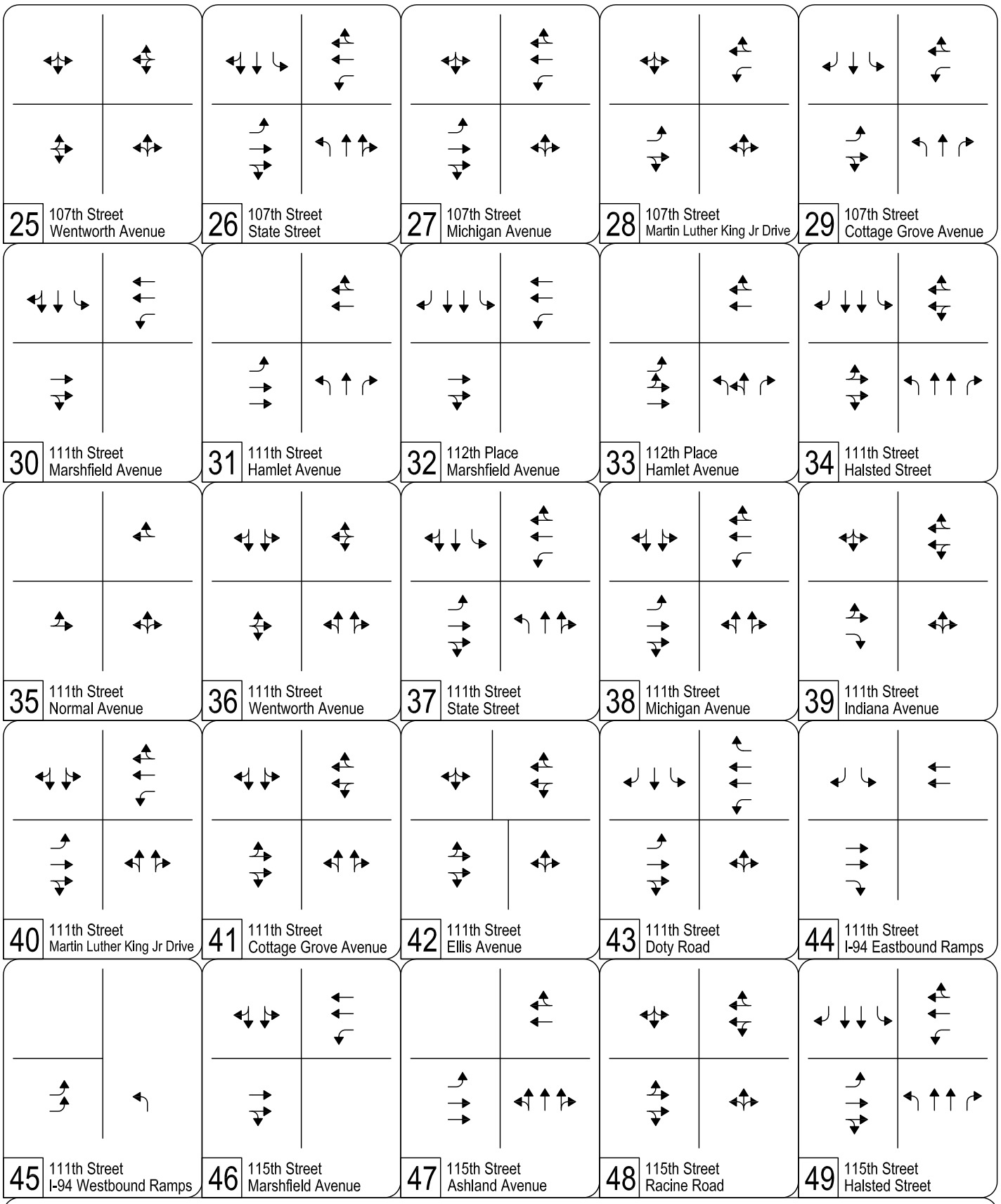
ITE Land Use	Unit	Trip Generation Rate			Peak Hour Direction			
		Daily	AM Peak Hour	PM Peak Hour	AM In	AM Out	PM In	PM Out
Light Rail with Park and Ride	Parking Spaces	2.51	1.07	1.24	80%	20%	20%	80%

BRT Alternative Park and Ride Facilities		Estimated Project Traffic						
Location	Parking Spaces	Daily	AM In	AM Out	AM Total	PM In	PM Out	PM Total
103rd Street	200	502	171	43	214	50	198	248
111th Street	200	502	171	43	214	50	198	248
Kensington Avenue	1,000	2,510	856	214	1,070	248	992	1,240
130th Street	1,400	3,514	1,198	300	1,498	347	1,389	1,736
Total	**2,800**	**7,028**	**2,396**	**600**	**2,996**	**695**	**2,777**	**3,472**



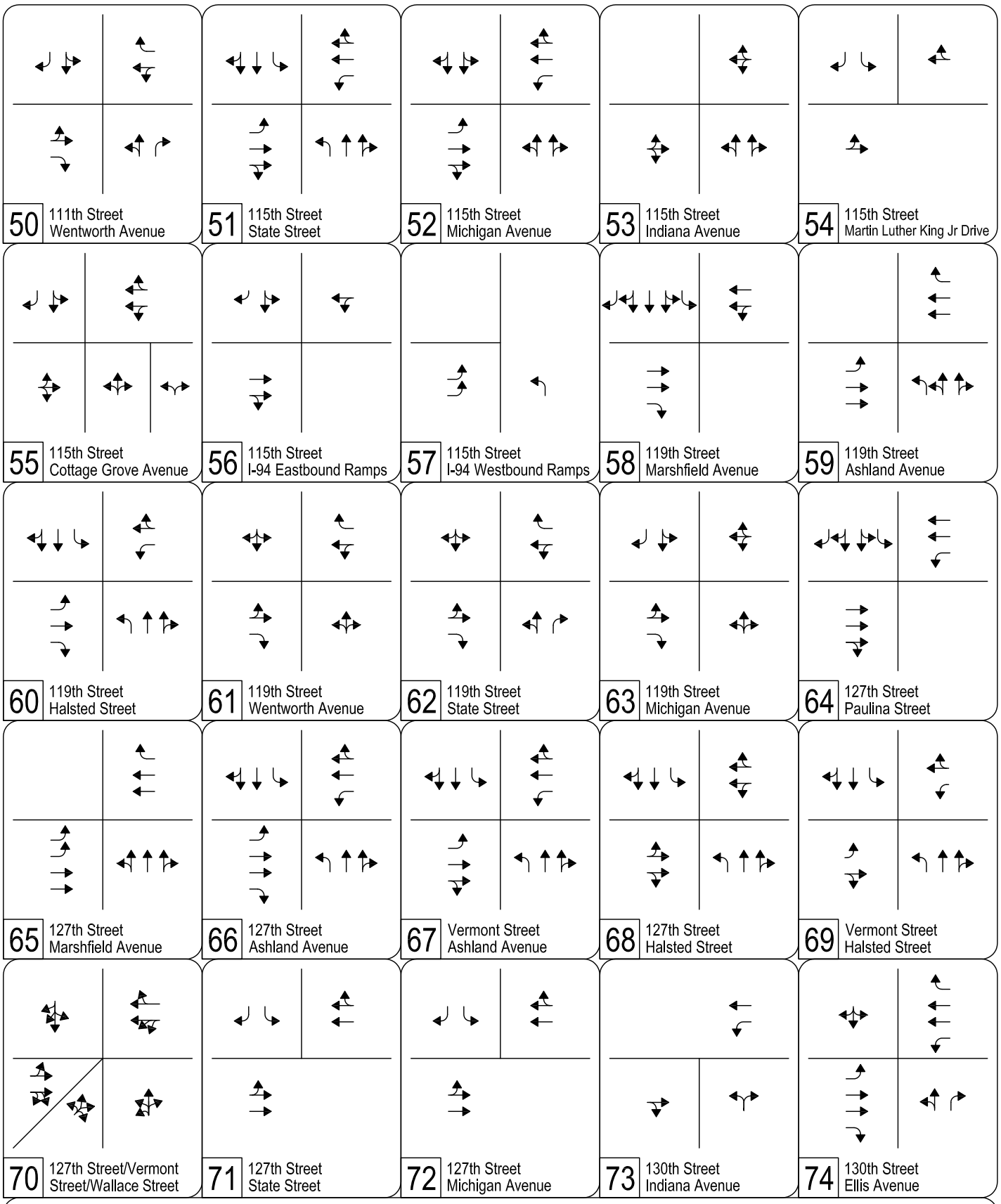
BRT Alternative (2026) Intersection Lane Geometry

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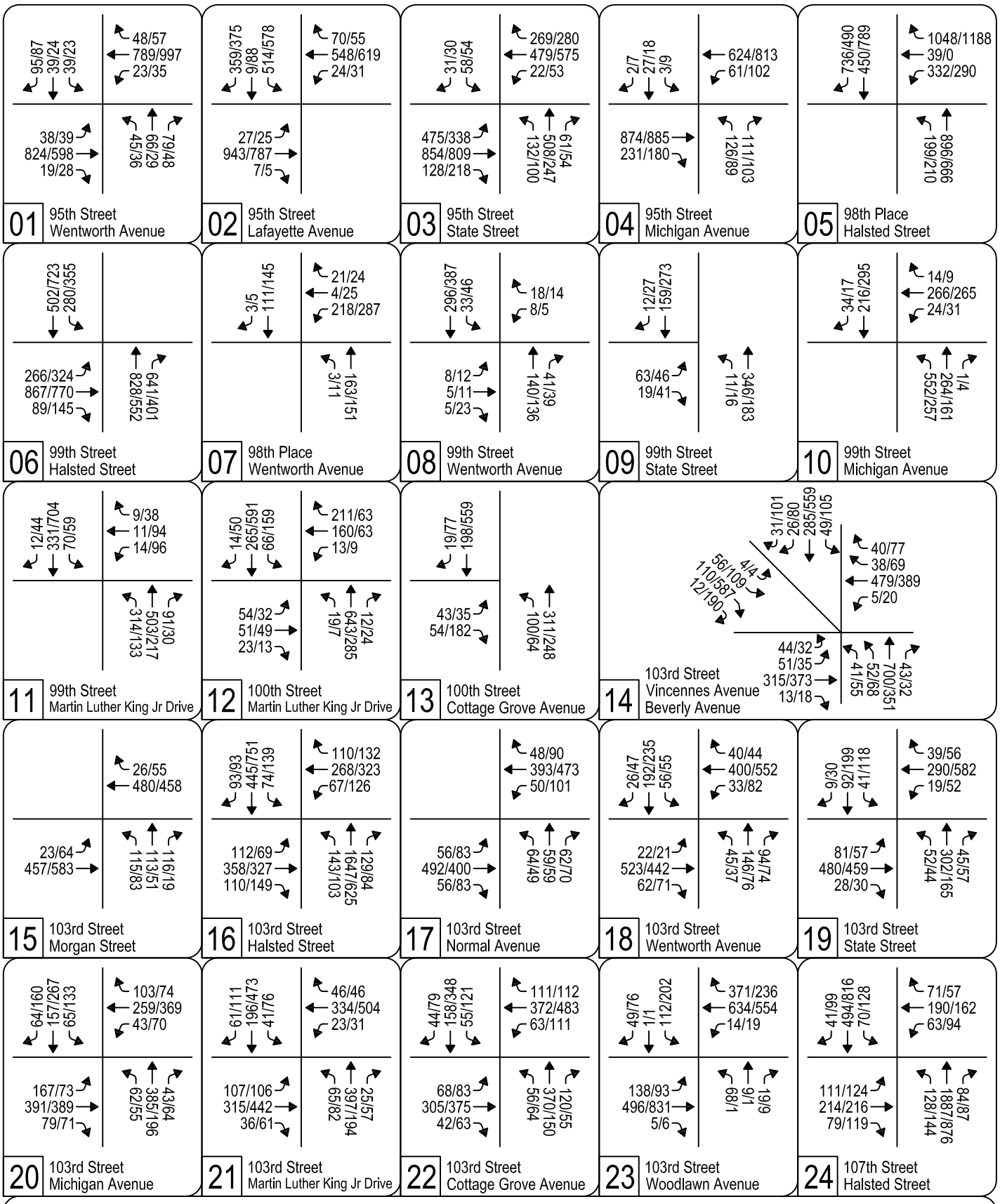
BRT Alternative (2026) Intersection Lane Geometry

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BRT Alternative (2026) Intersection Lane Geometry

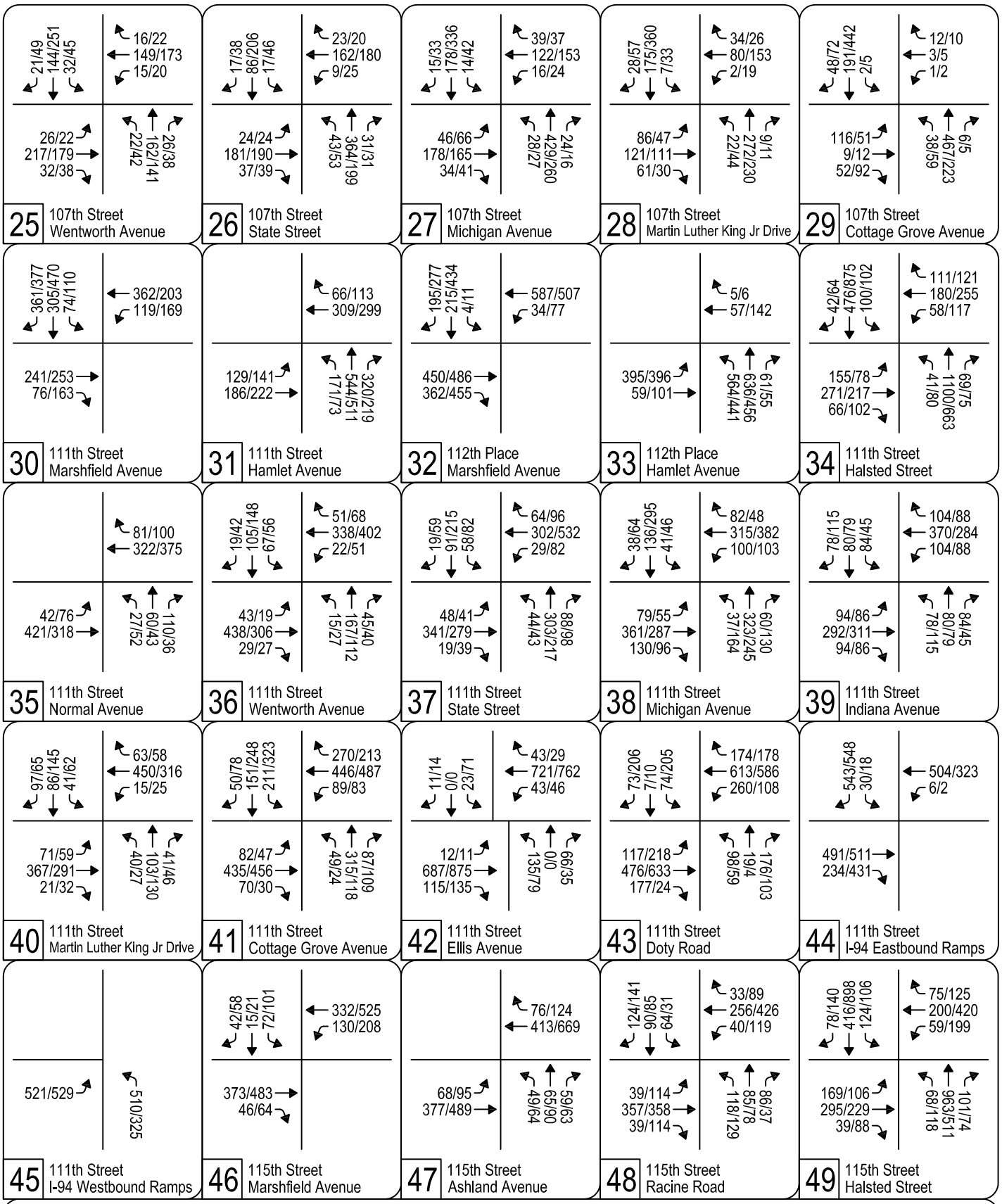
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BRT Alternative (2026) Intersection Traffic Volumes

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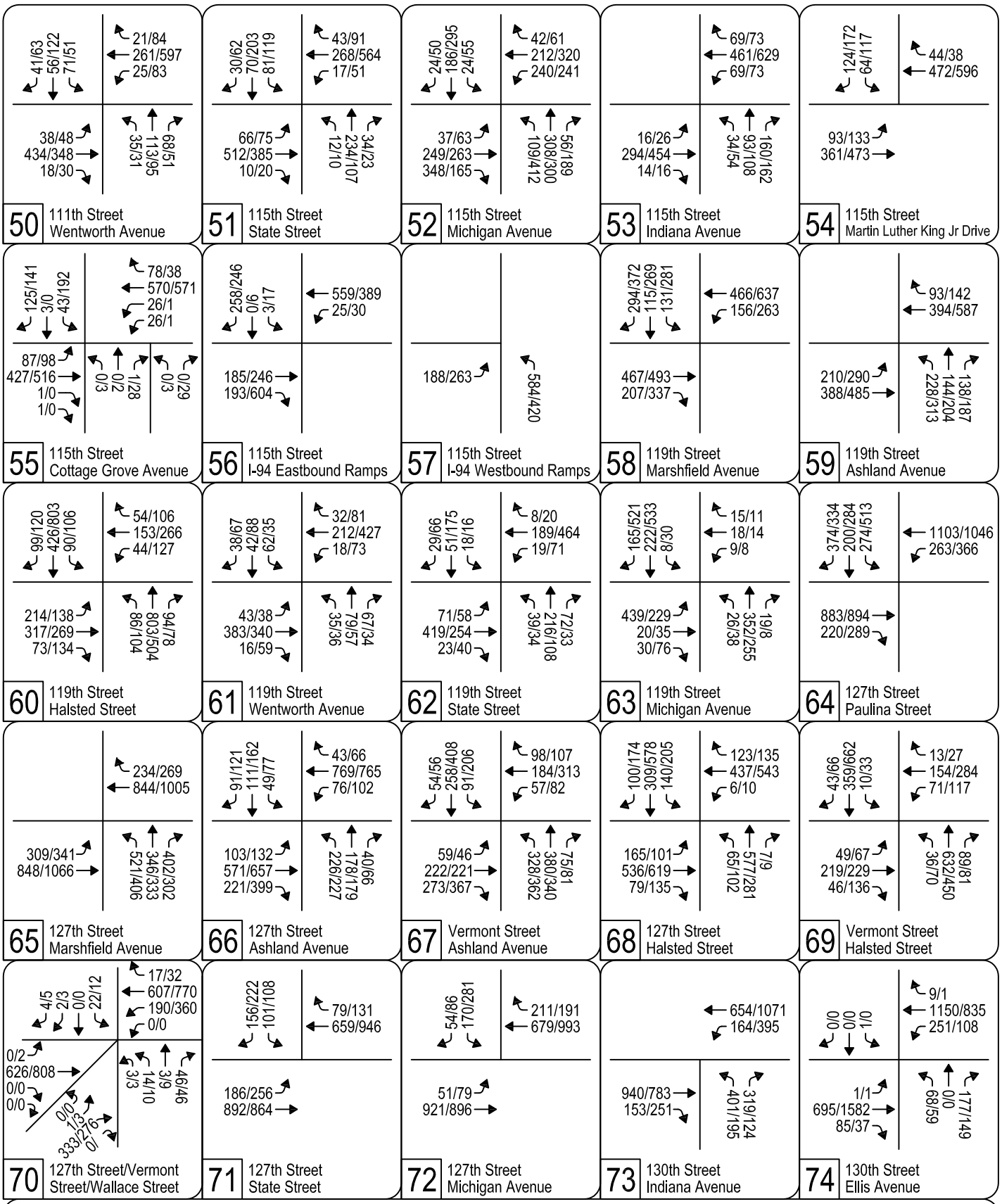
Legend: AM/PM Peak Hour Volumes



BRT Alternative (2026) Intersection Traffic Volumes

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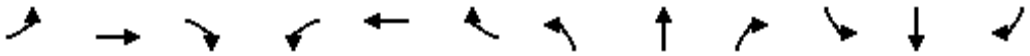
Legend: AM/PM Peak Hour Volumes



BRT Alternative (2026) Intersection Traffic Volumes

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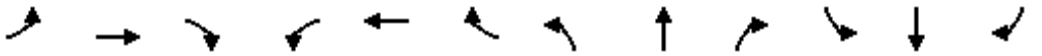
Legend: AM/PM Peak Hour Volumes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	38	824	19	23	789	48	45	66	79	39	39	95
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	16	10	10	16	8	15	8	8	14	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			0.99			0.99	
Flpb, ped/bikes	0.98	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	0.99			0.94			0.93	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1416	2975		1592	2978			1753			1670	
Flt Permitted	0.26	1.00		0.26	1.00			0.90			0.90	
Satd. Flow (perm)	384	2975		429	2978			1597			1527	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	40	867	20	24	831	51	47	69	83	41	41	100
RTOR Reduction (vph)	0	2	0	0	7	0	0	39	0	0	63	0
Lane Group Flow (vph)	40	885	0	24	875	0	0	160	0	0	119	0
Confl. Peds. (#/hr)	61		11	11		61	3		5	5		3
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	11%	7%	0%	0%	6%	2%	2%	7%	4%	5%	7%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			22.0			22.0	
Effective Green, g (s)	34.0	34.0		34.0	34.0			23.0			23.0	
Actuated g/C Ratio	0.52	0.52		0.52	0.52			0.35			0.35	
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0			5.0	
Lane Grp Cap (vph)	201	1556		224	1558			565			540	
v/s Ratio Prot		c0.30			0.29							
v/s Ratio Perm	0.10			0.06				c0.10			0.08	
v/c Ratio	0.20	0.57		0.11	0.56			0.28			0.22	
Uniform Delay, d1	8.3	10.5		7.8	10.5			15.1			14.7	
Progression Factor	1.00	1.00		0.81	1.13			1.00			1.00	
Incremental Delay, d2	2.2	1.5		0.8	1.3			1.2			0.9	
Delay (s)	10.5	12.0		7.2	13.1			16.3			15.7	
Level of Service	B	B		A	B			B			B	
Approach Delay (s)		12.0			12.9			16.3			15.7	
Approach LOS		B			B			B			B	

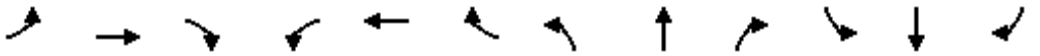
Intersection Summary			
HCM Average Control Delay	13.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	27	943	7	24	548	70	0	0	0	514	9	359
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00				0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.67				1.00	1.00	0.96
Flpb, ped/bikes	0.91	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	776	3285		1710	3138	512				3100	1440	1399
Flt Permitted	0.43	1.00		0.14	1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	355	3285		248	3138	512				3100	1440	1399
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	28	993	7	25	577	74	0	0	0	541	9	378
RTOR Reduction (vph)	0	1	0	0	0	32	0	0	0	0	0	172
Lane Group Flow (vph)	28	999	0	25	577	42	0	0	0	541	9	206
Confl. Peds. (#/hr)	354		13	13		354	22		22	22		22
Confl. Bikes (#/hr)	4					4			1	1		
Heavy Vehicles (%)	100%	4%	0%	0%	9%	100%	0%	0%	0%	7%	25%	5%
Turn Type	pm+pt			pm+pt		Perm				Split		Perm
Protected Phases	7	4		3	8					6	6	
Permitted Phases	4			8		8						6
Actuated Green, G (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Effective Green, g (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Actuated g/C Ratio	0.33	0.33		0.56	0.56	0.56				0.23	0.23	0.23
Clearance Time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Grp Cap (vph)	163	1087		634	1762	288				715	332	323
v/s Ratio Prot	0.02	c0.30		0.01	c0.18					c0.17	0.01	
v/s Ratio Perm	0.04			0.01		0.08						0.15
v/c Ratio	0.17	0.92		0.04	0.33	0.14				0.76	0.03	0.64
Uniform Delay, d1	31.6	41.8		15.1	15.3	13.6				46.6	38.7	45.1
Progression Factor	0.80	0.82		0.29	0.62	1.95				1.00	1.00	1.00
Incremental Delay, d2	2.0	12.2		0.1	0.3	0.7				7.3	0.2	9.2
Delay (s)	27.2	46.7		4.5	9.8	27.2				53.9	38.9	54.3
Level of Service	C	D		A	A	C				D	D	D
Approach Delay (s)		46.2			11.5			0.0			54.0	
Approach LOS		D			B			A			D	

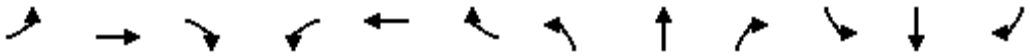
Intersection Summary			
HCM Average Control Delay	40.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	51.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	475	854	128	22	479	269	132	508	61	58	0	31
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.65		1.00	0.95	1.00		0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.98		1.00	1.00	0.85		1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (prot)	3190	3107		1555	2923	944		3300	1419	855		738
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (perm)	3190	3107		1555	2923	944		3300	1419	855		738
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	500	899	135	23	504	283	139	535	64	61	0	33
RTOR Reduction (vph)	0	9	0	0	0	161	0	0	25	0	0	30
Lane Group Flow (vph)	500	1025	0	23	504	122	0	674	39	61	0	3
Confl. Peds. (#/hr)	425		21	21		425	6		34	34		6
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	4%	8%	3%	10%	17%	5%	1%	3%	2%	100%	0%	100%
Turn Type	Prot			Prot		Perm	Split		Perm	Prot		custom
Protected Phases	7	4		3	8		2	2		6		
Permitted Phases						8			2			6
Actuated Green, G (s)	40.0	62.0		9.0	31.0	31.0		31.0	31.0	10.0		10.0
Effective Green, g (s)	40.0	62.0		9.0	31.0	31.0		31.0	31.0	10.0		10.0
Actuated g/C Ratio	0.31	0.48		0.07	0.24	0.24		0.24	0.24	0.08		0.08
Clearance Time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	982	1482		108	697	225		787	338	66		57
v/s Ratio Prot	0.16	c0.33		0.01	c0.17			c0.20		c0.07		
v/s Ratio Perm						0.13			0.03			0.00
v/c Ratio	0.51	0.69		0.21	0.72	0.54		0.86	0.11	0.92		0.04
Uniform Delay, d1	36.9	26.5		57.2	45.6	43.3		47.4	38.8	59.6		55.6
Progression Factor	0.75	0.21		1.00	1.00	1.00		0.94	0.89	1.00		1.00
Incremental Delay, d2	0.9	1.3		4.5	6.4	9.0		11.4	0.7	83.9		0.3
Delay (s)	28.5	6.9		61.6	52.0	52.3		56.2	35.3	143.5		55.9
Level of Service	C	A		E	D	D		E	D	F		E
Approach Delay (s)		13.9			52.3			54.4			112.7	
Approach LOS		B			D			D			F	

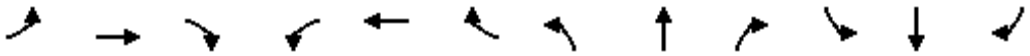
Intersection Summary			
HCM Average Control Delay	36.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	71.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	874	231	61	624	0	126	0	111	3	27	2
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	11	11	8	12	12	12	14	15	12
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes		0.99		1.00	1.00		1.00		0.98	1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00		1.00		1.00	0.99	1.00	
Frt		0.97		1.00	1.00		1.00		0.85	1.00	0.99	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		2852		1650	3005		1390		1465	1803	1961	
Flt Permitted		1.00		0.16	1.00		0.74		1.00	0.95	1.00	
Satd. Flow (perm)		2852		275	3005		1078		1465	1803	1961	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	971	257	68	693	0	140	0	123	3	30	2
RTOR Reduction (vph)	0	24	0	0	0	0	0	0	82	0	1	0
Lane Group Flow (vph)	0	1204	0	68	693	0	140	0	41	3	31	0
Confl. Peds. (#/hr)	49		15	15		49			12	12		
Heavy Vehicles (%)	0%	6%	14%	0%	10%	0%	23%	0%	2%	0%	0%	0%
Turn Type				Perm			custom		custom	Perm		
Protected Phases		4			8						6	
Permitted Phases				8			2		2	6		
Actuated Green, G (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Effective Green, g (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Actuated g/C Ratio		0.60		0.60	0.60		0.32		0.32	0.32	0.32	
Clearance Time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)		1711		165	1803		345		469	577	628	
v/s Ratio Prot		c0.42			0.23						0.02	
v/s Ratio Perm				0.25			c0.13		0.03	0.00		
v/c Ratio		0.70		0.41	0.38		0.41		0.09	0.01	0.05	
Uniform Delay, d1		13.8		10.6	10.4		26.6		23.8	23.2	23.5	
Progression Factor		1.00		1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		2.5		7.4	0.6		3.5		0.4	0.0	0.1	
Delay (s)		16.3		18.1	11.0		30.1		24.2	23.2	23.6	
Level of Service		B		B	B		C		C	C	C	
Approach Delay (s)		16.3			11.6			27.3			23.6	
Approach LOS		B			B			C			C	

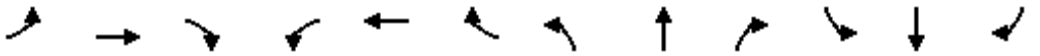
Intersection Summary			
HCM Average Control Delay	16.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	332	39	1048	199	896	0	0	450	736
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	12	10	10	12	12	11	12
Total Lost time (s)				4.0	4.0	5.0	3.0	4.0			4.0	
Lane Util. Factor				0.95	0.95	1.00	1.00	0.91			0.91	
Frpb, ped/bikes				1.00	1.00	0.99	1.00	1.00			0.98	
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00			1.00	
Frt				1.00	1.00	0.85	1.00	1.00			0.91	
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (prot)				1525	1629	1479	1550	4368			3931	
Flt Permitted				0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (perm)				1525	1629	1479	1550	4368			3931	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	339	40	1069	203	914	0	0	459	751
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	339	40	1069	203	914	0	0	1210	0
Confl. Peds. (#/hr)	2					2	12		8	8		12
Heavy Vehicles (%)	0%	0%	0%	3%	5%	2%	3%	5%	0%	0%	5%	8%
Turn Type				Perm		Perm	Prot					
Protected Phases					8		5	2			6	
Permitted Phases				8		8						
Actuated Green, G (s)				30.0	30.0	30.0	32.0	66.0			31.0	
Effective Green, g (s)				31.0	31.0	30.0	32.0	66.0			31.0	
Actuated g/C Ratio				0.30	0.30	0.29	0.30	0.63			0.30	
Clearance Time (s)				5.0	5.0	5.0	3.0	4.0			4.0	
Lane Grp Cap (vph)				450	481	423	472	2746			1161	
v/s Ratio Prot							c0.13	0.21			c0.31	
v/s Ratio Perm				0.22	0.02	c0.72						
v/c Ratio				0.75	0.08	2.53	0.43	0.33			1.87dr	
Uniform Delay, d1				33.5	26.7	37.5	29.2	9.2			37.0	
Progression Factor				1.00	1.00	1.00	0.65	2.37			1.00	
Incremental Delay, d2				11.1	0.3	694.2	2.0	0.2			38.1	
Delay (s)				44.6	27.1	731.7	21.2	21.9			75.1	
Level of Service				D	C	F	C	C			E	
Approach Delay (s)		0.0			551.4			21.8			75.1	
Approach LOS		A			F			C			E	

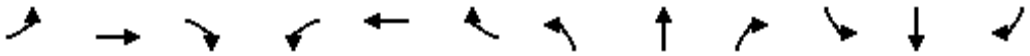
Intersection Summary			
HCM Average Control Delay	242.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.31		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.5%	ICU Level of Service	F
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	266	867	89	0	0	0	0	828	641	280	502	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	13	12	12	12	12	12	10	10	8	12	12	12
Total Lost time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Util. Factor	0.91	0.91						0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00						1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00						1.00	1.00	1.00	1.00	
Frt	1.00	0.99						1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1497	3185						4368	2187	1583	4636	
Flt Permitted	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1497	3185						4368	2187	1583	4636	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	274	894	92	0	0	0	0	854	661	289	518	0
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	247	1006	0	0	0	0	0	854	661	289	518	0
Confl. Peds. (#/hr)	4		14	14		4	4		3	3		4
Heavy Vehicles (%)	7%	1%	0%	0%	0%	0%	0%	5%	4%	8%	6%	0%
Turn Type	Perm								Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Actuated Green, G (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Effective Green, g (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Actuated g/C Ratio	0.32	0.32						0.27	0.27	0.30	0.59	
Clearance Time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Grp Cap (vph)	485	1031						1165	583	467	2737	
v/s Ratio Prot								0.20		c0.18	0.11	
v/s Ratio Perm	0.16	0.32							c0.30			
v/c Ratio	0.51	0.98						0.73	1.13	0.62	0.19	
Uniform Delay, d1	28.7	35.1						35.1	38.5	31.9	9.9	
Progression Factor	1.00	1.00						0.44	0.46	1.06	0.43	
Incremental Delay, d2	3.8	22.8						0.4	62.5	2.5	0.1	
Delay (s)	32.5	57.9						15.7	80.3	36.4	4.3	
Level of Service	C	E						B	F	D	A	
Approach Delay (s)		52.9			0.0			43.9			15.8	
Approach LOS		D			A			D			B	

Intersection Summary			
HCM Average Control Delay	40.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

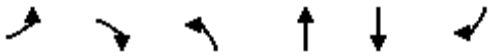


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	218	4	21	3	163	0	0	111	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	14	12	12	16	12
Total Lost time (s)				4.0	4.0		4.0	4.0			-3.0	
Lane Util. Factor				1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes				1.00	0.98		1.00	1.00			1.00	
Flpb, ped/bikes				1.00	1.00		1.00	1.00			1.00	
Frt				1.00	0.87		1.00	1.00			1.00	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1578	2709		1285	1882			1960	
Flt Permitted				0.95	1.00		0.58	1.00			1.00	
Satd. Flow (perm)				1578	2709		788	1882			1960	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	242	4	23	3	181	0	0	123	3
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	242	9	0	3	181	0	0	125	0
Confl. Peds. (#/hr)	2		2	2		2	3					3
Heavy Vehicles (%)	0%	0%	0%	8%	25%	5%	33%	2%	0%	0%	3%	33%
Turn Type				Perm			pm+pt					
Protected Phases					8		7	2			6	
Permitted Phases				8			2					
Actuated Green, G (s)				27.0	27.0		50.0	50.0			40.0	
Effective Green, g (s)				27.0	27.0		50.0	50.0			46.0	
Actuated g/C Ratio				0.32	0.32		0.59	0.59			0.54	
Clearance Time (s)				4.0	4.0		4.0	4.0			3.0	
Lane Grp Cap (vph)				501	861		504	1107			1061	
v/s Ratio Prot					0.00		0.00	c0.10			0.06	
v/s Ratio Perm				c0.15			0.00					
v/c Ratio				0.48	0.01		0.01	0.16			0.12	
Uniform Delay, d1				23.4	19.9		9.9	8.0			9.6	
Progression Factor				1.00	1.00		1.06	1.18			1.00	
Incremental Delay, d2				3.3	0.0		0.0	0.3			0.2	
Delay (s)				26.7	19.9		10.5	9.7			9.8	
Level of Service				C	B		B	A			A	
Approach Delay (s)		0.0			26.0			9.8			9.8	
Approach LOS		A			C			A			A	

Intersection Summary			
HCM Average Control Delay	17.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

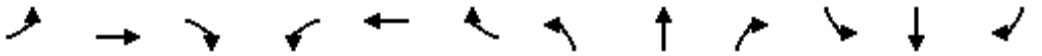
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	8	5	5	8	0	18	0	140	41	33	296	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	16	15	12	8	12	8	12	12	12	10	13	12
Total Lost time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99			1.00			1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00			1.00		1.00	1.00	
Frt	1.00	0.93			0.91			0.97		1.00	1.00	
Flt Protected	0.95	1.00			0.99			1.00		0.95	1.00	
Satd. Flow (prot)	1938	1809			1603			1686		1595	1755	
Flt Permitted	0.74	1.00			0.96			1.00		0.60	1.00	
Satd. Flow (perm)	1509	1809			1558			1686		1013	1755	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	8	5	5	8	0	19	0	147	43	35	312	0
RTOR Reduction (vph)	0	3	0	0	13	0	0	12	0	0	0	0
Lane Group Flow (vph)	8	7	0	0	14	0	0	178	0	35	312	0
Confl. Peds. (#/hr)			3	3			5		2	2		5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	3%	0%	6%	0%
Turn Type	Perm			Perm						pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Effective Green, g (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Actuated g/C Ratio	0.32	0.32			0.32			0.47		0.59	0.59	
Clearance Time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Grp Cap (vph)	479	575			495			793		644	1032	
v/s Ratio Prot		0.00						0.11		0.00	c0.18	
v/s Ratio Perm	0.01				c0.01					0.03		
v/c Ratio	0.02	0.01			0.03			0.22		0.05	0.30	
Uniform Delay, d1	19.9	19.9			20.0			13.3		8.5	8.8	
Progression Factor	1.00	1.00			1.00			1.00		0.99	0.90	
Incremental Delay, d2	0.1	0.0			0.1			0.7		0.2	0.7	
Delay (s)	20.0	19.9			20.1			14.0		8.6	8.6	
Level of Service	B	B			C			B		A	A	
Approach Delay (s)		19.9			20.1			14.0			8.6	
Approach LOS		B			C			B			A	

Intersection Summary			
HCM Average Control Delay	11.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.21		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



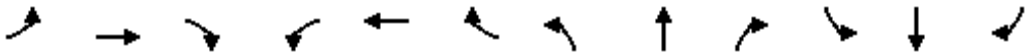
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	63	19	11	346	159	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	14	12	13	12	10	12
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	0.99		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.97		1.00	1.00	0.99	
Flt Protected	0.96		0.95	1.00	1.00	
Satd. Flow (prot)	1782		1767	1765	1634	
Flt Permitted	0.96		0.64	1.00	1.00	
Satd. Flow (perm)	1782		1187	1765	1634	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	70	21	12	384	177	13
RTOR Reduction (vph)	14	0	0	0	4	0
Lane Group Flow (vph)	77	0	12	384	186	0
Confl. Peds. (#/hr)		2				
Heavy Vehicles (%)	0%	0%	0%	2%	2%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.0		36.0	36.0	36.0	
Effective Green, g (s)	21.0		36.0	36.0	36.0	
Actuated g/C Ratio	0.32		0.55	0.55	0.55	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	576		657	978	905	
v/s Ratio Prot	c0.04			c0.22	0.11	
v/s Ratio Perm			0.01			
v/c Ratio	0.13		0.02	0.39	0.21	
Uniform Delay, d1	15.6		6.5	8.3	7.3	
Progression Factor	1.00		0.31	0.51	1.13	
Incremental Delay, d2	0.5		0.0	1.1	0.4	
Delay (s)	16.0		2.1	5.3	8.7	
Level of Service	B		A	A	A	
Approach Delay (s)	16.0			5.2	8.7	
Approach LOS	B			A	A	

Intersection Summary			
HCM Average Control Delay	7.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	39.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	24	266	14	552	264	1	0	216	34
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	14	16	12	12	15	12	12	13	10
Total Lost time (s)					4.0		4.0	4.0			3.0	3.0
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Frt					0.99		1.00	1.00			1.00	0.85
Flt Protected					1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3735		1660	1752			1603	1298
Flt Permitted					1.00		0.55	1.00			1.00	1.00
Satd. Flow (perm)					3735		955	1752			1603	1298
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	27	296	16	613	293	1	0	240	38
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	0	0	0	21
Lane Group Flow (vph)	0	0	0	0	335	0	613	294	0	0	240	17
Confl. Peds. (#/hr)									30	30		
Heavy Vehicles (%)	0%	0%	0%	11%	2%	0%	3%	13%	0%	0%	16%	10%
Turn Type				Split			pm+pt					Perm
Protected Phases				8	8		7	2			6	
Permitted Phases							2					6
Actuated Green, G (s)					26.0		51.0	51.0			38.0	38.0
Effective Green, g (s)					26.0		51.0	51.0			38.0	38.0
Actuated g/C Ratio					0.31		0.60	0.60			0.45	0.45
Clearance Time (s)					4.0		4.0	4.0			3.0	3.0
Lane Grp Cap (vph)					1142		656	1051			717	580
v/s Ratio Prot					c0.09		c0.11	0.17			0.15	
v/s Ratio Perm							c0.45					0.01
v/c Ratio					0.29		0.93	0.28			0.33	0.03
Uniform Delay, d1					22.5		17.5	8.2			15.3	13.2
Progression Factor					1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2					0.7		22.3	0.7			1.3	0.1
Delay (s)					23.1		39.8	8.8			16.5	13.3
Level of Service					C		D	A			B	B
Approach Delay (s)		0.0			23.1			29.8			16.1	
Approach LOS		A			C			C			B	

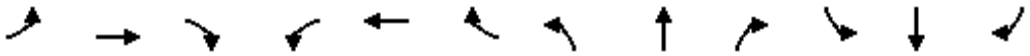
Intersection Summary			
HCM Average Control Delay	25.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	14	11	9	314	503	91	70	331	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	15	12	12	12	12	12	13	12
Total Lost time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.96		1.00	0.98		1.00	0.99	
Flt Protected					0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1801		1692	3238		1707	3352	
Flt Permitted					0.98		0.51	1.00		0.33	1.00	
Satd. Flow (perm)					1801		905	3238		597	3352	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	16	12	10	349	559	101	78	368	13
RTOR Reduction (vph)	0	0	0	0	7	0	0	20	0	0	3	0
Lane Group Flow (vph)	0	0	0	0	31	0	349	640	0	78	378	0
Confl. Peds. (#/hr)	2					2	6		20	20		6
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	0%	0%	0%	11%	0%	1%	3%	0%	0%	5%	0%
Turn Type				Split			pm+pt			pm+pt		
Protected Phases				8	8		5	2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)					23.0		41.0	34.0		41.0	34.0	
Effective Green, g (s)					23.0		41.0	34.0		41.0	34.0	
Actuated g/C Ratio					0.31		0.55	0.45		0.55	0.45	
Clearance Time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Grp Cap (vph)					552		568	1468		430	1520	
v/s Ratio Prot					c0.02		c0.06	0.20		0.02	0.11	
v/s Ratio Perm							c0.28			0.08		
v/c Ratio					0.06		0.61	0.44		0.18	0.25	
Uniform Delay, d1					18.3		13.1	14.0		11.8	12.6	
Progression Factor					1.00		0.71	0.73		1.00	1.00	
Incremental Delay, d2					0.2		4.5	0.9		0.9	0.4	
Delay (s)					18.5		13.9	11.1		12.8	13.0	
Level of Service					B		B	B		B	B	
Approach Delay (s)		0.0			18.5			12.0			13.0	
Approach LOS		A			B			B			B	

Intersection Summary			
HCM Average Control Delay	12.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	55.0%	ICU Level of Service	B
Analysis Period (min)	15		

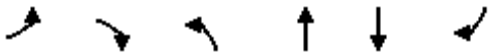
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	54	51	23	13	160	211	19	643	12	66	265	14
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	16	12	12	10	11	12	12	11	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.93		1.00	1.00		1.00	0.99	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1945			1625		1596	3232		1641	3132	
Flt Permitted		0.71			0.99		0.57	1.00		0.35	1.00	
Satd. Flow (perm)		1411			1612		961	3232		603	3132	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	57	54	24	14	168	222	20	677	13	69	279	15
RTOR Reduction (vph)	0	11	0	0	59	0	0	2	0	0	5	0
Lane Group Flow (vph)	0	124	0	0	345	0	20	688	0	69	289	0
Confl. Peds. (#/hr)									6	6		
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	0%	0%	12%	2%	2%	0%	2%	0%	4%	5%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Effective Green, g (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Actuated g/C Ratio		0.33			0.33		0.56	0.56		0.56	0.56	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		470			537		538	1810		338	1754	
v/s Ratio Prot								c0.21			0.09	
v/s Ratio Perm		0.09			c0.21		0.02			0.11		
v/c Ratio		0.26			0.64		0.04	0.38		0.20	0.16	
Uniform Delay, d1		18.3			21.2		7.4	9.2		8.2	8.0	
Progression Factor		1.00			1.00		1.00	1.00		0.16	0.07	
Incremental Delay, d2		1.4			5.8		0.1	0.6		1.3	0.2	
Delay (s)		19.7			27.0		7.5	9.8		2.6	0.8	
Level of Service		B			C		A	A		A	A	
Approach Delay (s)		19.7			27.0			9.8			1.1	
Approach LOS		B			C			A			A	

Intersection Summary			
HCM Average Control Delay	13.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	43	54	100	311	198	19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	48	60	111	346	220	21

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	108	226	230	147	94
Volume Left (vph)	48	111	0	0	0
Volume Right (vph)	60	0	0	0	21
Hadj (s)	-0.16	0.33	0.08	0.09	-0.07
Departure Headway (s)	5.2	5.4	5.1	5.4	5.2
Degree Utilization, x	0.16	0.34	0.33	0.22	0.14
Capacity (veh/h)	631	655	686	647	666
Control Delay (s)	9.2	9.9	9.4	8.6	7.8
Approach Delay (s)	9.2	9.6		8.3	
Approach LOS	A	A		A	

Intersection Summary			
Delay	9.2		
HCM Level of Service	A		
Intersection Capacity Utilization	34.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	44	51	315	13	5	479	38	40	41	52	700	43
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	0.95	
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.97			1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Frt		1.00	1.00	0.85	1.00	1.00	0.85			1.00	0.99	
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	
Satd. Flow (prot)		1575	1731	1530	1710	1731	1487			1710	3291	
Flt Permitted		0.11	1.00	1.00	0.55	1.00	1.00			0.41	1.00	
Satd. Flow (perm)		187	1731	1530	992	1731	1487			737	3291	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	49	57	350	14	6	532	42	44	46	58	778	48
RTOR Reduction (vph)	0	0	0	7	0	0	31	0	0	0	5	0
Lane Group Flow (vph)	0	106	350	7	6	532	55	0	0	104	821	0
Confl. Peds. (#/hr)		5					5					6
Heavy Vehicles (%)	8%	9%	4%	0%	0%	4%	0%	0%	0%	0%	3%	0%
Turn Type	Perm	pm+pt		Perm	Perm		Perm		Perm	Perm		
Protected Phases		7	4			8					2	
Permitted Phases	4	4		4	8		8		2	2		
Actuated Green, G (s)		50.0	50.0	50.0	32.0	32.0	32.0			25.0	25.0	
Effective Green, g (s)		50.0	50.0	50.0	32.0	32.0	32.0			25.0	25.0	
Actuated g/C Ratio		0.48	0.48	0.48	0.30	0.30	0.30			0.24	0.24	
Clearance Time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Grp Cap (vph)		281	824	729	302	528	453			175	784	
v/s Ratio Prot		0.05	c0.20			c0.31					c0.25	
v/s Ratio Perm		0.13		0.00	0.01		0.04			0.14		
v/c Ratio		0.38	0.42	0.01	0.02	1.01	0.12			0.59	1.05	
Uniform Delay, d1		20.2	18.1	14.5	25.5	36.5	26.4			35.5	40.0	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Incremental Delay, d2		3.8	1.6	0.0	0.1	41.1	0.6			14.0	45.4	
Delay (s)		24.0	19.7	14.5	25.7	77.6	26.9			49.5	85.4	
Level of Service		C	B	B	C	E	C			D	F	
Approach Delay (s)			20.5			70.1					81.3	
Approach LOS			C			E					F	

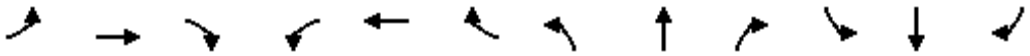
Intersection Summary			
HCM Average Control Delay	58.8	HCM Level of Service	E
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	78.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations								
Volume (vph)	49	285	26	31	4	56	110	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5				4.5	4.5	
Lane Util. Factor	1.00	0.95				1.00	0.88	
Frpb, ped/bikes	1.00	1.00				1.00	1.00	
Flpb, ped/bikes	1.00	1.00				1.00	1.00	
Frt	1.00	0.98				1.00	0.85	
Flt Protected	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1706	3280				1710	2622	
Flt Permitted	0.16	1.00				0.95	1.00	
Satd. Flow (perm)	293	3280				1710	2622	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	54	317	29	34	4	62	122	13
RTOR Reduction (vph)	0	7	0	0	0	0	7	0
Lane Group Flow (vph)	54	373	0	0	0	66	128	0
Confl. Peds. (#/hr)	6							
Heavy Vehicles (%)	0%	2%	0%	0%	0%	0%	3%	0%
Turn Type	Perm				Split		Perm	
Protected Phases		6			9	9		
Permitted Phases	6						9	
Actuated Green, G (s)	24.5	24.5				17.5	17.5	
Effective Green, g (s)	24.5	24.5				17.5	17.5	
Actuated g/C Ratio	0.23	0.23				0.17	0.17	
Clearance Time (s)	4.5	4.5				4.5	4.5	
Lane Grp Cap (vph)	68	765				285	437	
v/s Ratio Prot		0.11				0.04		
v/s Ratio Perm	0.18						c0.05	
v/c Ratio	0.79	0.49				0.23	0.29	
Uniform Delay, d1	37.9	34.8				37.9	38.3	
Progression Factor	1.00	1.00				1.00	1.00	
Incremental Delay, d2	61.4	2.2				1.9	1.7	
Delay (s)	99.3	37.0				39.8	40.0	
Level of Service	F	D				D	D	
Approach Delay (s)		44.8				40.0		
Approach LOS		D				D		

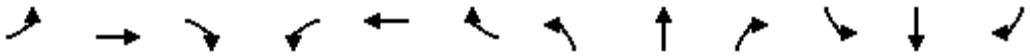
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	457	0	0	480	26	115	113	116	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	11	11	16	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.99			0.95				
Flt Protected		1.00			1.00			0.98				
Satd. Flow (prot)		1653			1929			1770				
Flt Permitted		0.96			1.00			0.98				
Satd. Flow (perm)		1598			1929			1770				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	26	508	0	0	533	29	128	126	129	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	534	0	0	562	0	0	383	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		31.0			31.0			26.0				
Effective Green, g (s)		31.0			31.0			26.0				
Actuated g/C Ratio		0.48			0.48			0.40				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		762			920			708				
v/s Ratio Prot					0.29							
v/s Ratio Perm		c0.33						0.22				
v/c Ratio		0.70			0.61			0.54				
Uniform Delay, d1		13.4			12.5			14.9				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		5.3			3.0			3.0				
Delay (s)		18.7			15.6			17.9				
Level of Service		B			B			B				
Approach Delay (s)		18.7			15.6			17.9			0.0	
Approach LOS		B			B			B			A	

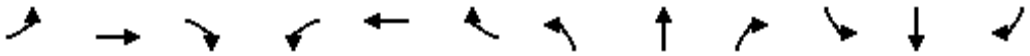
Intersection Summary			
HCM Average Control Delay	17.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	72.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	112	358	110	67	268	110	143	1647	129	74	445	93
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	9	9	10	9
Total Lost time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.96	1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1922	1426		1923	1396	1500	3099	1284	1425	2956	1265
Flt Permitted		0.66	1.00		0.60	1.00	0.40	1.00	1.00	0.09	1.00	1.00
Satd. Flow (perm)		1286	1426		1161	1396	627	3099	1284	142	2956	1265
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	118	377	116	71	282	116	151	1734	136	78	468	98
RTOR Reduction (vph)	0	0	68	0	0	68	0	0	31	0	0	59
Lane Group Flow (vph)	0	495	48	0	353	48	151	1734	105	78	468	39
Confl. Peds. (#/hr)	42		39	39		42	20		8	8		20
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	6%	4%	3%	0%	6%	5%	6%	3%	4%	8%	8%	4%
Turn Type	pm+pt		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		43.0	43.0		43.0	43.0	53.0	44.3	44.3	49.0	42.3	42.3
Effective Green, g (s)		43.0	43.0		43.0	43.0	53.0	44.3	44.3	49.0	42.3	42.3
Actuated g/C Ratio		0.41	0.41		0.41	0.41	0.50	0.42	0.42	0.47	0.40	0.40
Clearance Time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		527	584		475	572	389	1307	542	148	1191	510
v/s Ratio Prot							c0.03	c0.56		c0.03	0.16	
v/s Ratio Perm		c0.38	0.03		0.30	0.03	0.16		0.08	0.21		0.03
v/c Ratio		0.94	0.08		0.74	0.08	0.39	1.33	0.19	0.53	0.39	0.08
Uniform Delay, d1		29.7	18.9		26.3	18.9	14.7	30.4	19.1	23.2	22.2	19.3
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.14	0.78	0.44
Incremental Delay, d2		24.7	0.3		10.1	0.3	0.6	152.4	0.8	3.3	0.9	0.3
Delay (s)		54.4	19.2		36.4	19.2	15.3	182.8	19.9	29.7	18.2	8.8
Level of Service		D	B		D	B	B	F	B	C	B	A
Approach Delay (s)		47.7			32.2			159.3			18.2	
Approach LOS		D			C			F			B	

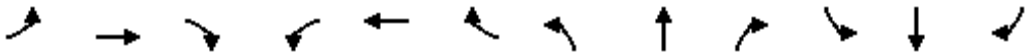
Intersection Summary			
HCM Average Control Delay	100.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	110.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	56	492	56	50	393	48	64	59	62	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		0.99			0.99			0.95				
Flt Protected		1.00			0.99			0.98				
Satd. Flow (prot)		1629			1627			1770				
Flt Permitted		0.92			0.90			0.98				
Satd. Flow (perm)		1503			1468			1770				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	62	547	62	56	437	53	71	66	69	0	0	0
RTOR Reduction (vph)	0	6	0	0	6	0	0	28	0	0	0	0
Lane Group Flow (vph)	0	665	0	0	540	0	0	178	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		38.0			38.0			19.0				
Effective Green, g (s)		38.0			38.0			19.0				
Actuated g/C Ratio		0.58			0.58			0.29				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		879			858			517				
v/s Ratio Prot												
v/s Ratio Perm		c0.44			0.37			0.10				
v/c Ratio		0.76			0.63			0.35				
Uniform Delay, d1		10.1			8.9			18.1				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		6.0			3.5			1.8				
Delay (s)		16.1			12.4			19.9				
Level of Service		B			B			B				
Approach Delay (s)		16.1			12.4			19.9			0.0	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	15.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.8%	ICU Level of Service	B
Analysis Period (min)	15		

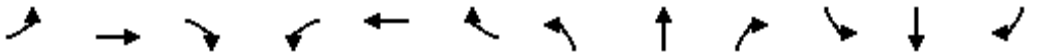
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	22	523	62	33	400	40	45	146	94	56	192	26
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	11	12	12	15	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.97		1.00	0.95		1.00	0.98		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		0.99	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.99	
Flt Protected		1.00	1.00		1.00	1.00		0.99	1.00		0.99	
Satd. Flow (prot)		1656	1255		1633	1288		1663	1490		1774	
Flt Permitted		0.98	1.00		0.94	1.00		0.89	1.00		0.90	
Satd. Flow (perm)		1620	1255		1540	1288		1495	1490		1615	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	23	551	65	35	421	42	47	154	99	59	202	27
RTOR Reduction (vph)	0	0	28	0	0	17	0	0	67	0	5	0
Lane Group Flow (vph)	0	574	37	0	456	25	0	201	32	0	283	0
Confl. Peds. (#/hr)	33		15	15		33	68		5	5		68
Confl. Bikes (#/hr)	4					4						
Heavy Vehicles (%)	0%	5%	14%	19%	5%	9%	2%	2%	1%	10%	7%	8%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Effective Green, g (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.32	0.32		0.32	
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Grp Cap (vph)		929	720		883	738		478	477		517	
v/s Ratio Prot												
v/s Ratio Perm		c0.35	0.03		0.30	0.02		0.13	0.02		c0.18	
v/c Ratio		0.62	0.05		0.52	0.03		0.42	0.07		0.55	
Uniform Delay, d1		10.6	7.0		9.7	7.0		20.0	17.7		21.0	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		3.1	0.1		2.2	0.1		2.7	0.3		4.1	
Delay (s)		13.6	7.2		11.9	7.0		22.7	18.0		25.2	
Level of Service		B	A		B	A		C	B		C	
Approach Delay (s)		13.0			11.4			21.2			25.2	
Approach LOS		B			B			C			C	

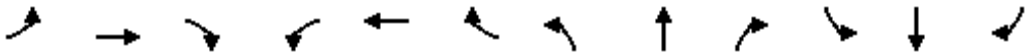
Intersection Summary			
HCM Average Control Delay	16.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	90.4%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



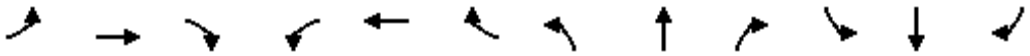
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	81	480	28	19	290	39	52	302	45	41	92	9
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	11	16	8	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.98	1.00	1.00	0.99
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1463	2993		1459	3530		1534	1647	1301	1517	1541	1156
Flt Permitted	0.53	1.00		0.40	1.00		0.69	1.00	1.00	0.45	1.00	1.00
Satd. Flow (perm)	821	2993		617	3530		1116	1647	1301	722	1541	1156
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	90	533	31	21	322	43	58	336	50	46	102	10
RTOR Reduction (vph)	0	6	0	0	16	0	0	0	26	0	0	6
Lane Group Flow (vph)	90	558	0	21	349	0	58	336	24	46	102	4
Confl. Peds. (#/hr)	16		9	9		16	1		5	5		1
Heavy Vehicles (%)	8%	6%	0%	13%	8%	3%	4%	2%	8%	5%	9%	22%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Effective Green, g (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	392	1427		294	1684		446	659	520	289	616	462
v/s Ratio Prot		c0.19			0.10			c0.20			0.07	
v/s Ratio Perm	0.11			0.03			0.05		0.02	0.06		0.00
v/c Ratio	0.23	0.39		0.07	0.21		0.13	0.51	0.05	0.16	0.17	0.01
Uniform Delay, d1	10.0	10.9		9.2	9.9		12.3	14.7	11.9	12.5	12.5	11.7
Progression Factor	1.00	1.00		1.00	1.00		0.65	0.79	0.39	0.56	0.55	0.31
Incremental Delay, d2	1.4	0.8		0.5	0.3		0.6	2.8	0.2	1.2	0.6	0.0
Delay (s)	11.3	11.7		9.7	10.1		8.6	14.3	4.8	8.1	7.5	3.6
Level of Service	B	B		A	B		A	B	A	A	A	A
Approach Delay (s)		11.7			10.1			12.5			7.4	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



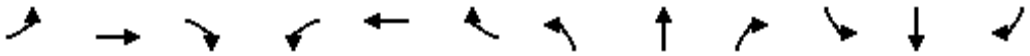
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	167	391	79	43	259	103	62	385	43	65	157	64
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	11	10	11	11	10	11	11	10	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.98		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.96	1.00		0.99	1.00		0.99	1.00		0.97	1.00	
Frt	1.00	0.97		1.00	0.96		1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1466	3059		1588	2937		1542	3027		1404	2759	
Flt Permitted	0.51	1.00		0.44	1.00		0.61	1.00		0.45	1.00	
Satd. Flow (perm)	792	3059		730	2937		985	3027		665	2759	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	176	412	83	45	273	108	65	405	45	68	165	67
RTOR Reduction (vph)	0	0	0	0	0	0	0	11	0	0	39	0
Lane Group Flow (vph)	176	495	0	45	381	0	65	439	0	68	193	0
Confl. Peds. (#/hr)	98		10	10		98	28		52	52		28
Heavy Vehicles (%)	5%	5%	4%	0%	5%	7%	2%	6%	13%	10%	11%	20%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.41	0.41		0.41	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	380	1468		350	1410		407	1251		275	1140	
v/s Ratio Prot		0.16			0.13			c0.14			0.07	
v/s Ratio Perm	c0.22			0.06			0.07			0.10		
v/c Ratio	0.46	0.34		0.13	0.27		0.16	0.35		0.25	0.17	
Uniform Delay, d1	13.0	12.1		10.8	11.7		13.8	15.1		14.4	13.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.0	0.6		0.8	0.5		0.8	0.8		2.1	0.3	
Delay (s)	17.1	12.7		11.6	12.1		14.7	15.9		16.5	14.2	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		13.9			12.1			15.7			14.7	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	14.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	107	315	36	23	334	46	65	397	25	41	196	61
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	8	16	12	9	10	10	9	10	10
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1533	1576		1473	1842		1533	3073		1372	2865	
Flt Permitted	0.44	1.00		0.48	1.00		0.59	1.00		0.43	1.00	
Satd. Flow (perm)	711	1576		737	1842		945	3073		622	2865	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	113	332	38	24	352	48	68	418	26	43	206	64
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	113	370	0	24	400	0	68	444	0	43	270	0
Confl. Peds. (#/hr)	7		23	23		7	10		8	8		10
Confl. Bikes (#/hr)	1		2	2		1	1		1	1		1
Heavy Vehicles (%)	4%	8%	10%	0%	9%	5%	0%	3%	0%	12%	7%	6%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	47.0	41.8		40.6	38.6		26.8	22.2		23.6	20.6	
Effective Green, g (s)	47.0	39.8		40.6	36.6		26.8	20.2		23.6	18.6	
Actuated g/C Ratio	0.55	0.47		0.48	0.43		0.32	0.24		0.28	0.22	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	443	738		369	793		330	730		199	627	
v/s Ratio Prot	c0.02	c0.23		0.00	0.22		c0.01	c0.14		0.01	0.09	
v/s Ratio Perm	0.13			0.03			0.05			0.05		
v/c Ratio	0.26	0.50		0.07	0.50		0.21	0.61		0.22	0.43	
Uniform Delay, d1	13.6	15.7		14.6	17.6		21.5	28.9		25.7	28.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	2.4		0.1	2.3		0.3	3.7		0.5	2.2	
Delay (s)	13.9	18.1		14.7	19.9		21.8	32.6		26.2	30.8	
Level of Service	B	B		B	B		C	C		C	C	
Approach Delay (s)		17.2			19.6			31.2			30.2	
Approach LOS		B			B			C			C	

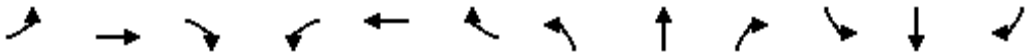
Intersection Summary			
HCM Average Control Delay	24.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	63.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	68	305	42	63	372	111	56	370	120	55	158	44
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	11	11	11	11	12	12	10	10	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		0.99	1.00	
Frt		0.98			0.97		1.00	0.96		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3492			2913		1614	3156		1580	2900	
Flt Permitted		0.78			0.85		0.61	1.00		0.40	1.00	
Satd. Flow (perm)		2753			2480		1038	3156		658	2900	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	76	339	47	70	413	123	62	411	133	61	176	49
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	462	0	0	606	0	62	544	0	61	225	0
Confl. Peds. (#/hr)	20		16	16		20	5		33	33		5
Confl. Bikes (#/hr)	2					2			2	2		
Heavy Vehicles (%)	9%	9%	0%	24%	7%	6%	2%	4%	2%	0%	5%	9%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.0			33.0		32.0	32.0		32.0	32.0	
Effective Green, g (s)		34.0			34.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio		0.45			0.45		0.44	0.44		0.44	0.44	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		1248			1124		457	1389		290	1276	
v/s Ratio Prot								c0.17			0.08	
v/s Ratio Perm		0.17			c0.24		0.06			0.09		
v/c Ratio		0.37			0.54		0.14	0.39		0.21	0.18	
Uniform Delay, d1		13.5			14.8		12.5	14.2		13.0	12.7	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.8			1.9		0.6	0.8		1.6	0.3	
Delay (s)		14.3			16.7		13.1	15.0		14.6	13.1	
Level of Service		B			B		B	B		B	B	
Approach Delay (s)		14.3			16.7			14.8			13.4	
Approach LOS		B			B			B			B	

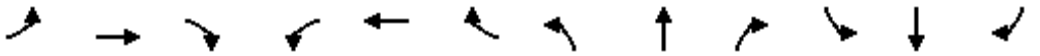
Intersection Summary			
HCM Average Control Delay	15.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	138	496	5	14	634	371	68	9	19	112	1	49
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	12	12	12	12	12	13	13	13
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	1.00		1.00	1.00	0.85		0.97			0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97			0.97	
Satd. Flow (prot)	1574	3143		1629	3257	1457		1612			3106	
Flt Permitted	0.36	1.00		0.44	1.00	1.00		0.70			0.75	
Satd. Flow (perm)	604	3143		748	3257	1457		1174			2411	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	153	551	6	16	704	412	76	10	21	124	1	54
RTOR Reduction (vph)	0	1	0	0	0	143	0	12	0	0	41	0
Lane Group Flow (vph)	153	556	0	16	704	269	0	95	0	0	138	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	46.0	46.0		46.0	46.0	46.0		16.4			16.4	
Effective Green, g (s)	46.0	46.0		46.0	46.0	46.0		16.4			16.4	
Actuated g/C Ratio	0.65	0.65		0.65	0.65	0.65		0.23			0.23	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		8.0			8.0	
Lane Grp Cap (vph)	395	2054		489	2128	952		273			562	
v/s Ratio Prot		0.18			0.22							
v/s Ratio Perm	c0.25			0.02		0.18		c0.08			0.06	
v/c Ratio	0.39	0.27		0.03	0.33	0.28		0.35			0.24	
Uniform Delay, d1	5.7	5.1		4.3	5.4	5.2		22.5			22.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	2.9	0.3		0.1	0.4	0.7		3.3			1.0	
Delay (s)	8.5	5.5		4.4	5.8	5.9		25.8			22.9	
Level of Service	A	A		A	A	A		C			C	
Approach Delay (s)		6.1			5.8			25.8			22.9	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM Average Control Delay	8.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	70.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	111	214	79	63	190	71	128	1887	84	70	494	41
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	9	12	10	10	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.96	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.96		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1548	1496		1547	1584		1493	3069	1271	1452	2983	1301
Flt Permitted	0.37	1.00		0.31	1.00		0.39	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	608	1496		513	1584		617	3069	1271	180	2983	1301
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	117	225	83	66	200	75	135	1986	88	74	520	43
RTOR Reduction (vph)	0	16	0	0	16	0	0	0	18	0	0	25
Lane Group Flow (vph)	117	292	0	66	259	0	135	1986	70	74	520	18
Confl. Peds. (#/hr)	4		9	9		4	6		16	16		6
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	3%	3%	4%	3%	1%	2%	3%	4%	4%	6%	7%	3%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	28.0	21.0		28.0	21.0		42.0	35.0	35.0	42.0	35.0	35.0
Effective Green, g (s)	26.0	22.0		26.0	22.0		40.0	35.0	35.0	40.0	35.0	35.0
Actuated g/C Ratio	0.31	0.26		0.31	0.26		0.47	0.41	0.41	0.47	0.41	0.41
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	252	387		230	410		352	1264	523	174	1228	536
v/s Ratio Prot	c0.03	c0.20		0.02	0.16		0.03	c0.65		c0.03	0.17	
v/s Ratio Perm	0.11			0.07			0.15		0.06	0.17		0.01
v/c Ratio	0.46	0.76		0.29	0.63		0.38	1.57	0.13	0.43	0.42	0.03
Uniform Delay, d1	22.5	29.0		21.9	27.9		13.3	25.0	15.6	18.1	17.8	14.9
Progression Factor	1.00	1.00		1.00	1.00		0.61	0.70	0.49	1.00	1.00	1.00
Incremental Delay, d2	6.0	12.9		3.1	7.2		2.6	260.3	0.4	7.4	1.1	0.1
Delay (s)	28.6	41.9		25.0	35.2		10.8	277.9	8.0	25.6	18.9	15.0
Level of Service	C	D		C	D		B	F	A	C	B	B
Approach Delay (s)		38.2			33.2			250.8			19.4	
Approach LOS		D			C			F			B	

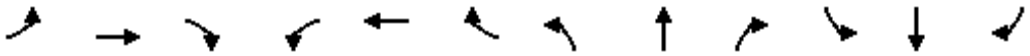
Intersection Summary			
HCM Average Control Delay	164.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	94.2%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	26	217	32	15	149	16	22	162	26	32	144	21
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	14	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.99			0.98			0.99	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1836			1839			1899			1930	
Flt Permitted		0.97			0.97			0.96			0.94	
Satd. Flow (perm)		1782			1792			1839			1823	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	27	224	33	15	154	16	23	167	27	33	148	22
RTOR Reduction (vph)	0	7	0	0	5	0	0	8	0	0	7	0
Lane Group Flow (vph)	0	277	0	0	180	0	0	209	0	0	196	0
Confl. Peds. (#/hr)	5		11	11		5	7		34	34		7
Confl. Bikes (#/hr)			3	3								
Heavy Vehicles (%)	4%	2%	0%	20%	1%	0%	12%	3%	8%	0%	3%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.42			0.42			0.46			0.46	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		740			744			849			841	
v/s Ratio Prot												
v/s Ratio Perm		c0.16			0.10			c0.11			0.11	
v/c Ratio		0.37			0.24			0.25			0.23	
Uniform Delay, d1		13.2			12.3			10.6			10.6	
Progression Factor		1.00			0.64			1.12			1.00	
Incremental Delay, d2		1.4			0.8			0.7			0.6	
Delay (s)		14.6			8.7			12.5			11.2	
Level of Service		B			A			B			B	
Approach Delay (s)		14.6			8.7			12.5			11.2	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	12.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.4%	ICU Level of Service	A
Analysis Period (min)	15		

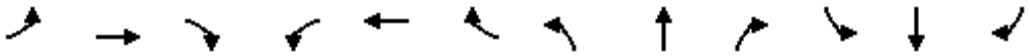
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	181	37	9	162	23	43	364	31	17	86	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.96	1.00		1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.98		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1466	2989		1302	3018		1529	3094		1492	2868	
Flt Permitted	0.62	1.00		0.60	1.00		0.68	1.00		0.50	1.00	
Satd. Flow (perm)	960	2989		825	3018		1093	3094		781	2868	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	201	41	10	180	26	48	404	34	19	96	19
RTOR Reduction (vph)	0	26	0	0	18	0	0	10	0	0	8	0
Lane Group Flow (vph)	27	216	0	10	188	0	48	428	0	19	107	0
Confl. Peds. (#/hr)	35		6	6		35	18					18
Confl. Bikes (#/hr)	14		32	32		14	23		7	7		23
Heavy Vehicles (%)	4%	4%	0%	22%	2%	6%	3%	2%	0%	7%	8%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0		39.0	39.0		39.0	39.0	
Effective Green, g (s)	19.0	19.0		19.0	19.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.58	0.58		0.58	0.58	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	281	874		241	882		639	1809		457	1677	
v/s Ratio Prot		c0.07			0.06			c0.14			0.04	
v/s Ratio Perm	0.03			0.01			0.04			0.02		
v/c Ratio	0.10	0.25		0.04	0.21		0.08	0.24		0.04	0.06	
Uniform Delay, d1	16.7	17.5		16.5	17.4		5.9	6.5		5.7	5.8	
Progression Factor	0.72	0.72		0.76	0.74		0.93	0.96		0.51	0.45	
Incremental Delay, d2	0.6	0.6		0.3	0.5		0.2	0.3		0.2	0.1	
Delay (s)	12.7	13.3		12.9	13.4		5.7	6.6		3.1	2.7	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		13.2			13.4			6.5			2.8	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	9.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	41.6%	ICU Level of Service	A
Analysis Period (min)	15		

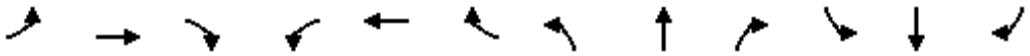
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	46	178	34	16	122	39	28	429	24	14	178	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	9	9	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.98		1.00	0.96			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1556	2952		1515	2866			1878			1807	
Flt Permitted	0.64	1.00		0.60	1.00			0.98			0.96	
Satd. Flow (perm)	1046	2952		965	2866			1838			1742	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	51	198	38	18	136	43	31	477	27	16	198	17
RTOR Reduction (vph)	0	23	0	0	26	0	0	3	0	0	4	0
Lane Group Flow (vph)	51	213	0	18	153	0	0	532	0	0	227	0
Confl. Peds. (#/hr)	10		29	29		10	17		10	10		17
Confl. Bikes (#/hr)									2	2		
Heavy Vehicles (%)	2%	4%	10%	0%	4%	0%	0%	8%	4%	0%	13%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Effective Green, g (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40			0.48			0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	418	1181		386	1146			877			831	
v/s Ratio Prot		c0.07			0.05							
v/s Ratio Perm	0.05			0.02				c0.29			0.13	
v/c Ratio	0.12	0.18		0.05	0.13			0.61			0.27	
Uniform Delay, d1	12.3	12.6		11.9	12.4			12.5			10.2	
Progression Factor	1.03	0.93		0.88	0.88			0.99			1.00	
Incremental Delay, d2	0.6	0.3		0.2	0.2			3.0			0.8	
Delay (s)	13.2	12.1		10.7	11.1			15.4			11.0	
Level of Service	B	B		B	B			B			B	
Approach Delay (s)		12.3			11.1			15.4			11.0	
Approach LOS		B			B			B			B	

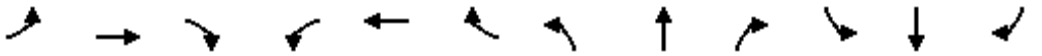
Intersection Summary			
HCM Average Control Delay	13.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



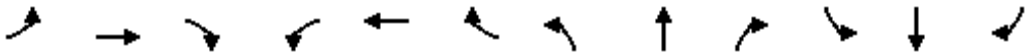
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	86	121	61	2	80	34	22	272	9	7	175	28
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	16	12	10	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.95		1.00	0.96			1.00			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1605	1874		1587	1870			1970			1932	
Flt Permitted	0.68	1.00		0.58	1.00			0.97			0.99	
Satd. Flow (perm)	1141	1874		965	1870			1926			1915	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	96	134	68	2	89	38	24	302	10	8	194	31
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	96	202	0	2	127	0	0	336	0	0	233	0
Confl. Peds. (#/hr)			8	8			1		8	8		1
Heavy Vehicles (%)	3%	3%	2%	0%	6%	0%	0%	3%	0%	0%	4%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Effective Green, g (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Actuated g/C Ratio	0.31	0.31		0.31	0.31			0.57			0.57	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	351	577		297	575			1096			1090	
v/s Ratio Prot		c0.11			0.07							
v/s Ratio Perm	0.08			0.00				c0.17			0.12	
v/c Ratio	0.27	0.35		0.01	0.22			0.31			0.21	
Uniform Delay, d1	17.0	17.5		15.6	16.7			7.3			6.9	
Progression Factor	0.91	0.90		0.87	0.92			0.98			1.00	
Incremental Delay, d2	1.9	1.7		0.0	0.9			0.7			0.4	
Delay (s)	17.3	17.3		13.7	16.3			7.9			7.3	
Level of Service	B	B		B	B			A			A	
Approach Delay (s)		17.3			16.2			7.9			7.3	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	116	9	52	1	3	12	38	467	6	2	191	48
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	10	11	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.97		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	0.98	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.87		1.00	0.88		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1603	1673		1710	1422		1491	1631	1392	1649	1907	1427
Flt Permitted	0.75	1.00		0.71	1.00		0.63	1.00	1.00	0.39	1.00	1.00
Satd. Flow (perm)	1260	1673		1283	1422		981	1631	1392	682	1907	1427
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	129	10	58	1	3	13	42	519	7	2	212	53
RTOR Reduction (vph)	0	42	0	0	9	0	0	0	3	0	0	21
Lane Group Flow (vph)	129	26	0	1	7	0	42	519	4	2	212	32
Confl. Peds. (#/hr)	9					9	1		6	6		1
Heavy Vehicles (%)	5%	14%	5%	0%	67%	12%	7%	3%	0%	0%	7%	5%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	17.0	17.0		17.0	17.0		39.0	39.0	39.0	39.0	39.0	39.0
Effective Green, g (s)	18.0	18.0		18.0	18.0		39.0	39.0	39.0	39.0	39.0	39.0
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.60	0.60	0.60	0.60	0.60	0.60
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	349	463		355	394		589	979	835	409	1144	856
v/s Ratio Prot		0.02			0.00			c0.32			0.11	
v/s Ratio Perm	c0.10			0.00			0.04		0.00	0.00		0.02
v/c Ratio	0.37	0.06		0.00	0.02		0.07	0.53	0.01	0.00	0.19	0.04
Uniform Delay, d1	18.9	17.3		17.0	17.1		5.4	7.6	5.2	5.2	5.9	5.3
Progression Factor	1.47	2.38		1.00	1.00		1.14	1.07	1.32	1.00	1.00	1.00
Incremental Delay, d2	2.9	0.2		0.0	0.1		0.2	1.6	0.0	0.0	0.4	0.1
Delay (s)	30.7	41.2		17.0	17.1		6.4	9.8	6.9	5.2	6.2	5.4
Level of Service	C	D		B	B		A	A	A	A	A	A
Approach Delay (s)		34.3			17.1			9.5			6.0	
Approach LOS		C			B			A			A	

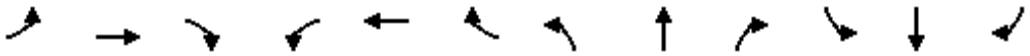
Intersection Summary			
HCM Average Control Delay	13.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	241	76	119	362	0	0	0	0	74	305	361
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)		4.0		3.0	3.0					5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	
Frpb, ped/bikes		0.99		1.00	1.00					1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Frt		0.96		1.00	1.00					1.00	0.92	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		2826		1621	3288					1574	2907	
Flt Permitted		1.00		0.50	1.00					0.95	1.00	
Satd. Flow (perm)		2826		846	3288					1574	2907	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	254	80	125	381	0	0	0	0	78	321	380
RTOR Reduction (vph)	0	30	0	0	0	0	0	0	0	0	214	0
Lane Group Flow (vph)	0	304	0	125	381	0	0	0	0	78	487	0
Confl. Peds. (#/hr)	14		32	32		14	14					14
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	9%	4%	5%	4%	0%	0%	0%	0%	5%	2%	4%
Turn Type				D.P+P						custom		
Protected Phases		8		7	7 8					6	6	
Permitted Phases				8						6		
Actuated Green, G (s)		33.0		56.0	59.0					32.0	32.0	
Effective Green, g (s)		33.0		56.0	59.0					32.0	32.0	
Actuated g/C Ratio		0.33		0.56	0.59					0.32	0.32	
Clearance Time (s)		4.0		3.0						5.0	5.0	
Lane Grp Cap (vph)		933		652	1940					504	930	
v/s Ratio Prot		c0.11		0.04	c0.12					0.05	c0.17	
v/s Ratio Perm				0.06								
v/c Ratio		0.33		0.19	0.20					0.15	0.52	
Uniform Delay, d1		25.1		10.6	9.5					24.3	27.8	
Progression Factor		1.00		1.94	2.04					1.00	1.00	
Incremental Delay, d2		0.9		0.6	0.2					0.7	2.1	
Delay (s)		26.1		21.0	19.6					25.0	29.9	
Level of Service		C		C	B					C	C	
Approach Delay (s)		26.1			20.0			0.0			29.4	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM Average Control Delay	25.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		

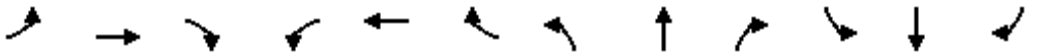
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	129	186	0	0	309	66	171	544	320	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	9	12	13	12	13	12	12	12
Total Lost time (s)	4.0	4.0			4.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.97		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1673	3054			2832		1750	1782	1514			
Flt Permitted	0.36	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	641	3054			2832		1750	1782	1514			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	136	196	0	0	325	69	180	573	337	0	0	0
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	226	0	0	0
Lane Group Flow (vph)	136	196	0	0	376	0	180	573	111	0	0	0
Confl. Peds. (#/hr)	14		16	16		14			1	1		
Confl. Bikes (#/hr)	1					1			1	1		
Heavy Vehicles (%)	2%	12%	0%	0%	5%	4%	1%	1%	3%	0%	0%	0%
Turn Type	pm+pt						custom		Perm			
Protected Phases	4	1 4			1		2	2				
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	54.0	58.0			21.0		33.0	33.0	33.0			
Effective Green, g (s)	54.0	58.0			21.0		33.0	33.0	33.0			
Actuated g/C Ratio	0.54	0.58			0.21		0.33	0.33	0.33			
Clearance Time (s)	4.0				4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	687	1771			595		578	588	500			
v/s Ratio Prot	c0.07	0.06			c0.13		0.10	c0.32				
v/s Ratio Perm	0.04								0.07			
v/c Ratio	0.20	0.11			0.63		0.31	0.97	0.22			
Uniform Delay, d1	11.7	9.4			36.0		25.0	33.1	24.2			
Progression Factor	0.24	0.25			1.00		0.74	0.79	1.92			
Incremental Delay, d2	0.6	0.1			5.0		0.9	24.4	0.7			
Delay (s)	3.5	2.5			41.0		19.5	50.4	47.2			
Level of Service	A	A			D		B	D	D			
Approach Delay (s)		2.9			41.0			44.3			0.0	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM Average Control Delay	36.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		

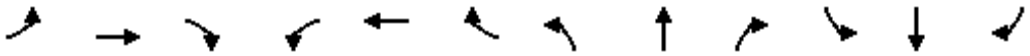
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	450	362	34	587	0	0	0	0	4	215	195
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	11	12	12	12	12	10	10	12
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	1.00
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.93		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3109		1613	3273					1596	3160	1443
Flt Permitted		1.00		0.18	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3109		299	3273					1596	3160	1443
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	469	377	35	611	0	0	0	0	4	224	203
RTOR Reduction (vph)	0	146	0	0	0	0	0	0	0	0	0	134
Lane Group Flow (vph)	0	700	0	35	611	0	0	0	0	4	224	69
Confl. Peds. (#/hr)	22		3	3		22						
Confl. Bikes (#/hr)	4					4			32	32		
Heavy Vehicles (%)	0%	2%	2%	6%	1%	0%	0%	0%	0%	0%	1%	6%
Turn Type				pm+pt						Split		Prot
Protected Phases		8		7	7 8					6	6	6
Permitted Phases				7 8								
Actuated Green, G (s)		36.0		54.0	58.0					34.0	34.0	34.0
Effective Green, g (s)		36.0		54.0	58.0					34.0	34.0	34.0
Actuated g/C Ratio		0.36		0.54	0.58					0.34	0.34	0.34
Clearance Time (s)		4.0		4.0						4.0	4.0	4.0
Lane Grp Cap (vph)		1119		398	1898					543	1074	491
v/s Ratio Prot		c0.23		0.02	c0.19					0.00	c0.07	0.05
v/s Ratio Perm				0.03								
v/c Ratio		0.63		0.09	0.32					0.01	0.21	0.14
Uniform Delay, d1		26.4		12.4	10.8					21.8	23.4	22.9
Progression Factor		1.00		0.55	0.68					0.74	0.79	0.94
Incremental Delay, d2		2.6		0.2	0.2					0.0	0.4	0.5
Delay (s)		29.1		6.9	7.6					16.1	19.0	22.0
Level of Service		C		A	A					B	B	C
Approach Delay (s)		29.1			7.5			0.0			20.4	
Approach LOS		C			A			A			C	

Intersection Summary			
HCM Average Control Delay	19.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.4%	ICU Level of Service	E
Analysis Period (min)	15		

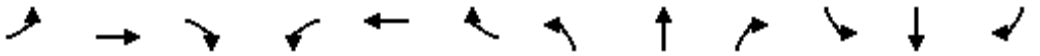
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	395	59	0	0	57	5	564	636	61	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	10	12	11	11	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	0.91	0.91			0.95		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	1.00			
Flpb, ped/bikes	0.99	0.99			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.99		1.00	1.00	0.85			
Flt Protected	0.95	0.96			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1444	3042			3079		1555	1637	1500			
Flt Permitted	0.71	0.74			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	1084	2339			3079		1555	1637	1500			
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	407	61	0	0	59	5	581	656	63	0	0	0
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	38	0	0	0
Lane Group Flow (vph)	203	265	0	0	60	0	581	656	25	0	0	0
Confl. Peds. (#/hr)	30		2	2		30			4	4		
Confl. Bikes (#/hr)	3					3			2	2		
Heavy Vehicles (%)	3%	2%	0%	0%	2%	0%	1%	1%	2%	0%	0%	0%
Turn Type	pm+pt						custom		custom			
Protected Phases	4	1 4			1		2	2	2			
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Effective Green, g (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Actuated g/C Ratio	0.51	0.51			0.15		0.37	0.37	0.37			
Clearance Time (s)	4.0				4.0		4.0	4.0	4.0			
Lane Grp Cap (vph)	682	1446			462		575	606	555			
v/s Ratio Prot	c0.11	0.07			0.02		0.37	c0.40	0.02			
v/s Ratio Perm	c0.04	0.03										
v/c Ratio	0.30	0.18			0.13		1.01	1.08	0.05			
Uniform Delay, d1	14.0	13.2			36.8		31.5	31.5	20.2			
Progression Factor	0.24	0.25			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.8	0.2			0.6		40.1	60.9	0.2			
Delay (s)	4.2	3.6			37.4		71.6	92.4	20.3			
Level of Service	A	A			D		E	F	C			
Approach Delay (s)		3.8			37.4			79.6			0.0	
Approach LOS		A			D			E			A	

Intersection Summary			
HCM Average Control Delay	58.8	HCM Level of Service	E
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.4%	ICU Level of Service	E
Analysis Period (min)	15		

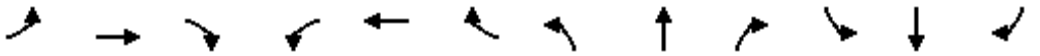
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	155	271	66	58	180	111	41	1100	69	100	476	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	9	10	9	9	10	9
Total Lost time (s)		4.0			4.0		4.0	3.5	4.0	4.0	3.5	4.0
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00			0.98		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.98			0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.98			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		2842			2770		1447	3069	1336	1494	2956	1270
Flt Permitted		0.67			0.80		0.39	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)		1943			2244		600	3069	1336	197	2956	1270
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	161	282	69	60	188	116	43	1146	72	104	496	44
RTOR Reduction (vph)	0	14	0	0	64	0	0	0	28	0	0	27
Lane Group Flow (vph)	0	498	0	0	300	0	43	1146	44	104	496	17
Confl. Peds. (#/hr)	49		20	20		49	26		8	8		26
Confl. Bikes (#/hr)	2					2						
Heavy Vehicles (%)	10%	7%	4%	9%	7%	5%	6%	4%	0%	3%	8%	5%
Turn Type	pm+pt			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		35.0			27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)		36.0			28.0		36.0	33.5	33.0	36.0	33.5	33.0
Actuated g/C Ratio		0.42			0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)		5.0			5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)		886			739		294	1210	519	144	1165	493
v/s Ratio Prot		c0.04					0.01	c0.37		c0.03	0.17	
v/s Ratio Perm		0.20			0.13		0.06		0.03	0.27		0.01
v/c Ratio		0.56			0.41		0.15	0.95	0.08	0.72	0.43	0.03
Uniform Delay, d1		18.5			22.1		14.7	24.9	16.4	18.7	18.7	16.1
Progression Factor		1.00			1.00		1.30	0.85	1.38	1.82	1.63	3.12
Incremental Delay, d2		2.6			1.7		0.6	11.2	0.2	24.7	1.0	0.1
Delay (s)		21.1			23.7		19.8	32.3	22.9	58.6	31.6	50.4
Level of Service		C			C		B	C	C	E	C	D
Approach Delay (s)		21.1			23.7			31.3			37.3	
Approach LOS		C			C			C			D	

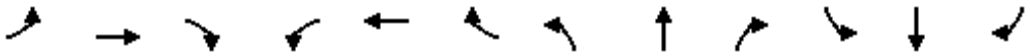
Intersection Summary			
HCM Average Control Delay	29.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	79.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	42	421	0	0	322	81	27	60	110	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.97			0.92				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		1706			1668			1575				
Flt Permitted		0.94			1.00			0.99				
Satd. Flow (perm)		1604			1668			1575				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	47	468	0	0	358	90	30	67	122	0	0	0
RTOR Reduction (vph)	0	0	0	0	14	0	0	70	0	0	0	0
Lane Group Flow (vph)	0	515	0	0	434	0	0	149	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		34.0			34.0			23.0				
Effective Green, g (s)		34.0			34.0			23.0				
Actuated g/C Ratio		0.52			0.52			0.35				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		839			872			557				
v/s Ratio Prot					0.26							
v/s Ratio Perm		c0.32						0.09				
v/c Ratio		0.61			0.50			0.27				
Uniform Delay, d1		10.9			10.0			15.0				
Progression Factor		1.00			0.54			1.00				
Incremental Delay, d2		3.3			1.8			1.2				
Delay (s)		14.2			7.2			16.2				
Level of Service		B			A			B				
Approach Delay (s)		14.2			7.2			16.2			0.0	
Approach LOS		B			A			B			A	

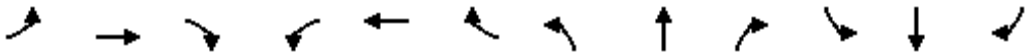
Intersection Summary			
HCM Average Control Delay	11.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	71.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	43	438	29	22	338	51	15	167	45	67	105	19
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.98			0.97			0.99	
Flt Protected		1.00			1.00			1.00			0.98	
Satd. Flow (prot)		1889			1831			3160			3148	
Flt Permitted		0.94			0.96			0.93			0.80	
Satd. Flow (perm)		1778			1766			2961			2549	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	48	487	32	24	376	57	17	186	50	74	117	21
RTOR Reduction (vph)	0	3	0	0	8	0	0	29	0	0	12	0
Lane Group Flow (vph)	0	564	0	0	449	0	0	224	0	0	200	0
Confl. Peds. (#/hr)	29		16	16		29	28		14	14		28
Confl. Bikes (#/hr)	1					1	1					1
Heavy Vehicles (%)	3%	7%	4%	12%	8%	13%	0%	4%	4%	4%	4%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0			27.0			27.0	
Effective Green, g (s)		30.0			30.0			27.0			27.0	
Actuated g/C Ratio		0.46			0.46			0.42			0.42	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		821			815			1230			1059	
v/s Ratio Prot												
v/s Ratio Perm		c0.32			0.25			0.08			c0.08	
v/c Ratio		0.69			0.55			0.18			0.19	
Uniform Delay, d1		13.8			12.6			12.0			12.1	
Progression Factor		0.63			0.51			0.94			0.72	
Incremental Delay, d2		3.9			2.6			0.3			0.4	
Delay (s)		12.6			9.0			11.6			9.1	
Level of Service		B			A			B			A	
Approach Delay (s)		12.6			9.0			11.6			9.1	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM Average Control Delay	10.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.3%	ICU Level of Service	D
Analysis Period (min)	15		

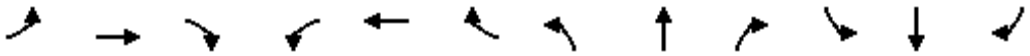
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	48	341	19	29	302	64	44	303	88	58	91	19
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	9	10	10	9	10	10	12	10	10	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.97		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1502	2949		1585	2934		1497	3030		1594	2941	
Flt Permitted	0.47	1.00		0.48	1.00		0.67	1.00		0.49	1.00	
Satd. Flow (perm)	744	2949		795	2934		1063	3030		829	2941	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	53	379	21	32	336	71	49	337	98	64	101	21
RTOR Reduction (vph)	0	6	0	0	28	0	0	42	0	0	10	0
Lane Group Flow (vph)	53	394	0	32	379	0	49	393	0	64	112	0
Confl. Peds. (#/hr)	25		14	14		25	12		4	4		12
Confl. Bikes (#/hr)	1					1			1	1		
Heavy Vehicles (%)	5%	7%	12%	0%	6%	2%	6%	1%	3%	0%	4%	12%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	252	998		269	993		572	1632		446	1584	
v/s Ratio Prot		c0.13			0.13			c0.13			0.04	
v/s Ratio Perm	0.07			0.04			0.05			0.08		
v/c Ratio	0.21	0.39		0.12	0.38		0.09	0.24		0.14	0.07	
Uniform Delay, d1	15.3	16.4		14.8	16.3		7.3	8.0		7.5	7.2	
Progression Factor	0.63	0.63		0.85	0.85		0.72	0.74		1.36	1.36	
Incremental Delay, d2	1.5	1.0		0.9	1.1		0.3	0.3		0.7	0.1	
Delay (s)	11.2	11.3		13.4	14.9		5.5	6.2		10.8	9.9	
Level of Service	B	B		B	B		A	A		B	A	
Approach Delay (s)		11.3			14.8			6.1			10.2	
Approach LOS		B			B			A			B	

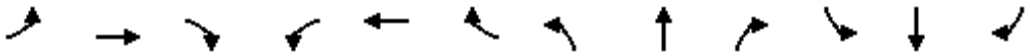
Intersection Summary			
HCM Average Control Delay	10.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	79	361	130	100	315	82	37	323	60	41	136	38
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	9	10	9	9	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.98			1.00			0.99	
Flpb, ped/bikes	0.97	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.96		1.00	0.97			0.98			0.97	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1381	2931		1336	3524			3413			3314	
Flt Permitted	0.50	1.00		0.43	1.00			0.91			0.84	
Satd. Flow (perm)	720	2931		605	3524			3133			2806	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	83	380	137	105	332	86	39	340	63	43	143	40
RTOR Reduction (vph)	0	56	0	0	36	0	0	20	0	0	24	0
Lane Group Flow (vph)	83	461	0	105	382	0	0	422	0	0	202	0
Confl. Peds. (#/hr)	53		34	34		53	67		28	28		67
Heavy Vehicles (%)	8%	5%	0%	14%	6%	1%	0%	9%	20%	5%	15%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Effective Green, g (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48			0.40			0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	343	1398		289	1681			1253			1122	
v/s Ratio Prot		0.16			0.11							
v/s Ratio Perm	0.12			c0.17				c0.13			0.07	
v/c Ratio	0.24	0.33		0.36	0.23			0.34			0.18	
Uniform Delay, d1	10.1	10.6		10.8	10.0			13.5			12.6	
Progression Factor	1.67	1.90		0.76	0.70			0.52			0.64	
Incremental Delay, d2	1.6	0.6		3.1	0.3			0.7			0.3	
Delay (s)	18.4	20.6		11.2	7.3			7.6			8.4	
Level of Service	B	C		B	A			A			A	
Approach Delay (s)		20.3			8.1			7.6			8.4	
Approach LOS		C			A			A			A	

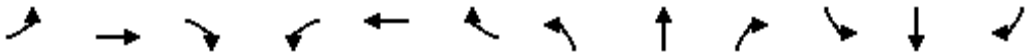
Intersection Summary			
HCM Average Control Delay	12.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	94	292	94	104	370	104	78	80	84	84	80	78
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	16	12	12	16	12
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		0.95			1.00			1.00	
Frt		1.00	0.85		0.97			0.95			0.96	
Flt Protected		0.99	1.00		0.99			0.98			0.98	
Satd. Flow (prot)		1637	1409		3036			1823			1826	
Flt Permitted		0.74	1.00		0.77			0.81			0.79	
Satd. Flow (perm)		1230	1409		2365			1503			1474	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	104	324	104	116	411	116	87	89	93	93	89	87
RTOR Reduction (vph)	0	0	50	0	29	0	0	29	0	0	26	0
Lane Group Flow (vph)	0	428	54	0	614	0	0	240	0	0	243	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		34.0	34.0		34.0			21.0			21.0	
Effective Green, g (s)		34.0	34.0		34.0			21.0			21.0	
Actuated g/C Ratio		0.52	0.52		0.52			0.32			0.32	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Grp Cap (vph)		643	737		1237			486			476	
v/s Ratio Prot												
v/s Ratio Perm		c0.35	0.04		0.26			0.16			c0.16	
v/c Ratio		0.67	0.07		0.50			0.49			0.51	
Uniform Delay, d1		11.3	7.7		10.0			17.7			17.8	
Progression Factor		1.75	4.51		0.42			1.00			1.00	
Incremental Delay, d2		5.2	0.2		1.3			3.6			3.9	
Delay (s)		25.1	34.8		5.5			21.3			21.7	
Level of Service		C	C		A			C			C	
Approach Delay (s)		27.0			5.5			21.3			21.7	
Approach LOS		C			A			C			C	

Intersection Summary			
HCM Average Control Delay	17.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	71.2%	ICU Level of Service	C
Analysis Period (min)	15		

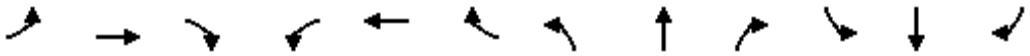
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	71	367	21	15	450	63	40	103	41	41	86	97
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	15	8	16	8	8	16	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00			0.99	
Flpb, ped/bikes	0.99	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.98			0.97			0.94	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1475	3017		1572	3003			3457			3397	
Flt Permitted	0.38	1.00		0.48	1.00			0.86			0.88	
Satd. Flow (perm)	597	3017		790	3003			3016			3015	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	79	408	23	17	500	70	44	114	46	46	96	108
RTOR Reduction (vph)	0	6	0	0	17	0	0	25	0	0	60	0
Lane Group Flow (vph)	79	425	0	17	553	0	0	179	0	0	190	0
Confl. Peds. (#/hr)	22		40	40		22	18		3	3		18
Confl. Bikes (#/hr)			2	2			1					1
Heavy Vehicles (%)	7%	5%	0%	0%	4%	2%	0%	3%	22%	0%	3%	8%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	28.0	28.0		28.0	28.0			29.0			29.0	
Effective Green, g (s)	28.0	28.0		28.0	28.0			29.0			29.0	
Actuated g/C Ratio	0.43	0.43		0.43	0.43			0.45			0.45	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	257	1300		340	1294			1346			1345	
v/s Ratio Prot		0.14			c0.18							
v/s Ratio Perm	0.13			0.02				0.06			c0.06	
v/c Ratio	0.31	0.33		0.05	0.43			0.13			0.14	
Uniform Delay, d1	12.1	12.3		10.8	12.9			10.6			10.6	
Progression Factor	0.98	1.00		1.12	0.95			1.04			0.85	
Incremental Delay, d2	2.4	0.5		0.2	0.6			0.2			0.2	
Delay (s)	14.3	12.8		12.2	12.8			11.3			9.3	
Level of Service	B	B		B	B			B			A	
Approach Delay (s)		13.0			12.8			11.3			9.3	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	12.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

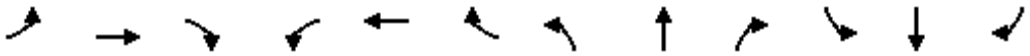


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	82	435	70	89	446	270	49	315	87	211	151	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.98			0.95			0.97			0.98	
Flt Protected		0.99			0.99			0.99			0.98	
Satd. Flow (prot)		3177			3076			3146			3118	
Flt Permitted		0.65			0.76			0.87			0.63	
Satd. Flow (perm)		2093			2349			2766			2027	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	91	483	78	99	496	300	54	350	97	234	168	56
RTOR Reduction (vph)	0	16	0	0	97	0	0	32	0	0	17	0
Lane Group Flow (vph)	0	636	0	0	798	0	0	469	0	0	441	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		26.0			26.0			29.0			20.0	
Effective Green, g (s)		26.0			26.0			29.0			20.0	
Actuated g/C Ratio		0.40			0.40			0.45			0.31	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		837			940			1269			624	
v/s Ratio Prot								c0.03				
v/s Ratio Perm		0.30			c0.34			0.13			c0.22	
v/c Ratio		0.76			0.85			0.37			0.89dl	
Uniform Delay, d1		16.8			17.7			11.9			19.9	
Progression Factor		1.75			1.00			1.00			0.89	
Incremental Delay, d2		6.3			9.4			0.8			6.6	
Delay (s)		35.7			27.1			12.8			24.3	
Level of Service		D			C			B			C	
Approach Delay (s)		35.7			27.1			12.8			24.3	
Approach LOS		D			C			B			C	

Intersection Summary			
HCM Average Control Delay	26.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	85.3%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

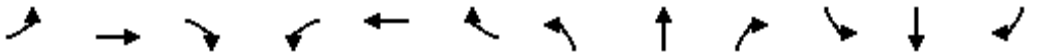
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	687	115	43	721	0	135	0	66	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	10	10	12	12	12	12	10	10	10
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			1.00				
Frt		0.98			1.00			0.96				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		2974			3031			1585				
Flt Permitted		1.00			0.84			0.80				
Satd. Flow (perm)		2974			2566			1307				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	763	128	48	801	0	150	0	73	0	0	0
RTOR Reduction (vph)	0	18	0	0	0	0	0	20	0	0	0	0
Lane Group Flow (vph)	0	873	0	0	849	0	0	203	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	custom			Perm			Perm			Perm		
Protected Phases		4 5 6 11			8			2			2	
Permitted Phases	4 6 11			8			2			2		
Actuated Green, G (s)		65.0			33.0			16.0				
Effective Green, g (s)		58.0			33.0			16.0				
Actuated g/C Ratio		0.64			0.37			0.18				
Clearance Time (s)					5.0			5.0				
Lane Grp Cap (vph)		1917			941			232				
v/s Ratio Prot		c0.29										
v/s Ratio Perm					c0.33			c0.16				
v/c Ratio		0.46			0.90			0.88				
Uniform Delay, d1		8.1			27.0			36.0				
Progression Factor		0.01			1.57			1.00				
Incremental Delay, d2		0.4			12.2			34.1				
Delay (s)		0.5			54.5			70.1				
Level of Service		A			D			E				
Approach Delay (s)		0.5			54.5			70.1			0.0	
Approach LOS		A			D			E			A	

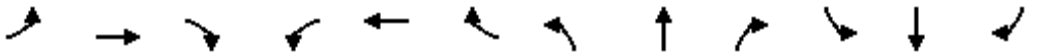
Intersection Summary			
HCM Average Control Delay	31.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	70.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	117	476	177	260	613	174	98	19	176	74	7	73
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	10	12	12	12	12	16	12	12	12	12
Total Lost time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	1.00
Frt	1.00	0.96		1.00	1.00	0.85		0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (prot)	1520	3020		1629	3257	1457		1756		1629	1714	1457
Flt Permitted	0.33	1.00		0.23	1.00	1.00		0.89		0.41	1.00	1.00
Satd. Flow (perm)	529	3020		400	3257	1457		1581		698	1714	1457
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	130	529	197	289	681	193	109	21	196	82	8	81
RTOR Reduction (vph)	0	40	0	0	0	98	0	74	0	0	0	44
Lane Group Flow (vph)	130	686	0	289	681	95	0	252	0	82	8	37
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	41.9	32.6		48.2	35.9	44.5		20.2		31.8	31.8	41.1
Effective Green, g (s)	41.9	32.6		48.2	35.9	44.5		20.2		31.8	31.8	41.1
Actuated g/C Ratio	0.47	0.36		0.54	0.40	0.49		0.22		0.35	0.35	0.46
Clearance Time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Vehicle Extension (s)	4.0	3.0		4.0	3.0	3.0		4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	349	1094		386	1299	720		355		336	606	665
v/s Ratio Prot	0.04	0.23		c0.10	0.21	0.01				c0.02	0.00	0.01
v/s Ratio Perm	0.14			c0.30		0.05		c0.16		0.06		0.02
v/c Ratio	0.37	0.63		0.75	0.52	0.13		0.71		0.24	0.01	0.06
Uniform Delay, d1	14.2	23.7		13.6	20.6	12.3		32.2		21.4	18.9	13.6
Progression Factor	1.92	1.62		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	0.8	2.5		8.2	1.5	0.1		7.0		0.4	0.0	0.0
Delay (s)	28.2	40.7		21.9	22.1	12.4		39.2		21.8	18.9	13.7
Level of Service	C	D		C	C	B		D		C	B	B
Approach Delay (s)		38.8			20.4			39.2			17.8	
Approach LOS		D			C			D			B	

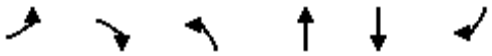
Intersection Summary			
HCM Average Control Delay	28.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	71.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	491	234	6	504	0	0	0	0	30	0	543
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	546	260	7	560	0	0	0	0	33	0	603
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		498										
pX, platoon unblocked												
vC, conflicting volume	560			546			839	1119	273	846	1119	280
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	560			546			839	1119	273	846	1119	280
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	100	100	87	100	15
cM capacity (veh/h)	987			999			37	200	716	249	200	708

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	273	273	260	193	373	33	603
Volume Left	0	0	0	7	0	33	0
Volume Right	0	0	260	0	0	0	603
cSH	1700	1700	1700	999	1700	249	708
Volume to Capacity	0.16	0.16	0.15	0.01	0.22	0.13	0.85
Queue Length 95th (ft)	0	0	0	1	0	11	246
Control Delay (s)	0.0	0.0	0.0	0.4	0.0	21.7	32.1
Lane LOS				A		C	D
Approach Delay (s)	0.0			0.1		31.5	
Approach LOS						D	

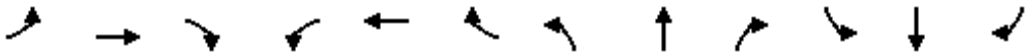
Intersection Summary				
Average Delay	10.0			
Intersection Capacity Utilization	57.0%	ICU Level of Service		B
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	521	0	510	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	579	0	567	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	289	289	567
Volume Left (vph)	289	289	567
Volume Right (vph)	0	0	0
Hadj (s)	0.58	0.58	0.29
Departure Headway (s)	6.8	6.8	5.7
Degree Utilization, x	0.55	0.55	0.90
Capacity (veh/h)	514	505	627
Control Delay (s)	16.7	16.7	38.6
Approach Delay (s)	16.7		38.6
Approach LOS	C		E

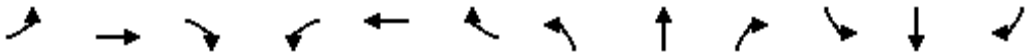
Intersection Summary			
Delay	27.5		
HCM Level of Service	D		
Intersection Capacity Utilization	52.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	373	46	130	332	0	0	0	0	72	15	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)		3.0		4.0	4.0						5.0	
Lane Util. Factor		0.95		1.00	0.95						0.95	
Frt		0.98		1.00	1.00						0.95	
Flt Protected		1.00		0.95	1.00						0.97	
Satd. Flow (prot)		3097		1574	3149						3014	
Flt Permitted		1.00		0.43	1.00						0.97	
Satd. Flow (perm)		3097		706	3149						3014	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	414	51	144	369	0	0	0	0	80	17	47
RTOR Reduction (vph)	0	11	0	0	0	0	0	0	0	0	32	0
Lane Group Flow (vph)	0	454	0	144	369	0	0	0	0	0	112	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type				pm+pt						Split		
Protected Phases		4		3	8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		36.0		49.0	49.0						27.0	
Effective Green, g (s)		36.0		49.0	49.0						27.0	
Actuated g/C Ratio		0.42		0.58	0.58						0.32	
Clearance Time (s)		3.0		4.0	4.0						5.0	
Lane Grp Cap (vph)		1312		509	1815						957	
v/s Ratio Prot		c0.15		c0.03	0.12						c0.04	
v/s Ratio Perm				0.13								
v/c Ratio		0.35		0.28	0.20						0.12	
Uniform Delay, d1		16.5		11.9	8.6						20.6	
Progression Factor		1.00		0.28	0.23						1.00	
Incremental Delay, d2		0.7		1.3	0.2						0.2	
Delay (s)		17.3		4.6	2.2						20.8	
Level of Service		B		A	A						C	
Approach Delay (s)		17.3			2.9			0.0			20.8	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	34.9%	ICU Level of Service	A
Analysis Period (min)	15		

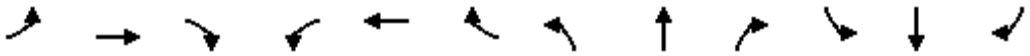
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	68	377	0	0	413	76	49	65	59	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	11	11	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0			3.0			5.0				
Lane Util. Factor	1.00	0.95			0.95			0.91				
Frt	1.00	1.00			0.98			0.95				
Flt Protected	0.95	1.00			1.00			0.99				
Satd. Flow (prot)	1629	3257			3076			4377				
Flt Permitted	0.37	1.00			1.00			0.99				
Satd. Flow (perm)	640	3257			3076			4377				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	76	419	0	0	459	84	54	72	66	0	0	0
RTOR Reduction (vph)	0	0	0	0	18	0	0	45	0	0	0	0
Lane Group Flow (vph)	76	419	0	0	525	0	0	147	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	pm+pt						Split					
Protected Phases	7	4			8		2	2				
Permitted Phases	4											
Actuated Green, G (s)	48.0	48.0			35.0			27.0				
Effective Green, g (s)	48.0	48.0			35.0			27.0				
Actuated g/C Ratio	0.56	0.56			0.41			0.32				
Clearance Time (s)	5.0	5.0			3.0			5.0				
Lane Grp Cap (vph)	478	1839			1267			1390				
v/s Ratio Prot	0.02	c0.13			c0.17			c0.03				
v/s Ratio Perm	0.07											
v/c Ratio	0.16	0.23			0.41			0.11				
Uniform Delay, d1	12.3	9.2			17.7			20.5				
Progression Factor	0.31	0.30			1.00			1.00				
Incremental Delay, d2	0.7	0.3			1.0			0.2				
Delay (s)	4.5	3.1			18.7			20.6				
Level of Service	A	A			B			C				
Approach Delay (s)		3.3			18.7			20.6			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM Average Control Delay	12.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	34.9%	ICU Level of Service	A
Analysis Period (min)	15		

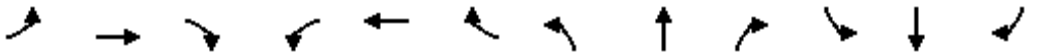
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	357	39	40	256	33	118	85	86	64	90	124
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	12	15	12	12	15	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		0.99			0.98			0.96			0.94	
Flt Protected		1.00			0.99			0.98			0.99	
Satd. Flow (prot)		2986			2976			1773			1752	
Flt Permitted		0.89			0.85			0.77			0.86	
Satd. Flow (perm)		2673			2560			1390			1527	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	43	397	43	44	284	37	131	94	96	71	100	138
RTOR Reduction (vph)	0	11	0	0	13	0	0	24	0	0	45	0
Lane Group Flow (vph)	0	472	0	0	352	0	0	297	0	0	264	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		23.0			23.0			32.0			32.0	
Effective Green, g (s)		23.0			23.0			32.0			32.0	
Actuated g/C Ratio		0.35			0.35			0.49			0.49	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		946			906			684			752	
v/s Ratio Prot												
v/s Ratio Perm		c0.18			0.14			c0.21			0.17	
v/c Ratio		0.50			0.39			0.43			0.35	
Uniform Delay, d1		16.5			15.7			10.7			10.1	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.9			1.3			2.0			1.3	
Delay (s)		18.4			17.0			12.7			11.4	
Level of Service		B			B			B			B	
Approach Delay (s)		18.4			17.0			12.7			11.4	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	15.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	65.0%	ICU Level of Service	C
Analysis Period (min)	15		

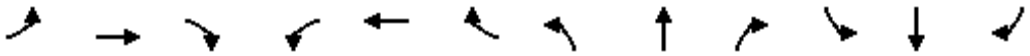
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	169	295	39	59	200	75	68	963	101	124	416	78
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	12	10	16	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.96
Flpb, ped/bikes	0.99	1.00		1.00	1.00		0.99	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1551	3023		1593	3505		1486	3040	1347	1494	3011	1271
Flt Permitted	0.55	1.00		0.49	1.00		0.44	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	891	3023		819	3505		690	3040	1347	197	3011	1271
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	178	311	41	62	211	79	72	1014	106	131	438	82
RTOR Reduction (vph)	0	12	0	0	45	0	0	0	65	0	0	50
Lane Group Flow (vph)	178	340	0	62	245	0	72	1014	41	131	438	32
Confl. Peds. (#/hr)	31		7	7		31	37		12	12		37
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	2%	4%	0%	0%	6%	2%	3%	5%	0%	3%	6%	4%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	32.0	27.0		32.0	27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)	30.0	28.0		30.0	28.0		36.0	33.0	33.0	36.0	33.0	33.0
Actuated g/C Ratio	0.35	0.33		0.35	0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	346	996		325	1155		330	1180	523	144	1169	493
v/s Ratio Prot	c0.02	0.11		0.01	0.07		0.01	0.33		c0.04	0.15	
v/s Ratio Perm	c0.16			0.06			0.08		0.03	c0.34		0.03
v/c Ratio	0.51	0.34		0.19	0.21		0.22	0.86	0.08	0.91	0.37	0.06
Uniform Delay, d1	20.9	21.5		18.6	20.5		14.9	23.9	16.4	20.5	18.6	16.3
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	2.21	0.62	0.82
Incremental Delay, d2	5.4	0.9		1.3	0.4		1.5	8.2	0.3	51.3	0.8	0.2
Delay (s)	26.3	22.5		19.9	21.0		16.4	32.1	16.7	96.4	12.4	13.5
Level of Service	C	C		B	C		B	C	B	F	B	B
Approach Delay (s)		23.8			20.8			29.8			29.5	
Approach LOS		C			C			C			C	

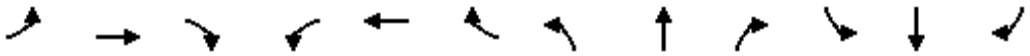
Intersection Summary			
HCM Average Control Delay	27.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	71.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	38	434	18	25	261	21	35	113	68	71	56	41
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	16	12	12	16	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00	0.99		1.00	0.98
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected		1.00	1.00		1.00	1.00		0.99	1.00		0.97	1.00
Satd. Flow (prot)		1935	1382		1947	1331		1970	1452		1933	1430
Flt Permitted		0.96	1.00		0.95	1.00		0.92	1.00		0.79	1.00
Satd. Flow (perm)		1860	1382		1848	1331		1839	1452		1579	1430
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	40	457	19	26	275	22	37	119	72	75	59	43
RTOR Reduction (vph)	0	0	10	0	0	12	0	0	42	0	0	25
Lane Group Flow (vph)	0	497	9	0	301	10	0	156	30	0	134	18
Confl. Peds. (#/hr)	5		21	21		5	9		1	1		9
Heavy Vehicles (%)	5%	5%	6%	7%	4%	12%	6%	1%	4%	0%	6%	5%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Effective Green, g (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Actuated g/C Ratio		0.46	0.46		0.46	0.46		0.42	0.42		0.42	0.42
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		858	638		853	614		764	603		656	594
v/s Ratio Prot												
v/s Ratio Perm		c0.27	0.01		0.16	0.01		0.08	0.02		c0.08	0.01
v/c Ratio		0.58	0.01		0.35	0.02		0.20	0.05		0.20	0.03
Uniform Delay, d1		12.9	9.5		11.3	9.5		12.1	11.3		12.1	11.2
Progression Factor		1.00	1.00		0.38	0.15		1.18	1.64		0.98	0.82
Incremental Delay, d2		2.8	0.0		1.1	0.0		0.6	0.2		0.7	0.1
Delay (s)		15.7	9.5		5.3	1.5		14.9	18.8		12.5	9.3
Level of Service		B	A		A	A		B	B		B	A
Approach Delay (s)		15.5			5.1			16.1			11.7	
Approach LOS		B			A			B			B	

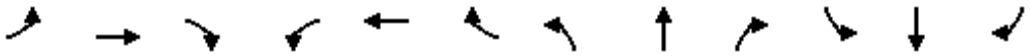
Intersection Summary			
HCM Average Control Delay	12.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	66	512	10	17	268	43	12	234	34	81	70	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00		1.00	0.98		1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1520	3031		1520	2977		1520	2982		1520	2904	
Flt Permitted	0.95	1.00		0.43	1.00		0.68	1.00		0.56	1.00	
Satd. Flow (perm)	1520	3031		694	2977		1091	2982		891	2904	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	73	569	11	19	298	48	13	260	38	90	78	33
RTOR Reduction (vph)	0	2	0	0	20	0	0	18	0	0	19	0
Lane Group Flow (vph)	73	578	0	19	326	0	13	280	0	90	92	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Prot			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Effective Green, g (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.11	0.49		0.34	0.34		0.42	0.42		0.42	0.42	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	164	1492		235	1008		453	1239		370	1206	
v/s Ratio Prot	c0.05	c0.19			0.11			0.09			0.03	
v/s Ratio Perm				0.03			0.01			c0.10		
v/c Ratio	0.45	0.39		0.08	0.32		0.03	0.23		0.24	0.08	
Uniform Delay, d1	27.2	10.4		14.6	16.0		11.2	12.3		12.4	11.5	
Progression Factor	1.07	0.60		0.92	0.93		0.55	0.58		1.12	1.10	
Incremental Delay, d2	7.8	0.7		0.7	0.8		0.1	0.4		1.6	0.1	
Delay (s)	36.9	6.9		14.0	15.7		6.2	7.5		15.4	12.8	
Level of Service	D	A		B	B		A	A		B	B	
Approach Delay (s)		10.3			15.6			7.4			14.0	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	44.6%	ICU Level of Service	A
Analysis Period (min)	15		

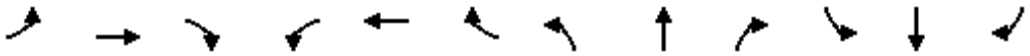
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	37	249	348	240	212	42	109	308	56	24	186	24
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.91		1.00	0.98			0.98			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1520	2774		1520	2964			3163			3190	
Flt Permitted	0.58	1.00		0.95	1.00			0.81			0.89	
Satd. Flow (perm)	925	2774		1520	2964			2584			2839	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	41	277	387	267	236	47	121	342	62	27	207	27
RTOR Reduction (vph)	0	268	0	0	25	0	0	16	0	0	14	0
Lane Group Flow (vph)	41	396	0	267	258	0	0	509	0	0	247	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Prot			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4						2			6		
Actuated Green, G (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Effective Green, g (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Actuated g/C Ratio	0.31	0.31		0.09	0.45			0.38			0.38	
Clearance Time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	285	854		140	1322			994			1092	
v/s Ratio Prot		c0.14		c0.18	0.09							
v/s Ratio Perm	0.04							c0.20			0.09	
v/c Ratio	0.14	0.46		1.91	0.19			0.51			0.23	
Uniform Delay, d1	16.3	18.2		29.5	10.9			15.3			13.5	
Progression Factor	0.63	0.27		1.32	1.10			1.08			0.57	
Incremental Delay, d2	1.0	1.7		426.9	0.2			1.4			0.5	
Delay (s)	11.3	6.6		465.9	12.3			18.0			8.1	
Level of Service	B	A		F	B			B			A	
Approach Delay (s)		6.9			232.5			18.0			8.1	
Approach LOS		A			F			B			A	

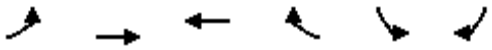
Intersection Summary			
HCM Average Control Delay	70.7	HCM Level of Service	E
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	67.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	16	294	14	69	461	69	34	93	160	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	14	12	10	15	10
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			0.95				
Frt		0.99			0.98			0.92				
Flt Protected		1.00			0.99			0.99				
Satd. Flow (prot)		1586			1566			3165				
Flt Permitted		0.97			0.92			0.99				
Satd. Flow (perm)		1535			1453			3165				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	18	327	16	77	512	77	38	103	178	0	0	0
RTOR Reduction (vph)	0	2	0	0	6	0	0	137	0	0	0	0
Lane Group Flow (vph)	0	359	0	0	660	0	0	182	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		41.9			41.9			15.1				
Effective Green, g (s)		41.9			41.9			15.1				
Actuated g/C Ratio		0.64			0.64			0.23				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		3.0			3.0			8.0				
Lane Grp Cap (vph)		989			937			735				
v/s Ratio Prot												
v/s Ratio Perm		0.23			c0.45			0.06				
v/c Ratio		0.36			0.70			0.25				
Uniform Delay, d1		5.4			7.5			20.3				
Progression Factor		1.89			1.00			1.00				
Incremental Delay, d2		0.9			4.4			0.8				
Delay (s)		11.0			11.9			21.1				
Level of Service		B			B			C				
Approach Delay (s)		11.0			11.9			21.1			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM Average Control Delay	13.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	71.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	93	361	472	44	64	124
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	98	380	497	46	67	131
Pedestrians		3	5		21	
Lane Width (ft)		16.0	16.0		10.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1319	491			
pX, platoon unblocked	0.85				0.85	0.85
vC, conflicting volume	564				1122	544
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	399				1055	375
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	89				64	77
cM capacity (veh/h)	928				186	560

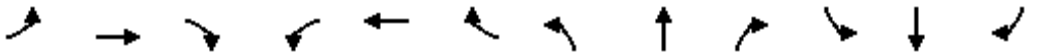
Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	478	543	67	131
Volume Left	98	0	67	0
Volume Right	0	46	0	131
cSH	928	1700	186	560
Volume to Capacity	0.11	0.32	0.36	0.23
Queue Length 95th (ft)	9	0	39	22
Control Delay (s)	2.9	0.0	34.9	13.4
Lane LOS	A		D	B
Approach Delay (s)	2.9	0.0	20.7	
Approach LOS			C	

Intersection Summary			
Average Delay	4.5		
Intersection Capacity Utilization	69.3%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	468	1	26	674	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0			4.0		
Lane Util. Factor	1.00			1.00		
Frt	1.00			1.00		
Flt Protected	1.00			1.00		
Satd. Flow (prot)	1714			1711		
Flt Permitted	1.00			0.97		
Satd. Flow (perm)	1714			1663		
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	520	1	29	749	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	521	0	0	778	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type			Perm			
Protected Phases	1 2 4			4	3	
Permitted Phases			4			
Actuated Green, G (s)	63.0			31.0		
Effective Green, g (s)	59.0			31.0		
Actuated g/C Ratio	0.69			0.36		
Clearance Time (s)				4.0		
Lane Grp Cap (vph)	1190			607		
v/s Ratio Prot	c0.30					
v/s Ratio Perm				c0.47		
v/c Ratio	0.44			1.28		
Uniform Delay, d1	5.7			27.0		
Progression Factor	0.06			1.00		
Incremental Delay, d2	0.1			139.1		
Delay (s)	0.4			166.1		
Level of Service	A			F		
Approach Delay (s)	0.4			166.1	0.0	
Approach LOS	A			F	A	

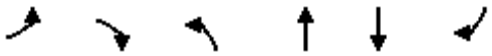
Intersection Summary			
HCM Average Control Delay	99.6	HCM Level of Service	F
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	63.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	185	193	25	559	0	0	0	0	3	0	258
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	206	214	28	621	0	0	0	0	3	0	287
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	621			206			989	989	210	779	882	621
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	621			206			989	989	210	779	882	621
tC, single (s)	4.1			5.5			7.5	6.5	6.9	7.5	6.5	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.9			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			100	100	100	99	100	33
cM capacity (veh/h)	969			984			65	242	802	283	279	425

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	137	283	649	3	287
Volume Left	0	0	28	3	0
Volume Right	0	214	0	0	287
cSH	1700	1700	984	283	425
Volume to Capacity	0.08	0.17	0.03	0.01	0.67
Queue Length 95th (ft)	0	0	2	1	121
Control Delay (s)	0.0	0.0	0.7	17.9	29.3
Lane LOS			A	C	D
Approach Delay (s)	0.0		0.7	29.1	
Approach LOS				D	

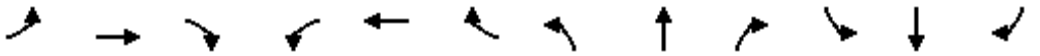
Intersection Summary			
Average Delay	6.6		
Intersection Capacity Utilization	57.8%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	188	0	584	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	209	0	649	0	0	0

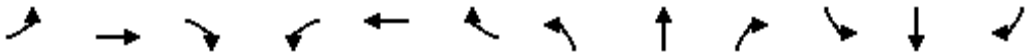
Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	104	104	649
Volume Left (vph)	104	104	649
Volume Right (vph)	0	0	0
Hadj (s)	0.58	0.58	0.29
Departure Headway (s)	6.8	6.8	4.9
Degree Utilization, x	0.20	0.20	0.88
Capacity (veh/h)	511	512	734
Control Delay (s)	10.3	10.3	31.8
Approach Delay (s)	10.3		31.8
Approach LOS	B		D

Intersection Summary			
Delay	26.5		
HCM Level of Service	D		
Intersection Capacity Utilization	46.5%	ICU Level of Service	A
Analysis Period (min)	15		



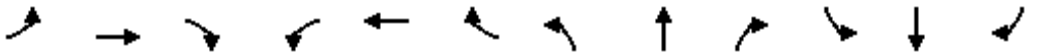
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	467	207	156	466	0	0	0	0	131	115	294
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	13	12	12	12	12	10	10	11
Total Lost time (s)		6.0	6.0		6.0					6.0	6.0	6.0
Lane Util. Factor		0.95	1.00		0.95					0.86	0.81	0.86
Frpb, ped/bikes		1.00	0.98		1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	0.93	0.85
Flt Protected		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (prot)		2978	1202		3372					1346	3693	1122
Flt Permitted		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (perm)		2978	1202		3372					1346	3693	1122
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	492	218	164	491	0	0	0	0	138	121	309
RTOR Reduction (vph)	0	0	147	0	0	0	0	0	0	0	99	92
Lane Group Flow (vph)	0	492	71	0	655	0	0	0	0	76	239	62
Confl. Peds. (#/hr)	5		3	3		5						
Heavy Vehicles (%)	0%	11%	9%	2%	4%	0%	0%	0%	0%	2%	2%	2%
Parking (#/hr)			0									0
Turn Type			Perm	Split						Split		custom
Protected Phases		2		10 12 14	10 12 14					4	4	
Permitted Phases			2									4 2
Actuated Green, G (s)		39.1	39.1		73.1					19.7	19.7	64.8
Effective Green, g (s)		39.1	39.1		73.1					19.7	19.7	64.8
Actuated g/C Ratio		0.24	0.24		0.46					0.12	0.12	0.40
Clearance Time (s)		6.0	6.0							6.0	6.0	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		728	294		1541					166	455	454
v/s Ratio Prot		c0.17			c0.19					0.06	c0.06	
v/s Ratio Perm			0.06									0.06
v/c Ratio		0.68	0.24		0.43					0.46	0.53	0.14
Uniform Delay, d1		54.7	48.5		29.3					65.2	65.8	30.0
Progression Factor		1.00	1.00		0.02					1.00	1.00	1.00
Incremental Delay, d2		5.0	1.9		0.1					2.0	1.1	0.1
Delay (s)		59.7	50.5		0.7					67.2	66.9	30.1
Level of Service		E	D		A					E	E	C
Approach Delay (s)		56.9			0.7			0.0			56.9	
Approach LOS		E			A			A			E	

Intersection Summary			
HCM Average Control Delay	37.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	30.1
Intersection Capacity Utilization	52.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



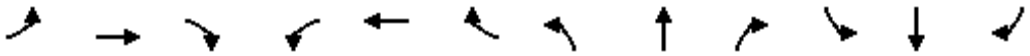
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	210	388	0	0	394	93	228	144	138	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	13	12	12	11	12	13	13	14	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0				
Lane Util. Factor	1.00	0.95			0.95	1.00	0.91	0.91				
Frt	1.00	1.00			1.00	0.85	1.00	0.94				
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (prot)	1574	3366			3149	1457	1531	3002				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (perm)	1574	3366			3149	1457	1531	3002				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	233	431	0	0	438	103	253	160	153	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	82	0	62	0	0	0	0
Lane Group Flow (vph)	233	431	0	0	438	21	192	312	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Split					Perm	Split					
Protected Phases	2 4 8	2 4 8			10		12	12				
Permitted Phases						10						
Actuated Green, G (s)	78.9	78.9			32.6	32.6	21.7	21.7				
Effective Green, g (s)	78.9	78.9			32.6	32.6	21.7	21.7				
Actuated g/C Ratio	0.49	0.49			0.20	0.20	0.14	0.14				
Clearance Time (s)					6.0	6.0	6.0	6.0				
Vehicle Extension (s)					3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	776	1660			642	297	208	407				
v/s Ratio Prot	c0.15	0.13			c0.14		c0.13	0.10				
v/s Ratio Perm						0.01						
v/c Ratio	0.30	0.26			0.68	0.07	0.92	0.77				
Uniform Delay, d1	24.1	23.6			58.9	51.5	68.3	66.7				
Progression Factor	0.07	0.07			1.00	1.00	1.00	1.00				
Incremental Delay, d2	0.2	0.1			3.0	0.1	41.3	8.4				
Delay (s)	1.9	1.8			61.9	51.6	109.6	75.1				
Level of Service	A	A			E	D	F	E				
Approach Delay (s)		1.8			59.9			86.8			0.0	
Approach LOS		A			E			F			A	

Intersection Summary			
HCM Average Control Delay	46.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	28.8
Intersection Capacity Utilization	49.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	214	317	73	44	153	54	86	803	94	90	426	99
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	14	12	10	10	12	9	10	12
Total Lost time (s)	4.0	4.0	5.0	4.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.99	1.00	1.00	1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1538	1556	1328	1595	1713		1524	2965		1509	2869	
Flt Permitted	0.49	1.00	1.00	0.43	1.00		0.35	1.00		0.14	1.00	
Satd. Flow (perm)	794	1556	1328	724	1713		569	2965		230	2869	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	225	334	77	46	161	57	91	845	99	95	448	104
RTOR Reduction (vph)	0	0	50	0	14	0	0	10	0	0	22	0
Lane Group Flow (vph)	225	334	27	46	204	0	91	934	0	95	530	0
Confl. Peds. (#/hr)	33		3	3		33	42		8	8		42
Confl. Bikes (#/hr)							1					1
Heavy Vehicles (%)	3%	8%	6%	0%	7%	5%	4%	5%	11%	2%	6%	9%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	38.2	31.2	31.2	32.4	28.3		39.6	34.1		39.6	34.1	
Effective Green, g (s)	36.2	32.2	31.2	30.4	28.3		37.6	34.1		37.6	34.1	
Actuated g/C Ratio	0.40	0.36	0.35	0.34	0.31		0.42	0.38		0.42	0.38	
Clearance Time (s)	3.0	5.0	5.0	3.0	5.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	369	557	461	275	539		286	1125		160	1088	
v/s Ratio Prot	c0.04	c0.21		0.01	0.12		0.02	c0.32		c0.03	0.18	
v/s Ratio Perm	0.20		0.02	0.05			0.12			0.22		
v/c Ratio	0.61	0.60	0.06	0.17	0.38		0.32	0.83		0.59	0.49	
Uniform Delay, d1	21.0	23.6	19.6	20.5	24.0		16.5	25.3		18.3	21.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.9	4.7	0.2	0.3	2.0		0.6	7.2		5.8	1.6	
Delay (s)	23.9	28.3	19.8	20.8	26.0		17.1	32.4		24.1	22.8	
Level of Service	C	C	B	C	C		B	C		C	C	
Approach Delay (s)		25.7			25.1			31.1			23.0	
Approach LOS		C			C			C			C	

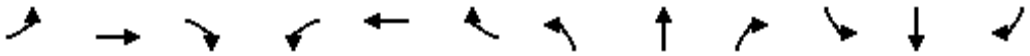
Intersection Summary			
HCM Average Control Delay	27.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	89.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	72.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	43	383	16	18	212	32	35	79	67	62	42	38
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	10	10	10	12	15	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Frpb, ped/bikes		1.00	0.97		1.00	0.97		0.99			0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.95			0.96	
Flt Protected		1.00	1.00		1.00	1.00		0.99			0.98	
Satd. Flow (prot)		1909	1482		1599	1198		1840			1812	
Flt Permitted		0.96	1.00		0.96	1.00		0.94			0.83	
Satd. Flow (perm)		1832	1482		1544	1198		1741			1544	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	45	403	17	19	223	34	37	83	71	65	44	40
RTOR Reduction (vph)	0	0	9	0	0	17	0	33	0	0	20	0
Lane Group Flow (vph)	0	448	8	0	242	17	0	158	0	0	129	0
Confl. Peds. (#/hr)	6		11	11		6	4		8	8		4
Confl. Bikes (#/hr)	1		1	1		1			1	1		
Heavy Vehicles (%)	0%	7%	0%	0%	5%	16%	0%	0%	0%	10%	0%	3%
Turn Type	Perm		Perm	Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Effective Green, g (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Actuated g/C Ratio		0.49	0.49		0.49	0.49		0.42			0.42	
Clearance Time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		902	730		760	590		723			641	
v/s Ratio Prot												
v/s Ratio Perm		c0.24	0.01		0.16	0.01		c0.09			0.08	
v/c Ratio		0.50	0.01		0.32	0.03		0.22			0.20	
Uniform Delay, d1		11.1	8.4		9.9	8.5		12.2			12.1	
Progression Factor		1.00	1.00		2.06	3.36		1.00			1.42	
Incremental Delay, d2		2.0	0.0		1.0	0.1		0.7			0.7	
Delay (s)		13.0	8.5		21.5	28.6		12.9			17.9	
Level of Service		B	A		C	C		B			B	
Approach Delay (s)		12.9			22.4			12.9			17.9	
Approach LOS		B			C			B			B	

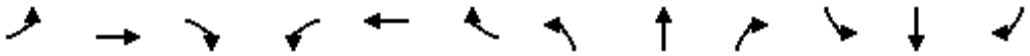
Intersection Summary			
HCM Average Control Delay	16.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	64.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	71	419	23	19	189	8	39	216	72	18	51	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.98		1.00	0.96		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.96	
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		0.99	
Satd. Flow (prot)		1658	1392		1584	1497		1754	1390		1656	
Flt Permitted		0.92	1.00		0.85	1.00		0.95	1.00		0.93	
Satd. Flow (perm)		1531	1392		1352	1497		1679	1390		1560	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	75	441	24	20	199	8	41	227	76	19	54	31
RTOR Reduction (vph)	0	0	10	0	0	5	0	0	39	0	16	0
Lane Group Flow (vph)	0	516	14	0	219	3	0	268	37	0	88	0
Confl. Peds. (#/hr)	11		17	17		11	4		17	17		4
Confl. Bikes (#/hr)	1		1	1		1	1					1
Heavy Vehicles (%)	0%	9%	5%	33%	11%	0%	6%	1%	6%	0%	0%	8%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Effective Green, g (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Actuated g/C Ratio		0.35	0.35		0.35	0.35		0.49	0.49		0.49	
Clearance Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Grp Cap (vph)		542	493		478	530		827	684		768	
v/s Ratio Prot												
v/s Ratio Perm		c0.34	0.01		0.16	0.00		c0.16	0.03		0.06	
v/c Ratio		0.95	0.03		0.46	0.01		0.32	0.05		0.11	
Uniform Delay, d1		20.5	13.7		16.2	13.6		10.0	8.6		8.9	
Progression Factor		1.61	2.00		0.94	0.90		0.33	0.34		1.15	
Incremental Delay, d2		26.9	0.1		3.1	0.0		0.8	0.1		0.3	
Delay (s)		60.0	27.5		18.2	12.3		4.1	3.0		10.5	
Level of Service		E	C		B	B		A	A		B	
Approach Delay (s)		58.5			18.0			3.9			10.5	
Approach LOS		E			B			A			B	

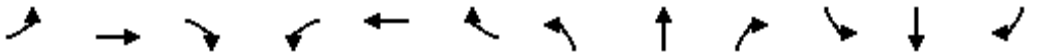
Intersection Summary			
HCM Average Control Delay	31.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	75.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	439	20	30	9	18	15	26	352	19	8	222	165
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.97		0.98			1.00			1.00	0.95
Flpb, ped/bikes		0.98	1.00		1.00			1.00			1.00	1.00
Frt		1.00	0.85		0.95			0.99			1.00	0.85
Flt Protected		0.95	1.00		0.99			1.00			1.00	1.00
Satd. Flow (prot)		1754	1390		1758			1979			1873	1328
Flt Permitted		0.73	1.00		0.91			0.97			0.99	1.00
Satd. Flow (perm)		1337	1390		1609			1933			1852	1328
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	488	22	33	10	20	17	29	391	21	9	247	183
RTOR Reduction (vph)	0	0	15	0	13	0	0	3	0	0	0	93
Lane Group Flow (vph)	0	510	18	0	34	0	0	438	0	0	256	90
Confl. Peds. (#/hr)	49		22	22		49	34		17	17		34
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	9%	0%	7%	0%	0%	0%	0%	2%	0%	0%	9%	9%
Turn Type	pm+pt		Perm	Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		27.0	27.0		17.0			32.0			32.0	32.0
Effective Green, g (s)		27.0	27.0		17.0			32.0			32.0	32.0
Actuated g/C Ratio		0.42	0.42		0.26			0.49			0.49	0.49
Clearance Time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		607	577		421			952			912	654
v/s Ratio Prot		c0.10										
v/s Ratio Perm		0.25	0.01		0.02			c0.23			0.14	0.07
v/c Ratio		0.84	0.03		0.08			0.46			0.28	0.14
Uniform Delay, d1		17.1	11.3		18.1			10.8			9.7	9.0
Progression Factor		1.03	1.64		1.00			0.58			0.84	1.15
Incremental Delay, d2		8.2	0.1		0.4			1.5			0.3	0.2
Delay (s)		25.7	18.5		18.5			7.8			8.4	10.5
Level of Service		C	B		B			A			A	B
Approach Delay (s)		25.2			18.5			7.8			9.3	
Approach LOS		C			B			A			A	

Intersection Summary			
HCM Average Control Delay	15.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	79.1%	ICU Level of Service	D
Analysis Period (min)	15		

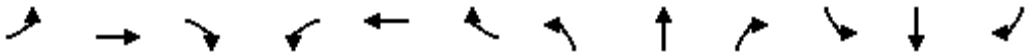
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	883	220	263	1103	0	0	0	0	274	200	374
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	11	8	8	8	11	12	14
Total Lost time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Lane Util. Factor		0.91		1.00	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00		1.00	1.00					1.00	0.99	0.99
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.97		1.00	1.00					1.00	0.94	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.99	1.00
Satd. Flow (prot)		4313		1589	3226					1419	2711	1355
Flt Permitted		1.00		0.17	1.00					0.95	0.99	1.00
Satd. Flow (perm)		4313		277	3226					1419	2711	1355
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	929	232	277	1161	0	0	0	0	288	211	394
RTOR Reduction (vph)	0	35	0	0	0	0	0	0	0	0	65	65
Lane Group Flow (vph)	0	1126	0	277	1161	0	0	0	0	233	386	144
Confl. Peds. (#/hr)	6		4	4		6	2					2
Heavy Vehicles (%)	0%	11%	7%	4%	6%	0%	0%	0%	0%	6%	4%	8%
Turn Type				pm+pt						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Actuated Green, G (s)		49.9		69.4	69.4					23.6	23.6	23.6
Effective Green, g (s)		49.9		69.4	69.4					23.6	23.6	23.6
Actuated g/C Ratio		0.48		0.66	0.66					0.22	0.22	0.22
Clearance Time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Vehicle Extension (s)		7.0		3.5	7.0					3.5	3.5	3.5
Lane Grp Cap (vph)		2050		371	2132					319	609	305
v/s Ratio Prot		0.26		c0.11	0.36							
v/s Ratio Perm				c0.39						c0.16	0.14	0.11
v/c Ratio		0.55		0.75	0.54					0.73	0.63	0.47
Uniform Delay, d1		19.6		11.3	9.4					37.7	36.8	35.3
Progression Factor		1.00		1.18	1.62					1.00	1.00	1.00
Incremental Delay, d2		1.1		5.0	0.6					8.6	2.3	1.4
Delay (s)		20.6		18.3	15.9					46.3	39.1	36.7
Level of Service		C		B	B					D	D	D
Approach Delay (s)		20.6			16.3			0.0			40.4	
Approach LOS		C			B			A			D	

Intersection Summary			
HCM Average Control Delay	23.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	100.0%	ICU Level of Service	F
Analysis Period (min)	15		

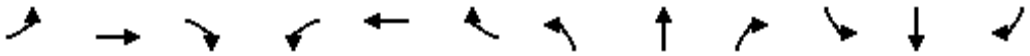
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	309	848	0	0	844	234	521	346	402	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	11	12	12	12	12	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0		6.0				
Lane Util. Factor	0.97	0.95			0.95	1.00		0.91				
Frpb, ped/bikes	1.00	1.00			1.00	0.99		1.00				
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00				
Frt	1.00	1.00			1.00	0.85		0.95				
Flt Protected	0.95	1.00			1.00	1.00		0.98				
Satd. Flow (prot)	2915	3138			3119	1449		4408				
Flt Permitted	0.19	1.00			1.00	1.00		0.98				
Satd. Flow (perm)	579	3138			3119	1449		4408				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	325	893	0	0	888	246	548	364	423	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	106	0	78	0	0	0	0
Lane Group Flow (vph)	325	893	0	0	888	140	0	1257	0	0	0	0
Confl. Peds. (#/hr)	4					4						
Heavy Vehicles (%)	10%	9%	0%	0%	6%	4%	4%	3%	5%	0%	0%	0%
Turn Type	pm+pt					Perm	Perm					
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8					
Actuated Green, G (s)	62.5	62.5			45.1	45.1		30.5				
Effective Green, g (s)	62.5	62.5			45.1	45.1		30.5				
Actuated g/C Ratio	0.60	0.60			0.43	0.43		0.29				
Clearance Time (s)	6.0	6.0			6.0	6.0		6.0				
Vehicle Extension (s)	3.5	7.0			7.0	7.0		5.0				
Lane Grp Cap (vph)	598	1868			1340	622		1280				
v/s Ratio Prot	0.06	c0.28			c0.28							
v/s Ratio Perm	0.26					0.10		0.29				
v/c Ratio	0.54	0.48			0.66	0.22		0.98				
Uniform Delay, d1	12.8	12.0			23.9	18.9		37.0				
Progression Factor	0.72	0.86			0.95	1.43		1.00				
Incremental Delay, d2	0.9	0.7			1.7	0.5		21.0				
Delay (s)	10.2	11.1			24.4	27.6		57.9				
Level of Service	B	B			C	C		E				
Approach Delay (s)		10.8			25.1			57.9			0.0	
Approach LOS		B			C			E			A	

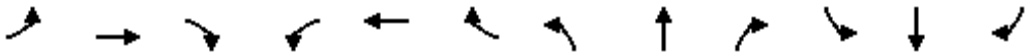
Intersection Summary			
HCM Average Control Delay	32.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	100.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	103	571	221	76	769	43	226	178	40	49	111	91
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	11	12	12	10	10	13	10	10	10
Total Lost time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.97		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1565	3061	1291	1602	3232		1446	3007		1544	2782	
Flt Permitted	0.14	1.00	1.00	0.42	1.00		0.53	1.00		0.61	1.00	
Satd. Flow (perm)	234	3061	1291	716	3232		807	3007		990	2782	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	108	601	233	80	809	45	238	187	42	52	117	96
RTOR Reduction (vph)	0	0	95	0	4	0	0	21	0	0	80	0
Lane Group Flow (vph)	108	601	138	80	850	0	238	208	0	52	133	0
Confl. Peds. (#/hr)	3		12	12		3	9		6	6		9
Heavy Vehicles (%)	2%	8%	5%	3%	5%	3%	10%	3%	2%	3%	7%	4%
Parking (#/hr)			0									
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	62.5	52.6	62.1	40.1	33.7		29.9	20.4		24.1	17.5	
Effective Green, g (s)	62.5	52.6	62.1	40.1	33.7		29.9	20.4		24.1	17.5	
Actuated g/C Ratio	0.60	0.50	0.59	0.38	0.32		0.28	0.19		0.23	0.17	
Clearance Time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0		3.0	7.0		3.0	7.0	
Lane Grp Cap (vph)	460	1533	764	327	1037		288	584		262	464	
v/s Ratio Prot	c0.06	c0.20	0.02	0.01	c0.26		c0.07	0.07		0.01	0.05	
v/s Ratio Perm	0.08		0.09	0.08			c0.16			0.03		
v/c Ratio	0.23	0.39	0.18	0.24	0.82		0.83	0.36		0.20	0.29	
Uniform Delay, d1	11.9	16.3	9.8	21.1	32.8		33.7	36.6		32.3	38.3	
Progression Factor	0.89	0.99	1.92	1.00	1.00		0.93	0.88		1.00	1.00	
Incremental Delay, d2	0.9	0.6	0.1	0.4	7.2		16.8	1.3		0.4	1.2	
Delay (s)	11.5	16.7	18.9	21.5	40.1		48.2	33.5		32.6	39.5	
Level of Service	B	B	B	C	D		D	C		C	D	
Approach Delay (s)		16.7			38.5			41.0			38.2	
Approach LOS		B			D			D			D	

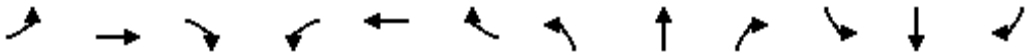
Intersection Summary			
HCM Average Control Delay	31.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	22.5
Intersection Capacity Utilization	72.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	222	273	57	184	98	328	380	75	91	258	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	12	11	12	12	11	13	12	10	11	12
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.92		1.00	0.95		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1634	2873		1463	3033		1589	3244		1549	3135	
Flt Permitted	0.55	1.00		0.33	1.00		0.46	1.00		0.48	1.00	
Satd. Flow (perm)	942	2873		515	3033		772	3244		780	3135	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	62	234	287	60	194	103	345	400	79	96	272	57
RTOR Reduction (vph)	0	206	0	0	64	0	0	15	0	0	17	0
Lane Group Flow (vph)	62	315	0	60	233	0	345	464	0	96	312	0
Confl. Peds. (#/hr)	20					20	1		2	2		1
Heavy Vehicles (%)	4%	5%	6%	13%	6%	5%	4%	6%	5%	3%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	35.7	28.7		35.9	28.8		53.2	41.9		38.6	31.3	
Effective Green, g (s)	35.7	28.7		35.9	28.8		53.2	41.9		38.6	31.3	
Actuated g/C Ratio	0.34	0.27		0.34	0.27		0.51	0.40		0.37	0.30	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.5	7.0		3.5	7.0		3.5	7.0		3.5	7.0	
Lane Grp Cap (vph)	366	785		240	832		530	1295		340	935	
v/s Ratio Prot	0.01	c0.11		c0.02	0.08		c0.11	0.14		0.02	0.10	
v/s Ratio Perm	0.05			0.07			c0.22			0.08		
v/c Ratio	0.17	0.40		0.25	0.28		0.65	0.36		0.28	0.33	
Uniform Delay, d1	23.8	31.1		24.0	30.0		16.6	22.1		22.4	28.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.03	0.91	
Incremental Delay, d2	0.3	1.5		0.6	0.8		3.0	0.8		0.5	0.9	
Delay (s)	24.0	32.7		24.7	30.8		19.6	22.9		23.5	26.9	
Level of Service	C	C		C	C		B	C		C	C	
Approach Delay (s)		31.8			29.8			21.5			26.2	
Approach LOS		C			C			C			C	

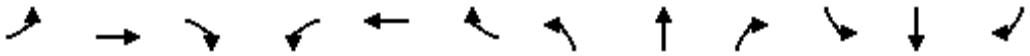
Intersection Summary			
HCM Average Control Delay	26.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	68.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	165	536	79	6	437	123	65	577	7	140	309	100
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	9	11	12	9	9	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.97		1.00	1.00		1.00	0.96	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		2912			2885		1436	3185		1450	2788	
Flt Permitted		0.58			0.94		0.43	1.00		0.29	1.00	
Satd. Flow (perm)		1692			2727		654	3185		448	2788	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	183	596	88	7	486	137	72	641	8	156	343	111
RTOR Reduction (vph)	0	13	0	0	39	0	0	1	0	0	48	0
Lane Group Flow (vph)	0	854	0	0	591	0	72	648	0	156	406	0
Confl. Peds. (#/hr)	9		11	11		9	11		14	14		11
Heavy Vehicles (%)	3%	6%	18%	50%	6%	6%	7%	3%	50%	6%	7%	2%
Turn Type	pm+pt			Perm			pm+pt			pm+pt		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			19.0		26.0	22.0		26.0	22.0	
Effective Green, g (s)		27.0			19.0		26.0	22.0		26.0	22.0	
Actuated g/C Ratio		0.42			0.29		0.40	0.34		0.40	0.34	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		778			797		310	1078		241	944	
v/s Ratio Prot		c0.07					0.01	0.20		c0.04	0.15	
v/s Ratio Perm		c0.39			0.22		0.08			c0.22		
v/c Ratio		1.10			0.74		0.23	0.60		0.65	0.43	
Uniform Delay, d1		19.0			20.8		12.4	17.9		14.3	16.6	
Progression Factor		1.00			1.54		0.89	0.70		1.00	1.00	
Incremental Delay, d2		62.1			0.6		1.6	2.3		12.7	1.4	
Delay (s)		81.1			32.6		12.6	14.7		27.0	18.1	
Level of Service		F			C		B	B		C	B	
Approach Delay (s)		81.1			32.6			14.5			20.3	
Approach LOS		F			C			B			C	

Intersection Summary			
HCM Average Control Delay	40.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	79.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	49	219	46	71	154	13	36	632	89	10	359	43
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.99		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1666	1899		1615	1942		1658	3202		1138	3197	
Flt Permitted	0.65	1.00		0.53	1.00		0.51	1.00		0.32	1.00	
Satd. Flow (perm)	1137	1899		908	1942		889	3202		379	3197	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	51	226	47	73	159	13	37	652	92	10	370	44
RTOR Reduction (vph)	0	11	0	0	4	0	0	17	0	0	14	0
Lane Group Flow (vph)	51	262	0	73	168	0	37	727	0	10	400	0
Confl. Peds. (#/hr)	10		16	16		10	4		6	6		4
Confl. Bikes (#/hr)			4	4								
Heavy Vehicles (%)	2%	4%	5%	5%	4%	0%	3%	4%	8%	50%	5%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.48	0.48		0.48	0.48	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	420	701		335	717		424	1527		181	1525	
v/s Ratio Prot		c0.14			0.09			c0.23			0.13	
v/s Ratio Perm	0.04			0.08			0.04			0.03		
v/c Ratio	0.12	0.37		0.22	0.23		0.09	0.48		0.06	0.26	
Uniform Delay, d1	13.5	15.0		14.1	14.2		9.3	11.5		9.1	10.2	
Progression Factor	1.00	1.00		1.73	1.78		1.00	1.00		0.50	0.50	
Incremental Delay, d2	0.6	1.5		0.6	0.3		0.4	1.1		0.5	0.3	
Delay (s)	14.1	16.5		25.0	25.5		9.7	12.6		5.0	5.4	
Level of Service	B	B		C	C		A	B		A	A	
Approach Delay (s)		16.1			25.3			12.4			5.4	
Approach LOS		B			C			B			A	

Intersection Summary				
HCM Average Control Delay	13.2	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.43			
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0	
Intersection Capacity Utilization	61.1%	ICU Level of Service	B	
Analysis Period (min)	15			

c Critical Lane Group

Movement	EBT	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR	SBR2
Lane Configurations												
Volume (vph)	626	190	607	17	3	14	3	46	22	0	2	4
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	12	12	16	12	12	16	12	12
Total Lost time (s)	5.0		5.0				4.0			4.0		
Lane Util. Factor	0.95		0.95				1.00			1.00		
Frpb, ped/bikes	1.00		1.00				1.00			0.99		
Flpb, ped/bikes	1.00		1.00				1.00			1.00		
Frt	1.00		1.00				0.91			0.97		
Flt Protected	1.00		0.99				0.99			0.96		
Satd. Flow (prot)	2956		2955				1732			1897		
Flt Permitted	1.00		0.57				0.94			0.81		
Satd. Flow (perm)	2956		1703				1646			1604		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	659	200	639	18	3	15	3	48	23	0	2	4
RTOR Reduction (vph)	0	0	2	0	0	0	38	0	0	3	0	0
Lane Group Flow (vph)	659	0	855	0	0	0	31	0	0	26	0	0
Confl. Peds. (#/hr)		7		6		3					3	
Confl. Bikes (#/hr)		1										
Heavy Vehicles (%)	8%	8%	6%	0%	0%	8%	0%	5%	0%	0%	0%	0%
Turn Type		custom				Perm			Perm			
Protected Phases	8	7	4				2			6		
Permitted Phases		4 7				2			6			
Actuated Green, G (s)	18.0		27.0				14.0			14.0		
Effective Green, g (s)	18.0		27.0				14.0			14.0		
Actuated g/C Ratio	0.28		0.42				0.22			0.22		
Clearance Time (s)	5.0		5.0				4.0			4.0		
Lane Grp Cap (vph)	819		823				355			345		
v/s Ratio Prot	0.22		c0.10									
v/s Ratio Perm			c0.34				c0.02			0.02		
v/c Ratio	0.80		1.04				0.09			0.07		
Uniform Delay, d1	21.9		19.0				20.4			20.3		
Progression Factor	1.28		0.77				1.00			1.00		
Incremental Delay, d2	2.0		40.7				0.5			0.4		
Delay (s)	30.0		55.3				20.9			20.8		
Level of Service	C		E				C			C		
Approach Delay (s)	30.0		55.3				20.9			20.8		
Approach LOS	C		E				C			C		

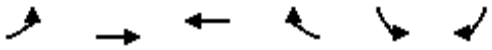
Intersection Summary			
HCM Average Control Delay	91.4	HCM Level of Service	F
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	93.4%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



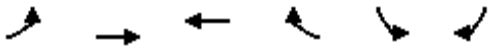
Movement	NEL	NER
Lane Configurations		
Volume (vph)	1	333
Ideal Flow (vphpl)	1800	1800
Lane Width	12	12
Total Lost time (s)	5.0	
Lane Util. Factor	1.00	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Frt	0.87	
Flt Protected	1.00	
Satd. Flow (prot)	1429	
Flt Permitted	1.00	
Satd. Flow (perm)	1429	
Peak-hour factor, PHF	0.95	0.95
Adj. Flow (vph)	1	351
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	352	0
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Heavy Vehicles (%)	0%	9%
Turn Type		
Protected Phases	3	
Permitted Phases		
Actuated Green, G (s)	10.0	
Effective Green, g (s)	10.0	
Actuated g/C Ratio	0.15	
Clearance Time (s)	5.0	
Lane Grp Cap (vph)	220	
v/s Ratio Prot	c0.25	
v/s Ratio Perm		
v/c Ratio	1.60	
Uniform Delay, d1	27.5	
Progression Factor	0.89	
Incremental Delay, d2	289.2	
Delay (s)	313.7	
Level of Service	F	
Approach Delay (s)	313.7	
Approach LOS	F	

Intersection Summary



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	186	892	659	79	101	156
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frt		1.00	0.98		1.00	0.85
Flt Protected		0.99	1.00		0.95	1.00
Satd. Flow (prot)		3229	3205		1629	1457
Flt Permitted		0.64	1.00		0.95	1.00
Satd. Flow (perm)		2097	3205		1629	1457
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	207	991	732	88	112	173
RTOR Reduction (vph)	0	0	14	0	0	128
Lane Group Flow (vph)	0	1198	806	0	112	45
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		40.0	40.0		17.0	17.0
Effective Green, g (s)		40.0	40.0		17.0	17.0
Actuated g/C Ratio		0.62	0.62		0.26	0.26
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1290	1972		426	381
v/s Ratio Prot			0.25		c0.07	
v/s Ratio Perm		c0.57				0.03
v/c Ratio		0.93	0.41		0.26	0.12
Uniform Delay, d1		11.2	6.4		19.0	18.3
Progression Factor		1.42	1.33		0.93	0.90
Incremental Delay, d2		5.8	0.6		1.5	0.6
Delay (s)		21.8	9.1		19.2	17.2
Level of Service		C	A		B	B
Approach Delay (s)		21.8	9.1		18.0	
Approach LOS		C	A		B	

Intersection Summary			
HCM Average Control Delay	16.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	51	921	679	211	170	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	12	10	11	12	10	10
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frpb, ped/bikes		1.00	0.99		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.96		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2928	2912		1464	1373
Flt Permitted		0.86	1.00		0.95	1.00
Satd. Flow (perm)		2531	2912		1464	1373
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	54	969	715	222	179	57
RTOR Reduction (vph)	0	0	45	0	0	40
Lane Group Flow (vph)	0	1023	892	0	179	17
Confl. Peds. (#/hr)	1			1		
Confl. Bikes (#/hr)	1			1		
Heavy Vehicles (%)	4%	9%	8%	12%	9%	4%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		38.0	38.0		19.0	19.0
Effective Green, g (s)		38.0	38.0		19.0	19.0
Actuated g/C Ratio		0.58	0.58		0.29	0.29
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1480	1702		428	401
v/s Ratio Prot			0.31		c0.12	
v/s Ratio Perm		c0.40				0.01
v/c Ratio		0.69	0.52		0.42	0.04
Uniform Delay, d1		9.4	8.1		18.5	16.5
Progression Factor		0.84	0.59		1.00	1.44
Incremental Delay, d2		1.3	0.7		2.9	0.2
Delay (s)		9.2	5.5		21.6	23.9
Level of Service		A	A		C	C
Approach Delay (s)		9.2	5.5		22.1	
Approach LOS		A	A		C	

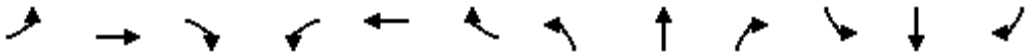
Intersection Summary			
HCM Average Control Delay	9.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	75.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



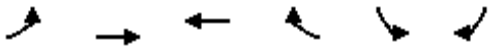
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	940	153	164	654	401	319
Ideal Flow (vphpl)	2300	1800	1800	2300	1800	1800
Lane Width	15	12	14	16	15	12
Total Lost time (s)	5.0		5.0	5.0	5.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	0.99	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.98		1.00	1.00	0.94	
Flt Protected	1.00		0.95	1.00	0.97	
Satd. Flow (prot)	2240		1770	2436	1761	
Flt Permitted	1.00		0.13	1.00	0.97	
Satd. Flow (perm)	2240		240	2436	1761	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	959	156	167	667	409	326
RTOR Reduction (vph)	9	0	0	0	44	0
Lane Group Flow (vph)	1106	0	167	667	691	0
Confl. Peds. (#/hr)		4	4			8
Heavy Vehicles (%)	11%	7%	3%	7%	2%	2%
Turn Type			Perm			
Protected Phases	4			8	2	
Permitted Phases			8			
Actuated Green, G (s)	31.0		31.0	31.0	24.0	
Effective Green, g (s)	31.0		31.0	31.0	24.0	
Actuated g/C Ratio	0.48		0.48	0.48	0.37	
Clearance Time (s)	5.0		5.0	5.0	5.0	
Lane Grp Cap (vph)	1068		114	1162	650	
v/s Ratio Prot	0.49			0.27	c0.39	
v/s Ratio Perm			c0.69			
v/c Ratio	1.04		1.46	0.57	1.06	
Uniform Delay, d1	17.0		17.0	12.2	20.5	
Progression Factor	1.47		1.00	1.00	1.00	
Incremental Delay, d2	33.7		250.7	2.1	53.2	
Delay (s)	58.7		267.7	14.3	73.7	
Level of Service	E		F	B	E	
Approach Delay (s)	58.7			65.1	73.7	
Approach LOS	E			E	E	

Intersection Summary			
HCM Average Control Delay	64.8	HCM Level of Service	E
HCM Volume to Capacity ratio	1.29		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	115.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	695	85	251	1150	9	68	0	177	1	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	15	13	11	11	12	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0	4.0	3.0	3.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00		0.95	
Satd. Flow (prot)	1881	3213	1422	1589	3138	1366		1642	1443		969	
Flt Permitted	0.22	1.00	1.00	0.28	1.00	1.00		0.76	1.00		0.71	
Satd. Flow (perm)	430	3213	1422	472	3138	1366		1309	1443		722	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	772	94	279	1278	10	76	0	197	1	0	0
RTOR Reduction (vph)	0	0	43	0	0	2	0	0	173	0	0	0
Lane Group Flow (vph)	1	772	51	279	1278	8	0	76	24	0	1	0
Heavy Vehicles (%)	0%	10%	4%	4%	9%	12%	18%	0%	6%	100%	0%	0%
Turn Type	Perm		Perm	custom		custom	Perm		Perm	Perm		
Protected Phases		4		3	3 8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)	45.7	45.7	45.7	66.6	66.6	66.6		10.4	10.4		10.4	
Effective Green, g (s)	45.7	45.7	45.7	66.6	66.6	66.6		10.4	10.4		10.4	
Actuated g/C Ratio	0.54	0.54	0.54	0.78	0.78	0.78		0.12	0.12		0.12	
Clearance Time (s)	4.0	4.0	4.0	3.0		4.0		4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0		3.0	
Lane Grp Cap (vph)	231	1727	765	605	2459	1070		160	177		88	
v/s Ratio Prot		0.24		0.10	c0.41							
v/s Ratio Perm	0.00		0.04	0.26		0.01		c0.06	0.02		0.00	
v/c Ratio	0.00	0.45	0.07	0.46	0.52	0.01		0.47	0.14		0.01	
Uniform Delay, d1	9.1	12.0	9.4	3.6	3.4	2.0		34.8	33.3		32.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	0.0	0.8	0.2	0.6	0.2	0.0		2.2	0.4		0.1	
Delay (s)	9.1	12.8	9.6	4.2	3.5	2.0		37.0	33.6		32.8	
Level of Service	A	B	A	A	A	A		D	C		C	
Approach Delay (s)		12.4			3.6			34.6			32.8	
Approach LOS		B			A			C			C	

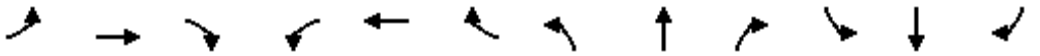
Intersection Summary			
HCM Average Control Delay	9.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	51.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	12	778	813	43	23	11
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	12	10	10
Total Lost time (s)		5.0	5.0		3.0	
Lane Util. Factor		0.95	0.95		1.00	
Frt		1.00	0.99		0.96	
Flt Protected		1.00	1.00		0.97	
Satd. Flow (prot)		3038	3017		1481	
Flt Permitted		0.93	1.00		0.97	
Satd. Flow (perm)		2842	3017		1481	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	13	864	903	48	26	12
RTOR Reduction (vph)	0	0	4	0	11	0
Lane Group Flow (vph)	0	877	947	0	27	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type	Perm					
Protected Phases		4	8 2 11		5	
Permitted Phases	4					
Actuated Green, G (s)		33.0	64.0		7.0	
Effective Green, g (s)		33.0	64.0		7.0	
Actuated g/C Ratio		0.37	0.71		0.08	
Clearance Time (s)		5.0			3.0	
Lane Grp Cap (vph)		1042	2145		115	
v/s Ratio Prot			c0.31		c0.02	
v/s Ratio Perm		c0.31				
v/c Ratio		0.84	0.44		0.23	
Uniform Delay, d1		26.1	5.5		39.0	
Progression Factor		1.00	0.00		1.00	
Incremental Delay, d2		8.2	0.3		4.7	
Delay (s)		34.3	0.3		43.7	
Level of Service		C	A		D	
Approach Delay (s)		34.3	0.3		43.7	
Approach LOS		C	A		D	

Intersection Summary			
HCM Average Control Delay	17.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	42.5%	ICU Level of Service	A
Analysis Period (min)	15		

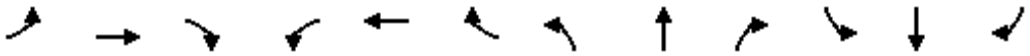
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	87	427	1	26	570	78	0	0	1	43	3	125
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12	12	11	12	11
Total Lost time (s)		4.0			4.0			3.0			3.0	3.0
Lane Util. Factor		1.00			0.95			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			0.92			1.00	0.96
Flpb, ped/bikes		1.00			1.00			1.00			0.98	1.00
Frt		1.00			0.98			0.86			1.00	0.85
Flt Protected		0.99			1.00			1.00			0.96	1.00
Satd. Flow (prot)		1727			3232			1432			1610	1282
Flt Permitted		0.77			0.93			1.00			0.94	1.00
Satd. Flow (perm)		1340			3026			1432			1581	1282
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	97	474	1	29	633	87	0	0	1	48	3	139
RTOR Reduction (vph)	0	0	0	0	12	0	0	1	0	0	0	93
Lane Group Flow (vph)	0	572	0	0	737	0	0	0	0	0	51	46
Confl. Peds. (#/hr)	33		13	13		33	29		13	13		29
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	4%	3%	0%	0%	4%	0%	0%	0%	0%	5%	0%	11%
Turn Type	Perm			Prot			Perm			pm+pt		Perm
Protected Phases		4		3	3 4			1		2	1 2	
Permitted Phases	4				3		1	1		1 2		1 2
Actuated Green, G (s)		31.0			45.0			9.0			25.0	28.0
Effective Green, g (s)		31.0			45.0			9.0			25.0	28.0
Actuated g/C Ratio		0.36			0.53			0.11			0.29	0.33
Clearance Time (s)		4.0						3.0				
Lane Grp Cap (vph)		489			1636			152			470	422
v/s Ratio Prot					c0.07			0.00			0.02	
v/s Ratio Perm		c0.43			0.16						0.01	c0.04
v/c Ratio		1.17			0.45			0.00			0.11	0.11
Uniform Delay, d1		27.0			12.4			34.0			21.9	19.8
Progression Factor		1.00			1.82			1.00			1.00	1.00
Incremental Delay, d2		96.5			0.1			0.0			0.5	0.5
Delay (s)		123.5			22.6			34.0			22.3	20.3
Level of Service		F			C			C			C	C
Approach Delay (s)		123.5			22.6			34.0			20.9	
Approach LOS		F			C			C			C	

Intersection Summary			
HCM Average Control Delay	60.5	HCM Level of Service	E
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	72.6%	ICU Level of Service	C
Analysis Period (min)	15		

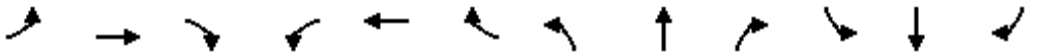
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	598	28	35	997	57	36	29	48	23	24	87
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	16	10	10	16	8	15	8	8	14	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			0.98	
Flpb, ped/bikes	0.98	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.99			0.94			0.91	
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.99	
Satd. Flow (prot)	1556	3022		1587	3021			1808			1703	
Flt Permitted	0.17	1.00		0.36	1.00			0.89			0.95	
Satd. Flow (perm)	286	3022		604	3021			1636			1627	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	41	629	29	37	1049	60	38	31	51	24	25	92
RTOR Reduction (vph)	0	5	0	0	6	0	0	33	0	0	22	0
Lane Group Flow (vph)	41	653	0	37	1103	0	0	87	0	0	119	0
Confl. Peds. (#/hr)	145		16	16		145	17		19	19		17
Confl. Bikes (#/hr)	5					5			2	2		
Heavy Vehicles (%)	0%	5%	0%	0%	4%	2%	0%	0%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			22.0			22.0	
Effective Green, g (s)	34.0	34.0		34.0	34.0			23.0			23.0	
Actuated g/C Ratio	0.52	0.52		0.52	0.52			0.35			0.35	
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0			5.0	
Lane Grp Cap (vph)	150	1581		316	1580			579			576	
v/s Ratio Prot		0.22			c0.37							
v/s Ratio Perm	0.14			0.06				0.05			c0.07	
v/c Ratio	0.27	0.41		0.12	0.70			0.15			0.21	
Uniform Delay, d1	8.6	9.4		7.9	11.6			14.3			14.6	
Progression Factor	1.00	1.00		0.70	1.38			1.00			1.00	
Incremental Delay, d2	4.5	0.8		0.7	2.3			0.5			0.8	
Delay (s)	13.1	10.2		6.2	18.4			14.9			15.5	
Level of Service	B	B		A	B			B			B	
Approach Delay (s)		10.4			18.0			14.9			15.5	
Approach LOS		B			B			B			B	

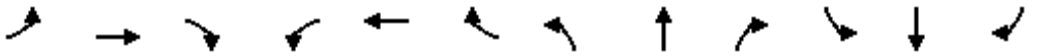
Intersection Summary			
HCM Average Control Delay	15.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	787	5	31	619	55	0	0	0	578	88	375
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00				0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.67				1.00	1.00	0.98
Flpb, ped/bikes	0.92	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	790	3379		1710	3226	514				3285	1731	1481
Flt Permitted	0.40	1.00		0.14	1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	336	3379		248	3226	514				3285	1731	1481
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	26	828	5	33	652	58	0	0	0	608	93	395
RTOR Reduction (vph)	0	0	0	0	0	25	0	0	0	0	0	168
Lane Group Flow (vph)	26	833	0	33	652	33	0	0	0	608	93	227
Confl. Peds. (#/hr)	350		4	4		350	8		6	6		8
Confl. Bikes (#/hr)	7		1	1		7						
Heavy Vehicles (%)	100%	1%	20%	0%	6%	100%	0%	0%	0%	1%	4%	1%
Turn Type	pm+pt			pm+pt		Perm				Split		Perm
Protected Phases	7	4		3	8					6	6	
Permitted Phases	4			8		8						6
Actuated Green, G (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Effective Green, g (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Actuated g/C Ratio	0.33	0.33		0.56	0.56	0.56				0.23	0.23	0.23
Clearance Time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Grp Cap (vph)	160	1118		634	1812	289				758	399	342
v/s Ratio Prot	0.02	c0.25		0.02	c0.20					c0.19	0.05	
v/s Ratio Perm	0.04			0.01		0.06						0.15
v/c Ratio	0.16	0.75		0.05	0.36	0.11				0.80	0.23	0.66
Uniform Delay, d1	31.6	38.6		15.2	15.7	13.3				47.2	40.6	45.4
Progression Factor	0.85	0.86		0.33	0.74	1.70				1.00	1.00	1.00
Incremental Delay, d2	2.1	4.4		0.1	0.4	0.5				8.8	1.4	9.8
Delay (s)	28.9	37.4		5.1	12.0	23.1				56.0	42.0	55.2
Level of Service	C	D		A	B	C				E	D	E
Approach Delay (s)		37.2			12.6			0.0			54.5	
Approach LOS		D			B			A			D	

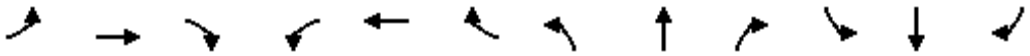
Intersection Summary			
HCM Average Control Delay	37.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	52.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	338	809	218	53	575	280	100	247	54	54	0	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.67		1.00	0.91	1.00		0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.97		1.00	1.00	0.85		1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (prot)	3285	3263		1710	3138	1018		3301	1363	855		738
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (perm)	3285	3263		1710	3138	1018		3301	1363	855		738
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	356	852	229	56	605	295	105	260	57	57	0	32
RTOR Reduction (vph)	0	19	0	0	0	222	0	0	41	0	0	30
Lane Group Flow (vph)	356	1063	0	56	605	73	0	365	16	57	0	2
Confl. Peds. (#/hr)	327		13	13		327	6		60	60		6
Confl. Bikes (#/hr)	6					6						
Heavy Vehicles (%)	1%	1%	0%	0%	9%	1%	0%	3%	2%	100%	0%	100%
Turn Type	Prot			Prot		Perm	Split		Perm	Prot		custom
Protected Phases	7	4		3	8		2	2		6		
Permitted Phases						8			2			6
Actuated Green, G (s)	41.0	65.0		8.0	32.0	32.0		29.0	29.0	10.0		10.0
Effective Green, g (s)	41.0	65.0		8.0	32.0	32.0		29.0	29.0	10.0		10.0
Actuated g/C Ratio	0.32	0.50		0.06	0.25	0.25		0.22	0.22	0.08		0.08
Clearance Time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	1036	1632		105	772	251		736	304	66		57
v/s Ratio Prot	0.11	c0.33		0.03	c0.19			c0.11		c0.07		
v/s Ratio Perm						0.07			0.01			0.00
v/c Ratio	0.34	0.65		0.53	0.78	0.29		0.50	0.05	0.86		0.04
Uniform Delay, d1	34.2	24.1		59.2	45.8	39.8		44.1	39.7	59.3		55.6
Progression Factor	0.93	0.18		1.00	1.00	1.00		0.95	1.00	1.00		1.00
Incremental Delay, d2	0.6	1.3		18.0	7.8	2.9		2.4	0.3	65.1		0.3
Delay (s)	32.5	5.7		77.2	53.6	42.7		44.2	40.1	124.4		55.9
Level of Service	C	A		E	D	D		D	D	F		E
Approach Delay (s)		12.3			51.6			43.7			99.8	
Approach LOS		B			D			D			F	

Intersection Summary			
HCM Average Control Delay	32.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	68.0%	ICU Level of Service	C
Analysis Period (min)	15		

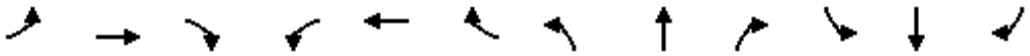
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	885	180	102	813	0	89	0	103	9	18	7
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	11	11	8	12	12	12	14	15	12
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes		0.99		1.00	1.00		1.00		0.98	1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00		0.97		1.00	0.99	1.00	
Frt		0.97		1.00	1.00		1.00		0.85	1.00	0.96	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		2987		1649	3149		1388		1451	1803	1870	
Flt Permitted		1.00		0.17	1.00		0.74		1.00	0.95	1.00	
Satd. Flow (perm)		2987		296	3149		1079		1451	1803	1870	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	983	200	113	903	0	99	0	114	10	20	8
RTOR Reduction (vph)	0	17	0	0	0	0	0	0	78	0	5	0
Lane Group Flow (vph)	0	1166	0	113	903	0	99	0	36	10	23	0
Confl. Peds. (#/hr)	67		19	19		67	38		12	12		38
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	2%	11%	0%	5%	0%	19%	0%	3%	0%	0%	0%
Turn Type				Perm			custom		custom	Perm		
Protected Phases		4			8						6	
Permitted Phases				8			2		2	6		
Actuated Green, G (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Effective Green, g (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Actuated g/C Ratio		0.60		0.60	0.60		0.32		0.32	0.32	0.32	
Clearance Time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)		1792		178	1889		345		464	577	598	
v/s Ratio Prot		c0.39			0.29						0.01	
v/s Ratio Perm				0.38			c0.09		0.03	0.01		
v/c Ratio		0.65		0.63	0.48		0.29		0.08	0.02	0.04	
Uniform Delay, d1		13.1		12.9	11.2		25.5		23.7	23.2	23.4	
Progression Factor		1.00		1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		1.8		16.0	0.9		2.1		0.3	0.1	0.1	
Delay (s)		15.0		28.9	12.1		27.5		24.0	23.3	23.5	
Level of Service		B		C	B		C		C	C	C	
Approach Delay (s)		15.0			14.0			25.7			23.5	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	15.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.5%	ICU Level of Service	B
Analysis Period (min)	15		

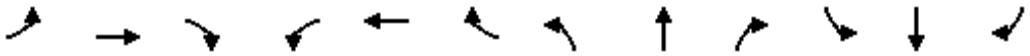
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	290	0	1188	210	666	0	0	789	490
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	12	10	10	12	12	11	12
Total Lost time (s)				4.0		5.0	3.0	4.0			4.0	
Lane Util. Factor				0.95		1.00	1.00	0.91			0.91	
Frpb, ped/bikes				1.00		1.00	1.00	1.00			0.98	
Flpb, ped/bikes				1.00		1.00	1.00	1.00			1.00	
Frt				1.00		0.85	1.00	1.00			0.94	
Flt Protected				0.95		1.00	0.95	1.00			1.00	
Satd. Flow (prot)				1540		1530	1535	4327			4270	
Flt Permitted				0.95		1.00	0.95	1.00			1.00	
Satd. Flow (perm)				1540		1530	1535	4327			4270	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	296	0	1212	214	680	0	0	805	500
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	296	0	1212	214	680	0	0	1305	0
Confl. Peds. (#/hr)	2					2	18		3	3		18
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%	4%	6%	0%	0%	4%	1%
Turn Type				Split		Prot	Prot					
Protected Phases				8	8	8	5	2			6	
Permitted Phases												
Actuated Green, G (s)				30.0		30.0	32.0	66.0			31.0	
Effective Green, g (s)				31.0		30.0	32.0	66.0			31.0	
Actuated g/C Ratio				0.30		0.29	0.30	0.63			0.30	
Clearance Time (s)				5.0		5.0	3.0	4.0			4.0	
Lane Grp Cap (vph)				455		437	468	2720			1261	
v/s Ratio Prot				0.19		c0.79	c0.14	0.16			c0.31	
v/s Ratio Perm												
v/c Ratio				0.65		2.77	0.46	0.25			1.16dr	
Uniform Delay, d1				32.3		37.5	29.5	8.6			37.0	
Progression Factor				1.00		1.00	0.63	2.08			1.00	
Incremental Delay, d2				7.0		804.4	2.7	0.2			34.8	
Delay (s)				39.3		841.9	21.4	18.0			71.8	
Level of Service				D		F	C	B			E	
Approach Delay (s)		0.0			684.4			18.8			71.8	
Approach LOS		A			F			B			E	

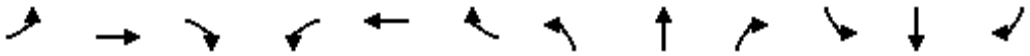
Intersection Summary			
HCM Average Control Delay	308.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.40		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	98.9%	ICU Level of Service	F
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	324	770	145	0	0	0	0	552	401	355	723	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	13	12	12	12	12	12	10	10	8	12	12	12
Total Lost time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Util. Factor	0.91	0.91						0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00						1.00	1.00	1.00	1.00	
Flpb, ped/bikes	0.99	1.00						1.00	1.00	1.00	1.00	
Frt	1.00	0.98						1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1509	3157						4368	2244	1598	4680	
Flt Permitted	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1509	3157						4368	2244	1598	4680	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	334	794	149	0	0	0	0	569	413	366	745	0
RTOR Reduction (vph)	0	14	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	301	962	0	0	0	0	0	569	413	366	745	0
Confl. Peds. (#/hr)	6		1	1		6	6					6
Heavy Vehicles (%)	6%	1%	0%	0%	0%	0%	0%	5%	4%	7%	5%	0%
Turn Type	Perm								Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Actuated Green, G (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Effective Green, g (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Actuated g/C Ratio	0.32	0.32						0.27	0.27	0.30	0.59	
Clearance Time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Grp Cap (vph)	489	1022						1165	598	472	2763	
v/s Ratio Prot								0.13		c0.23	0.16	
v/s Ratio Perm	0.20	0.30							c0.18			
v/c Ratio	0.62	0.94						0.49	0.69	0.78	0.27	
Uniform Delay, d1	30.0	34.5						32.5	34.6	33.8	10.5	
Progression Factor	1.00	1.00						1.14	1.14	0.86	0.21	
Incremental Delay, d2	5.7	17.2						1.3	5.8	4.7	0.1	
Delay (s)	35.7	51.7						38.4	45.3	33.7	2.3	
Level of Service	D	D						D	D	C	A	
Approach Delay (s)		48.0			0.0			41.3			12.6	
Approach LOS		D			A			D			B	

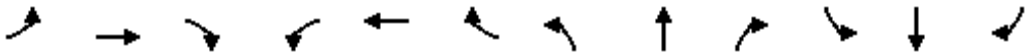
Intersection Summary			
HCM Average Control Delay	34.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	98.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	287	25	24	11	151	0	0	145	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	14	12	12	16	12
Total Lost time (s)				4.0	4.0		4.0	4.0			-3.0	
Lane Util. Factor				1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes				1.00	0.99		1.00	1.00			1.00	
Flpb, ped/bikes				1.00	1.00		1.00	1.00			1.00	
Frt				1.00	0.93		1.00	1.00			1.00	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1688	3132		1710	1846			1955	
Flt Permitted				0.95	1.00		0.55	1.00			1.00	
Satd. Flow (perm)				1688	3132		982	1846			1955	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	319	28	27	12	168	0	0	161	6
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	319	37	0	12	168	0	0	166	0
Confl. Peds. (#/hr)	2		2	2		2			6	6		
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	0%	4%	0%	0%	4%	0%
Turn Type				Perm			pm+pt					
Protected Phases					8		7	2			6	
Permitted Phases				8			2					
Actuated Green, G (s)				27.0	27.0		50.0	50.0			40.0	
Effective Green, g (s)				27.0	27.0		50.0	50.0			46.0	
Actuated g/C Ratio				0.32	0.32		0.59	0.59			0.54	
Clearance Time (s)				4.0	4.0		4.0	4.0			3.0	
Lane Grp Cap (vph)				536	995		638	1086			1058	
v/s Ratio Prot					0.01		0.00	c0.09			c0.08	
v/s Ratio Perm				c0.19			0.01					
v/c Ratio				0.60	0.04		0.02	0.15			0.16	
Uniform Delay, d1				24.4	20.0		10.5	7.9			9.8	
Progression Factor				1.00	1.00		1.05	1.18			1.00	
Incremental Delay, d2				4.8	0.1		0.1	0.3			0.3	
Delay (s)				29.2	20.1		11.1	9.7			10.1	
Level of Service				C	C		B	A			B	
Approach Delay (s)		0.0			27.9			9.7			10.1	
Approach LOS		A			C			A			B	

Intersection Summary			
HCM Average Control Delay	19.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	1.0
Intersection Capacity Utilization	36.8%	ICU Level of Service	A
Analysis Period (min)	15		

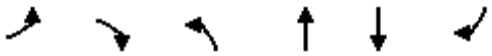
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	12	11	23	5	0	14	0	136	39	46	387	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	16	15	12	8	12	8	12	12	12	10	13	12
Total Lost time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.97			0.98			0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00			1.00		1.00	1.00	
Frt	1.00	0.90			0.90			0.97		1.00	1.00	
Flt Protected	0.95	1.00			0.99			1.00		0.95	1.00	
Satd. Flow (prot)	1935	1735			1565			1720		1590	1860	
Flt Permitted	0.74	1.00			0.97			1.00		0.61	1.00	
Satd. Flow (perm)	1516	1735			1531			1720		1021	1860	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	13	12	24	5	0	15	0	143	41	48	407	0
RTOR Reduction (vph)	0	16	0	0	10	0	0	12	0	0	0	0
Lane Group Flow (vph)	13	20	0	0	10	0	0	172	0	48	407	0
Confl. Peds. (#/hr)	1		11	11		1	1		10	10		1
Confl. Bikes (#/hr)			2	2			1		2	2		1
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Turn Type	Perm			Perm						pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Effective Green, g (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Actuated g/C Ratio	0.32	0.32			0.32			0.47		0.59	0.59	
Clearance Time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Grp Cap (vph)	482	551			486			809		647	1094	
v/s Ratio Prot		c0.01						0.10		0.01	c0.22	
v/s Ratio Perm	0.01				0.01					0.04		
v/c Ratio	0.03	0.04			0.02			0.21		0.07	0.37	
Uniform Delay, d1	20.0	20.0			19.9			13.2		8.5	9.2	
Progression Factor	1.00	1.00			1.00			1.00		0.96	0.86	
Incremental Delay, d2	0.1	0.1			0.1			0.6		0.2	0.9	
Delay (s)	20.1	20.1			20.0			13.8		8.4	8.8	
Level of Service	C	C			B			B		A	A	
Approach Delay (s)		20.1			20.0			13.8			8.8	
Approach LOS		C			B			B			A	

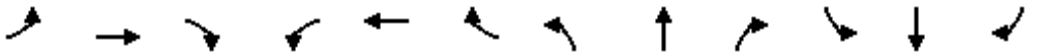
Intersection Summary			
HCM Average Control Delay	11.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	41.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



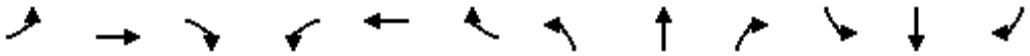
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	46	41	16	183	273	27
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	14	12	13	12	10	12
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.94		1.00	1.00	0.99	
Flt Protected	0.97		0.95	1.00	1.00	
Satd. Flow (prot)	1751		1765	1782	1656	
Flt Permitted	0.97		0.52	1.00	1.00	
Satd. Flow (perm)	1751		966	1782	1656	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	51	46	18	203	303	30
RTOR Reduction (vph)	31	0	0	0	5	0
Lane Group Flow (vph)	66	0	18	203	328	0
Confl. Peds. (#/hr)			2			2
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.0		36.0	36.0	36.0	
Effective Green, g (s)	21.0		36.0	36.0	36.0	
Actuated g/C Ratio	0.32		0.55	0.55	0.55	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	566		535	987	917	
v/s Ratio Prot	c0.04			0.11	c0.20	
v/s Ratio Perm			0.02			
v/c Ratio	0.12		0.03	0.21	0.36	
Uniform Delay, d1	15.5		6.6	7.3	8.1	
Progression Factor	1.00		0.54	0.64	1.41	
Incremental Delay, d2	0.4		0.1	0.5	0.9	
Delay (s)	15.9		3.7	5.1	12.3	
Level of Service	B		A	A	B	
Approach Delay (s)	15.9			5.0	12.3	
Approach LOS	B			A	B	

Intersection Summary			
HCM Average Control Delay	10.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	28.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



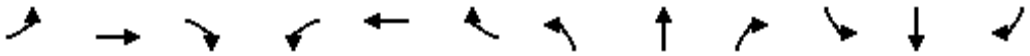
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	31	265	9	257	161	4	0	295	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	14	16	12	12	15	12	12	13	10
Total Lost time (s)					4.0		4.0	4.0			3.0	3.0
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Frt					1.00		1.00	1.00			1.00	0.85
Flt Protected					0.99		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3771		1693	1677			1738	1428
Flt Permitted					0.99		0.46	1.00			1.00	1.00
Satd. Flow (perm)					3771		820	1677			1738	1428
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	34	294	10	286	179	4	0	328	19
RTOR Reduction (vph)	0	0	0	0	3	0	0	1	0	0	0	11
Lane Group Flow (vph)	0	0	0	0	335	0	286	182	0	0	328	8
Confl. Peds. (#/hr)	1					1			5	5		
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	1%	18%	0%	0%	7%	0%
Turn Type				Split			pm+pt					Perm
Protected Phases				8	8		7	2			6	
Permitted Phases							2					6
Actuated Green, G (s)					26.0		51.0	51.0			38.0	38.0
Effective Green, g (s)					26.0		51.0	51.0			38.0	38.0
Actuated g/C Ratio					0.31		0.60	0.60			0.45	0.45
Clearance Time (s)					4.0		4.0	4.0			3.0	3.0
Lane Grp Cap (vph)					1153		595	1006			777	638
v/s Ratio Prot					c0.09		c0.06	0.11			0.19	
v/s Ratio Perm							c0.23					0.01
v/c Ratio					0.29		0.48	0.18			0.42	0.01
Uniform Delay, d1					22.5		14.2	7.6			16.0	13.1
Progression Factor					1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2					0.6		2.8	0.4			1.7	0.0
Delay (s)					23.1		16.9	8.0			17.7	13.1
Level of Service					C		B	A			B	B
Approach Delay (s)		0.0			23.1			13.5			17.4	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM Average Control Delay	17.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	96	94	38	133	217	30	59	704	44
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	15	12	12	12	12	12	13	12
Total Lost time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.98		1.00	0.98		1.00	0.99	
Flt Protected					0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1896		1710	3290		1707	3467	
Flt Permitted					0.98		0.25	1.00		0.58	1.00	
Satd. Flow (perm)					1896		446	3290		1048	3467	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	107	104	42	148	241	33	66	782	49
RTOR Reduction (vph)	0	0	0	0	10	0	0	14	0	0	6	0
Lane Group Flow (vph)	0	0	0	0	243	0	148	260	0	66	825	0
Confl. Peds. (#/hr)							5		5	5		5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	1%	0%
Turn Type				Split			pm+pt			pm+pt		
Protected Phases				8	8		5	2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)					23.0		41.0	34.0		41.0	34.0	
Effective Green, g (s)					23.0		41.0	34.0		41.0	34.0	
Actuated g/C Ratio					0.31		0.55	0.45		0.55	0.45	
Clearance Time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Grp Cap (vph)					581		362	1491		634	1572	
v/s Ratio Prot					c0.13		c0.04	0.08		0.01	c0.24	
v/s Ratio Perm							0.19			0.05		
v/c Ratio					0.42		0.41	0.17		0.10	0.52	
Uniform Delay, d1					20.7		16.4	12.2		8.2	14.7	
Progression Factor					1.00		0.83	0.82		1.00	1.00	
Incremental Delay, d2					2.2		3.4	0.3		0.3	1.3	
Delay (s)					22.9		17.0	10.3		8.6	16.0	
Level of Service					C		B	B		A	B	
Approach Delay (s)		0.0			22.9			12.6			15.4	
Approach LOS		A			C			B			B	

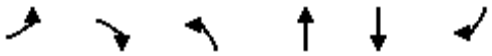
Intersection Summary			
HCM Average Control Delay	15.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	53.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	32	49	13	9	63	63	7	285	24	159	591	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	16	12	12	10	11	12	12	11	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.94		1.00	0.99		1.00	0.99	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1964			1655		1595	3174		1704	3231	
Flt Permitted		0.89			0.99		0.36	1.00		0.56	1.00	
Satd. Flow (perm)		1775			1637		598	3174		996	3231	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	34	52	14	9	66	66	7	300	25	167	622	53
RTOR Reduction (vph)	0	8	0	0	42	0	0	8	0	0	8	0
Lane Group Flow (vph)	0	92	0	0	99	0	7	317	0	167	667	0
Confl. Peds. (#/hr)	2					2	1		6	6		1
Confl. Bikes (#/hr)			1	1			3					3
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	0%	3%	0%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Effective Green, g (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Actuated g/C Ratio		0.33			0.33		0.56	0.56		0.56	0.56	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		592			546		335	1777		558	1809	
v/s Ratio Prot								0.10			c0.21	
v/s Ratio Perm		0.05			c0.06		0.01			0.17		
v/c Ratio		0.16			0.18		0.02	0.18		0.30	0.37	
Uniform Delay, d1		17.6			17.7		7.3	8.1		8.7	9.1	
Progression Factor		1.00			1.00		1.00	1.00		0.27	0.25	
Incremental Delay, d2		0.6			0.7		0.1	0.2		1.2	0.5	
Delay (s)		18.1			18.5		7.5	8.3		3.6	2.8	
Level of Service		B			B		A	A		A	A	
Approach Delay (s)		18.1			18.5			8.3			3.0	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	6.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	48.4%	ICU Level of Service	A
Analysis Period (min)	15		

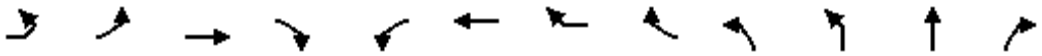
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	35	182	64	248	559	77
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	39	202	71	276	621	86

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	241	163	184	414	293
Volume Left (vph)	39	71	0	0	0
Volume Right (vph)	202	0	0	0	86
Hadj (s)	-0.42	0.27	0.05	0.05	-0.15
Departure Headway (s)	5.7	6.4	6.2	5.8	5.6
Degree Utilization, x	0.38	0.29	0.32	0.67	0.45
Capacity (veh/h)	596	538	557	609	630
Control Delay (s)	12.1	10.8	10.9	18.4	11.9
Approach Delay (s)	12.1	10.8		15.7	
Approach LOS	B	B		C	

Intersection Summary			
Delay	13.7		
HCM Level of Service	B		
Intersection Capacity Utilization	52.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	32	35	373	18	20	389	69	77	55	68	351	32
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	0.95	
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.93			1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Frt		1.00	1.00	0.85	1.00	1.00	0.85			1.00	0.99	
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	
Satd. Flow (prot)		1612	1731	1530	1710	1731	1421			1710	3250	
Flt Permitted		0.14	1.00	1.00	0.52	1.00	1.00			0.14	1.00	
Satd. Flow (perm)		238	1731	1530	936	1731	1421			257	3250	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	36	39	414	20	22	432	77	86	61	76	390	36
RTOR Reduction (vph)	0	0	0	12	0	0	38	0	0	0	7	0
Lane Group Flow (vph)	0	75	414	8	22	432	125	0	0	137	419	0
Confl. Peds. (#/hr)		25					25					3
Heavy Vehicles (%)	6%	6%	4%	0%	0%	4%	0%	0%	0%	0%	4%	0%
Turn Type	Perm	pm+pt		Perm	Perm		Perm		Perm	Perm		
Protected Phases		7	4			8					2	
Permitted Phases	4	4		4	8		8		2	2		
Actuated Green, G (s)		44.0	44.0	44.0	25.0	25.0	25.0			28.0	28.0	
Effective Green, g (s)		44.0	44.0	44.0	25.0	25.0	25.0			28.0	28.0	
Actuated g/C Ratio		0.42	0.42	0.42	0.24	0.24	0.24			0.27	0.27	
Clearance Time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Grp Cap (vph)		303	725	641	223	412	338			69	867	
v/s Ratio Prot		0.04	c0.24			c0.25					0.13	
v/s Ratio Perm		0.07		0.01	0.02		0.09			c0.53		
v/c Ratio		0.25	0.57	0.01	0.10	1.05	0.37			1.99	0.48	
Uniform Delay, d1		21.6	23.3	17.8	31.2	40.0	33.4			38.5	32.4	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Incremental Delay, d2		1.9	3.3	0.0	0.9	57.6	3.1			491.0	1.9	
Delay (s)		23.5	26.5	17.9	32.1	97.6	36.5			529.5	34.3	
Level of Service		C	C	B	C	F	D			F	C	
Approach Delay (s)			25.8			79.1					154.8	
Approach LOS			C			E					F	

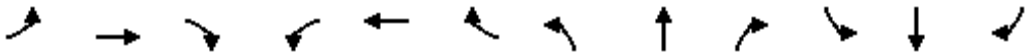
Intersection Summary			
HCM Average Control Delay	137.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.41		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	101.3%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations								
Volume (vph)	105	559	80	101	4	109	587	190
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5				4.5	4.5	
Lane Util. Factor	1.00	0.95				1.00	0.88	
Frpb, ped/bikes	1.00	1.00				1.00	1.00	
Flpb, ped/bikes	1.00	1.00				1.00	1.00	
Frt	1.00	0.96				1.00	0.85	
Flt Protected	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1705	3246				1710	2633	
Flt Permitted	0.38	1.00				0.95	1.00	
Satd. Flow (perm)	675	3246				1710	2633	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	117	621	89	112	4	121	652	211
RTOR Reduction (vph)	0	12	0	0	0	0	26	0
Lane Group Flow (vph)	117	810	0	0	0	125	837	0
Confl. Peds. (#/hr)	3							
Heavy Vehicles (%)	0%	2%	0%	0%	0%	0%	3%	0%
Turn Type	Perm				Split		Perm	
Protected Phases		6			9	9		
Permitted Phases	6						9	
Actuated Green, G (s)	27.5	27.5				20.5	20.5	
Effective Green, g (s)	27.5	27.5				20.5	20.5	
Actuated g/C Ratio	0.26	0.26				0.20	0.20	
Clearance Time (s)	4.5	4.5				4.5	4.5	
Lane Grp Cap (vph)	177	850				334	514	
v/s Ratio Prot		0.25				0.07		
v/s Ratio Perm	0.17						c0.32	
v/c Ratio	0.66	0.95				0.37	1.63	
Uniform Delay, d1	34.6	38.1				36.7	42.2	
Progression Factor	1.00	1.00				1.00	1.00	
Incremental Delay, d2	17.8	21.4				3.2	291.8	
Delay (s)	52.4	59.5				39.9	334.0	
Level of Service	D	E				D	F	
Approach Delay (s)		58.6				296.8		
Approach LOS		E				F		

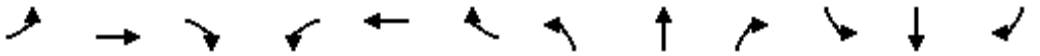
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	64	583	0	0	458	55	83	51	19	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	11	11	16	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.99			0.98				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		1681			1952			1840				
Flt Permitted		0.91			1.00			0.97				
Satd. Flow (perm)		1533			1952			1840				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	71	648	0	0	509	61	92	57	21	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	719	0	0	570	0	0	170	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		40.0			40.0			17.0				
Effective Green, g (s)		40.0			40.0			17.0				
Actuated g/C Ratio		0.62			0.62			0.26				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		943			1201			481				
v/s Ratio Prot					0.29							
v/s Ratio Perm		c0.47						0.09				
v/c Ratio		0.76			0.47			0.35				
Uniform Delay, d1		9.1			6.8			19.5				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		5.8			1.3			2.0				
Delay (s)		14.9			8.1			21.6				
Level of Service		B			A			C				
Approach Delay (s)		14.9			8.1			21.6			0.0	
Approach LOS		B			A			C			A	

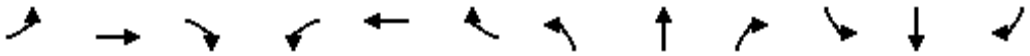
Intersection Summary			
HCM Average Control Delay	13.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	84.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	69	327	149	126	323	132	103	625	84	139	751	93
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	9	9	10	9
Total Lost time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.96	1.00	1.00	0.95	1.00	1.00	0.94
Flpb, ped/bikes		1.00	1.00		0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1982	1434		1944	1444	1546	3040	1296	1505	3069	1252
Flt Permitted		0.39	1.00		0.72	1.00	0.23	1.00	1.00	0.30	1.00	1.00
Satd. Flow (perm)		773	1434		1416	1444	379	3040	1296	468	3069	1252
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	73	344	157	133	340	139	108	658	88	146	791	98
RTOR Reduction (vph)	0	0	93	0	0	99	0	0	53	0	0	49
Lane Group Flow (vph)	0	417	64	0	473	40	108	658	35	146	791	49
Confl. Peds. (#/hr)	24		45	45		24	36		24	24		36
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	2%	2%	2%	2%	3%	2%	3%	5%	1%	2%	4%	3%
Turn Type	pm+pt		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		43.0	43.0		30.0	30.0	50.6	42.3	42.3	51.4	42.7	42.7
Effective Green, g (s)		43.0	43.0		30.0	30.0	50.6	42.3	42.3	51.4	42.7	42.7
Actuated g/C Ratio		0.41	0.41		0.29	0.29	0.48	0.40	0.40	0.49	0.41	0.41
Clearance Time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		432	587		405	413	275	1225	522	315	1248	509
v/s Ratio Prot		c0.09					0.03	0.22		c0.04	c0.26	
v/s Ratio Perm		0.30	0.04		c0.33	0.03	0.16		0.03	0.19		0.04
v/c Ratio		0.97	0.11		1.17	0.10	0.39	0.54	0.07	0.46	0.63	0.10
Uniform Delay, d1		30.3	19.2		37.5	27.5	16.4	23.9	19.2	15.9	24.9	19.2
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.76	1.56	2.69
Incremental Delay, d2		35.4	0.4		99.1	0.5	0.9	1.7	0.3	1.0	2.4	0.4
Delay (s)		65.7	19.5		136.6	28.0	17.3	25.6	19.5	29.1	41.1	52.2
Level of Service		E	B		F	C	B	C	B	C	D	D
Approach Delay (s)		53.1			112.0			23.9			40.5	
Approach LOS		D			F			C			D	

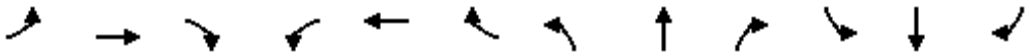
Intersection Summary			
HCM Average Control Delay	52.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	88.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	83	400	83	101	473	90	49	59	70	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		0.98			0.98			0.95				
Flt Protected		0.99			0.99			0.99				
Satd. Flow (prot)		1644			1646			1796				
Flt Permitted		0.83			0.84			0.99				
Satd. Flow (perm)		1378			1397			1796				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	92	444	92	112	526	100	54	66	78	0	0	0
RTOR Reduction (vph)	0	10	0	0	9	0	0	36	0	0	0	0
Lane Group Flow (vph)	0	618	0	0	729	0	0	162	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		40.0			40.0			17.0				
Effective Green, g (s)		40.0			40.0			17.0				
Actuated g/C Ratio		0.62			0.62			0.26				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		848			860			470				
v/s Ratio Prot												
v/s Ratio Perm		0.45			c0.52			0.09				
v/c Ratio		0.73			0.85			0.34				
Uniform Delay, d1		8.7			10.1			19.5				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		5.5			10.2			2.0				
Delay (s)		14.2			20.2			21.5				
Level of Service		B			C			C				
Approach Delay (s)		14.2			20.2			21.5			0.0	
Approach LOS		B			C			C			A	

Intersection Summary			
HCM Average Control Delay	18.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.7%	ICU Level of Service	C
Analysis Period (min)	15		

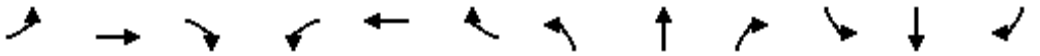
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	21	442	71	82	552	44	37	76	74	55	235	47
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	11	12	12	15	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.96		1.00	0.96		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		0.99	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.98	
Flt Protected		1.00	1.00		0.99	1.00		0.98	1.00		0.99	
Satd. Flow (prot)		1687	1382		1712	1417		1686	1455		1886	
Flt Permitted		0.96	1.00		0.89	1.00		0.84	1.00		0.93	
Satd. Flow (perm)		1630	1382		1528	1417		1435	1455		1775	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	22	465	75	86	581	46	39	80	78	58	247	49
RTOR Reduction (vph)	0	0	32	0	0	13	0	0	53	0	7	0
Lane Group Flow (vph)	0	487	43	0	667	33	0	119	25	0	347	0
Confl. Peds. (#/hr)	25		19	19		25	36		30	30		36
Confl. Bikes (#/hr)	1		2	2		1	3					3
Heavy Vehicles (%)	0%	3%	3%	0%	1%	0%	0%	1%	1%	0%	1%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Effective Green, g (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.32	0.32		0.32	
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Grp Cap (vph)		935	792		876	812		459	466		568	
v/s Ratio Prot												
v/s Ratio Perm		0.30	0.03		c0.44	0.02		0.08	0.02		c0.20	
v/c Ratio		0.52	0.05		0.76	0.04		0.26	0.05		0.61	
Uniform Delay, d1		9.7	7.0		12.1	7.0		18.9	17.6		21.5	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		2.1	0.1		6.2	0.1		1.4	0.2		4.8	
Delay (s)		11.8	7.2		18.3	7.1		20.3	17.9		26.4	
Level of Service		B	A		B	A		C	B		C	
Approach Delay (s)		11.2			17.6			19.3			26.4	
Approach LOS		B			B			B			C	

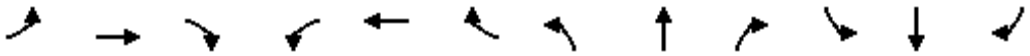
Intersection Summary			
HCM Average Control Delay	17.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	97.6%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	57	459	30	52	582	56	44	165	57	118	199	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	11	16	8	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	0.98	1.00		1.00	1.00		0.99	1.00	1.00	0.99	1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1536	3068		1652	3733		1585	1663	1370	1568	1680	1397
Flt Permitted	0.32	1.00		0.41	1.00		0.59	1.00	1.00	0.63	1.00	1.00
Satd. Flow (perm)	520	3068		720	3733		977	1663	1370	1043	1680	1397
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	63	510	33	58	647	62	49	183	63	131	221	33
RTOR Reduction (vph)	0	7	0	0	11	0	0	0	38	0	0	20
Lane Group Flow (vph)	63	536	0	58	698	0	49	183	25	131	221	13
Confl. Peds. (#/hr)	51		3	3		51	13		13	13		13
Heavy Vehicles (%)	2%	3%	3%	0%	2%	0%	0%	1%	2%	1%	0%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Effective Green, g (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	248	1463		343	1780		391	665	548	417	672	559
v/s Ratio Prot		0.17			c0.19			0.11			c0.13	
v/s Ratio Perm	0.12			0.08			0.05		0.02	0.13		0.01
v/c Ratio	0.25	0.37		0.17	0.39		0.13	0.28	0.05	0.31	0.33	0.02
Uniform Delay, d1	10.1	10.8		9.7	10.9		12.3	13.1	11.9	13.4	13.5	11.8
Progression Factor	1.00	1.00		1.00	1.00		0.84	0.91	0.75	0.59	0.59	0.28
Incremental Delay, d2	2.5	0.7		1.1	0.7		0.7	1.0	0.2	1.9	1.3	0.1
Delay (s)	12.6	11.5		10.7	11.6		11.0	13.0	9.1	9.8	9.2	3.4
Level of Service	B	B		B	B		B	B	A	A	A	A
Approach Delay (s)		11.6			11.5			11.8			8.9	
Approach LOS		B			B			B			A	

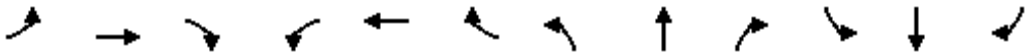
Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	73	389	71	70	369	74	55	196	64	133	267	160
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	11	10	11	11	10	11	11	10	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	0.96	1.00		0.95	1.00		0.99	1.00		0.96	1.00	
Frt	1.00	0.98		1.00	0.97		1.00	0.96		1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1327	3142		1515	3107		1582	2928		1453	2920	
Flt Permitted	0.46	1.00		0.44	1.00		0.45	1.00		0.58	1.00	
Satd. Flow (perm)	636	3142		708	3107		750	2928		893	2920	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	77	409	75	74	388	78	58	206	67	140	281	168
RTOR Reduction (vph)	0	0	0	0	0	0	0	39	0	0	99	0
Lane Group Flow (vph)	77	484	0	74	466	0	58	234	0	140	350	0
Confl. Peds. (#/hr)	112		99	99		112	23		53	53		23
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	16%	1%	0%	0%	1%	9%	0%	8%	2%	5%	5%	7%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.41	0.41		0.41	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	305	1508		340	1491		310	1210		369	1207	
v/s Ratio Prot		c0.15			0.15			0.08			0.12	
v/s Ratio Perm	0.12			0.10			0.08			c0.16		
v/c Ratio	0.25	0.32		0.22	0.31		0.19	0.19		0.38	0.29	
Uniform Delay, d1	11.5	12.0		11.3	11.9		14.0	14.0		15.3	14.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.0	0.6		1.5	0.5		1.3	0.4		3.0	0.6	
Delay (s)	13.5	12.5		12.8	12.5		15.3	14.4		18.3	15.3	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		12.7			12.5			14.5			16.0	
Approach LOS		B			B			B			B	

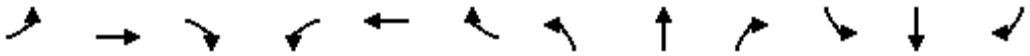
Intersection Summary			
HCM Average Control Delay	13.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	106	442	61	31	504	46	82	194	57	76	473	111
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	8	16	12	9	10	10	9	10	10
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1594	1653		1370	1974		1534	2998		1534	3011	
Flt Permitted	0.26	1.00		0.31	1.00		0.28	1.00		0.59	1.00	
Satd. Flow (perm)	439	1653		446	1974		450	2998		951	3011	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	112	465	64	33	531	48	86	204	60	80	498	117
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	112	529	0	33	579	0	86	264	0	80	615	0
Confl. Peds. (#/hr)	21		95	95		21	36		8	8		36
Confl. Bikes (#/hr)	2		3	3		2	2					2
Heavy Vehicles (%)	0%	2%	0%	7%	2%	0%	0%	3%	0%	0%	2%	1%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	44.0	39.4		40.8	37.8		26.6	21.8		26.6	21.8	
Effective Green, g (s)	44.0	37.4		40.8	35.8		26.6	19.8		26.6	19.8	
Actuated g/C Ratio	0.52	0.44		0.48	0.42		0.31	0.23		0.31	0.23	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	290	727		247	831		202	698		331	701	
v/s Ratio Prot	c0.02	c0.32		0.00	0.29		c0.02	0.09		0.01	c0.20	
v/s Ratio Perm	0.18			0.06			0.11			0.06		
v/c Ratio	0.39	0.73		0.13	0.70		0.43	0.38		0.24	0.88	
Uniform Delay, d1	22.7	19.6		20.1	20.2		29.1	27.4		21.9	31.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.9	6.3		0.2	4.8		1.4	1.6		0.4	14.5	
Delay (s)	23.6	25.9		20.4	25.0		30.5	29.0		22.3	46.0	
Level of Service	C	C		C	C		C	C		C	D	
Approach Delay (s)		25.5			24.7			29.4			43.2	
Approach LOS		C			C			C			D	

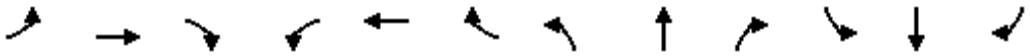
Intersection Summary			
HCM Average Control Delay	31.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	78.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	83	375	63	111	483	112	64	150	55	121	348	79
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	11	11	11	11	12	12	10	10	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		0.99	1.00	
Frt		0.98			0.98		1.00	0.96		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3679			3131		1652	3237		1549	3025	
Flt Permitted		0.70			0.74		0.44	1.00		0.61	1.00	
Satd. Flow (perm)		2597			2323		765	3237		994	3025	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	92	417	70	123	537	124	71	167	61	134	387	88
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	579	0	0	784	0	71	228	0	134	475	0
Confl. Peds. (#/hr)	23		30	30		23	1		20	20		1
Confl. Bikes (#/hr)	3					3						
Heavy Vehicles (%)	0%	3%	0%	2%	2%	0%	0%	1%	0%	2%	2%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.0			33.0		32.0	32.0		32.0	32.0	
Effective Green, g (s)		34.0			34.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio		0.45			0.45		0.44	0.44		0.44	0.44	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		1177			1053		337	1424		437	1331	
v/s Ratio Prot								0.07			c0.16	
v/s Ratio Perm		0.22			c0.34		0.09			0.13		
v/c Ratio		0.49			0.74		0.21	0.16		0.31	0.36	
Uniform Delay, d1		14.4			16.9		13.0	12.7		13.6	14.0	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.5			4.8		1.4	0.2		1.8	0.7	
Delay (s)		15.9			21.7		14.4	12.9		15.4	14.7	
Level of Service		B			C		B	B		B	B	
Approach Delay (s)		15.9			21.7			13.2			14.9	
Approach LOS		B			C			B			B	

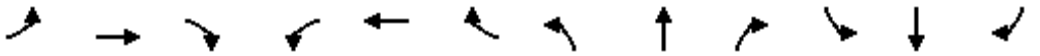
Intersection Summary			
HCM Average Control Delay	17.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	71.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	93	831	6	19	554	236	1	1	9	202	1	76
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	12	12	12	12	12	13	13	13
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	1.00		1.00	1.00	0.85		0.89			0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00		1.00			0.97	
Satd. Flow (prot)	1605	3206		1660	3320	1485		1545			3176	
Flt Permitted	0.40	1.00		0.27	1.00	1.00		0.98			0.77	
Satd. Flow (perm)	679	3206		468	3320	1485		1519			2535	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	103	923	7	21	616	262	1	1	10	224	1	84
RTOR Reduction (vph)	0	0	0	0	0	96	0	7	0	0	53	0
Lane Group Flow (vph)	103	930	0	21	616	166	0	5	0	0	256	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	46.1	46.1		46.1	46.1	46.1		18.6			18.6	
Effective Green, g (s)	46.1	46.1		46.1	46.1	46.1		18.6			18.6	
Actuated g/C Ratio	0.63	0.63		0.63	0.63	0.63		0.26			0.26	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		8.0			8.0	
Lane Grp Cap (vph)	431	2033		297	2105	942		389			649	
v/s Ratio Prot		c0.29			0.19							
v/s Ratio Perm	0.15			0.04		0.11		0.00			c0.10	
v/c Ratio	0.24	0.46		0.07	0.29	0.18		0.01			0.39	
Uniform Delay, d1	5.7	6.9		5.1	6.0	5.5		20.2			22.4	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	1.3	0.7		0.5	0.4	0.4		0.1			1.7	
Delay (s)	7.0	7.6		5.6	6.3	5.9		20.2			24.1	
Level of Service	A	A		A	A	A		C			C	
Approach Delay (s)		7.5			6.2			20.2			24.1	
Approach LOS		A			A			C			C	

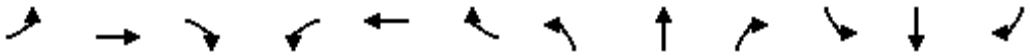
Intersection Summary			
HCM Average Control Delay	9.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	72.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	124	216	119	94	162	57	144	876	87	128	816	99
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	9	12	10	10	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.95		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1560	1504		1563	1584		1493	3069	1337	1523	3099	1318
Flt Permitted	0.45	1.00		0.24	1.00		0.21	1.00	1.00	0.18	1.00	1.00
Satd. Flow (perm)	743	1504		393	1584		323	3069	1337	285	3099	1318
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	131	227	125	99	171	60	152	922	92	135	859	104
RTOR Reduction (vph)	0	23	0	0	15	0	0	0	40	0	0	49
Lane Group Flow (vph)	131	329	0	99	216	0	152	922	52	135	859	55
Confl. Peds. (#/hr)	10		13	13		10	18		7	7		18
Confl. Bikes (#/hr)	2					2	2		1	1		2
Heavy Vehicles (%)	2%	1%	1%	2%	1%	2%	3%	4%	0%	1%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	28.0	21.0		28.0	21.0		42.0	35.0	35.0	42.0	35.0	35.0
Effective Green, g (s)	26.0	22.0		26.0	22.0		40.0	35.0	35.0	40.0	35.0	35.0
Actuated g/C Ratio	0.31	0.26		0.31	0.26		0.47	0.41	0.41	0.47	0.41	0.41
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	285	389		203	410		235	1264	551	222	1276	543
v/s Ratio Prot	0.03	c0.22		c0.03	0.14		c0.05	c0.30		0.04	0.28	
v/s Ratio Perm	0.11			0.11			0.26		0.04	0.24		0.04
v/c Ratio	0.46	0.85		0.49	0.53		0.65	0.73	0.09	0.61	0.67	0.10
Uniform Delay, d1	22.5	29.9		22.7	27.0		14.6	21.0	15.3	14.8	20.3	15.3
Progression Factor	1.00	1.00		1.00	1.00		0.67	0.81	0.55	1.00	1.00	1.00
Incremental Delay, d2	5.3	19.8		8.2	4.8		11.9	3.4	0.3	11.8	2.9	0.4
Delay (s)	27.8	49.6		30.9	31.8		21.8	20.5	8.8	26.6	23.2	15.7
Level of Service	C	D		C	C		C	C	A	C	C	B
Approach Delay (s)		43.7			31.5			19.8			22.9	
Approach LOS		D			C			B			C	

Intersection Summary			
HCM Average Control Delay	25.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	72.0%	ICU Level of Service	C
Analysis Period (min)	15		

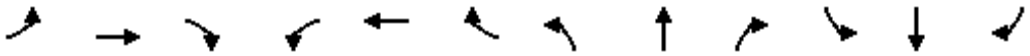
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	22	179	38	20	173	22	42	141	38	45	251	49
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	14	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.99			1.00			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.99			0.98			0.98	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1835			1848			1937			1975	
Flt Permitted		0.97			0.96			0.90			0.94	
Satd. Flow (perm)		1780			1790			1753			1871	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	23	185	39	21	178	23	43	145	39	46	259	51
RTOR Reduction (vph)	0	11	0	0	6	0	0	11	0	0	9	0
Lane Group Flow (vph)	0	236	0	0	216	0	0	216	0	0	347	0
Confl. Peds. (#/hr)	18		34	34		18	16		19	19		16
Confl. Bikes (#/hr)			6	6			1		4	4		1
Heavy Vehicles (%)	0%	1%	0%	5%	1%	0%	0%	2%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.42			0.42			0.46			0.46	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		739			744			809			864	
v/s Ratio Prot												
v/s Ratio Perm		c0.13			0.12			0.12			c0.19	
v/c Ratio		0.32			0.29			0.27			0.40	
Uniform Delay, d1		12.8			12.6			10.7			11.6	
Progression Factor		1.00			0.73			1.29			1.00	
Incremental Delay, d2		1.1			1.0			0.8			1.4	
Delay (s)		14.0			10.2			14.6			13.0	
Level of Service		B			B			B			B	
Approach Delay (s)		14.0			10.2			14.6			13.0	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	49.2%	ICU Level of Service	A
Analysis Period (min)	15		

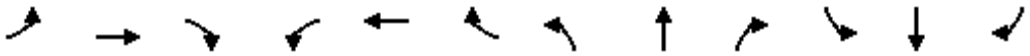
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	190	39	25	180	20	53	199	31	46	206	38
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.97	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.99		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1496	3056		1576	3116		1518	3119		1550	3075	
Flt Permitted	0.61	1.00		0.59	1.00		0.58	1.00		0.59	1.00	
Satd. Flow (perm)	965	3056		987	3116		935	3119		969	3075	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	211	43	28	200	22	59	221	34	51	229	42
RTOR Reduction (vph)	0	26	0	0	13	0	0	14	0	0	17	0
Lane Group Flow (vph)	27	228	0	28	209	0	59	241	0	51	254	0
Confl. Peds. (#/hr)	20		17	17		20	2					2
Confl. Bikes (#/hr)	32		36	36		32	22		25	25		22
Heavy Vehicles (%)	4%	1%	0%	0%	0%	0%	5%	0%	0%	3%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0		39.0	39.0		39.0	39.0	
Effective Green, g (s)	19.0	19.0		19.0	19.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.58	0.58		0.58	0.58	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	282	893		289	911		547	1823		566	1798	
v/s Ratio Prot		c0.07			0.07			0.08			c0.08	
v/s Ratio Perm	0.03			0.03			0.06			0.05		
v/c Ratio	0.10	0.26		0.10	0.23		0.11	0.13		0.09	0.14	
Uniform Delay, d1	16.7	17.6		16.8	17.4		6.0	6.1		5.9	6.1	
Progression Factor	0.93	0.96		0.77	0.77		1.39	1.42		0.41	0.36	
Incremental Delay, d2	0.6	0.7		0.7	0.6		0.4	0.1		0.3	0.2	
Delay (s)	16.3	17.5		13.6	14.1		8.7	8.8		2.7	2.4	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		17.4			14.0			8.8			2.4	
Approach LOS		B			B			A			A	

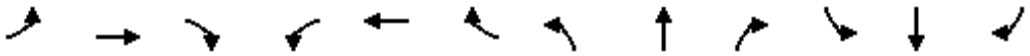
Intersection Summary			
HCM Average Control Delay	10.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.18		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



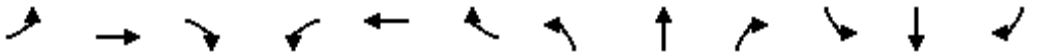
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	66	165	41	24	153	37	27	260	16	42	336	33
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	9	9	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.97		1.00	0.97			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1555	3056		1525	2936			1923			1939	
Flt Permitted	0.62	1.00		0.61	1.00			0.94			0.94	
Satd. Flow (perm)	1014	3056		977	2936			1824			1832	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	73	183	46	27	170	41	30	289	18	47	373	37
RTOR Reduction (vph)	0	28	0	0	25	0	0	3	0	0	5	0
Lane Group Flow (vph)	73	201	0	27	186	0	0	334	0	0	452	0
Confl. Peds. (#/hr)	11		17	17		11	26		7	7		26
Heavy Vehicles (%)	2%	1%	0%	0%	1%	3%	4%	5%	0%	0%	4%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Effective Green, g (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40			0.48			0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	406	1222		391	1174			870			874	
v/s Ratio Prot		0.07			0.06							
v/s Ratio Perm	c0.07			0.03				0.18			c0.25	
v/c Ratio	0.18	0.16		0.07	0.16			0.38			0.52	
Uniform Delay, d1	12.6	12.5		12.0	12.5			10.9			11.8	
Progression Factor	1.02	0.97		0.77	0.76			1.07			1.00	
Incremental Delay, d2	1.0	0.3		0.3	0.3			1.2			2.2	
Delay (s)	13.9	12.4		9.6	9.8			12.8			14.0	
Level of Service	B	B		A	A			B			B	
Approach Delay (s)		12.8			9.7			12.8			14.0	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	12.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



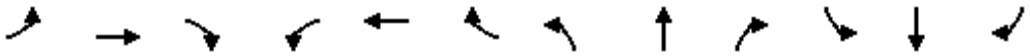
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	47	111	30	19	153	26	44	230	11	33	360	57
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	16	12	10	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.97		1.00	0.98			0.99			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			1.00	
Satd. Flow (prot)	1652	1966		1584	1975			1981			1979	
Flt Permitted	0.58	1.00		0.65	1.00			0.89			0.96	
Satd. Flow (perm)	1013	1966		1082	1975			1777			1911	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	52	123	33	21	170	29	49	256	12	37	400	63
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	52	156	0	21	199	0	0	317	0	0	500	0
Confl. Peds. (#/hr)	1		10	10		1	2		5	5		2
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	2%	0%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Effective Green, g (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Actuated g/C Ratio	0.31	0.31		0.31	0.31			0.57			0.57	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	312	605		333	608			1012			1088	
v/s Ratio Prot		0.08			c0.10							
v/s Ratio Perm	0.05			0.02				0.18			c0.26	
v/c Ratio	0.17	0.26		0.06	0.33			0.31			0.46	
Uniform Delay, d1	16.4	16.9		15.9	17.3			7.3			8.2	
Progression Factor	0.83	0.81		0.92	0.93			1.00			1.00	
Incremental Delay, d2	1.1	1.0		0.4	1.4			0.8			1.4	
Delay (s)	14.7	14.6		15.0	17.6			8.2			9.6	
Level of Service	B	B		B	B			A			A	
Approach Delay (s)		14.7			17.3			8.2			9.6	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



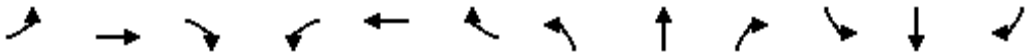
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	51	12	92	2	5	10	59	223	5	5	442	72
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	10	11	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98		1.00	0.98		1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.87		1.00	0.90		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1695	1726		1702	1808		1594	1647	1428	1653	2000	1496
Flt Permitted	0.75	1.00		0.68	1.00		0.41	1.00	1.00	0.60	1.00	1.00
Satd. Flow (perm)	1332	1726		1224	1808		693	1647	1428	1049	2000	1496
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	57	13	102	2	6	11	66	248	6	6	491	80
RTOR Reduction (vph)	0	74	0	0	8	0	0	0	2	0	0	28
Lane Group Flow (vph)	57	41	0	2	9	0	66	248	4	6	491	52
Confl. Peds. (#/hr)	5		5	5		5	3					3
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	0%	2%	0%	0%	2%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	17.0	17.0		17.0	17.0		39.0	39.0	39.0	39.0	39.0	39.0
Effective Green, g (s)	18.0	18.0		18.0	18.0		39.0	39.0	39.0	39.0	39.0	39.0
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.60	0.60	0.60	0.60	0.60	0.60
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	369	478		339	501		416	988	857	629	1200	898
v/s Ratio Prot		0.02			0.01			0.15			c0.25	
v/s Ratio Perm	c0.04			0.00			0.10		0.00	0.01		0.04
v/c Ratio	0.15	0.09		0.01	0.02		0.16	0.25	0.00	0.01	0.41	0.06
Uniform Delay, d1	17.8	17.4		17.0	17.1		5.7	6.1	5.2	5.2	6.9	5.4
Progression Factor	1.40	2.81		1.00	1.00		0.80	0.75	0.93	1.00	1.00	1.00
Incremental Delay, d2	0.9	0.3		0.0	0.1		0.6	0.5	0.0	0.0	1.0	0.1
Delay (s)	25.8	49.2		17.1	17.1		5.2	5.1	4.9	5.3	7.9	5.5
Level of Service	C	D		B	B		A	A	A	A	A	A
Approach Delay (s)		41.5			17.1			5.1			7.6	
Approach LOS		D			B			A			A	

Intersection Summary			
HCM Average Control Delay	12.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	253	163	169	203	0	0	0	0	110	470	377
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)		4.0		3.0	3.0					5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	
Frpb, ped/bikes		0.99		1.00	1.00					1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Frt		0.94		1.00	1.00					1.00	0.93	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		2905		1693	3288					1503	3021	
Flt Permitted		1.00		0.41	1.00					0.95	1.00	
Satd. Flow (perm)		2905		722	3288					1503	3021	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	266	172	178	214	0	0	0	0	116	495	397
RTOR Reduction (vph)	0	103	0	0	0	0	0	0	0	0	141	0
Lane Group Flow (vph)	0	335	0	178	214	0	0	0	0	116	751	0
Confl. Peds. (#/hr)	18		3	3		18	1					1
Heavy Vehicles (%)	0%	4%	1%	1%	4%	0%	0%	0%	0%	10%	2%	1%
Turn Type				D.P+P						Split		
Protected Phases		8		7	7 8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		33.0		53.0	56.0					37.0	37.0	
Effective Green, g (s)		33.0		53.0	56.0					37.0	37.0	
Actuated g/C Ratio		0.32		0.52	0.55					0.36	0.36	
Clearance Time (s)		4.0		3.0						5.0	5.0	
Lane Grp Cap (vph)		940		566	1805					545	1096	
v/s Ratio Prot		c0.12		c0.06	0.07					0.08	c0.25	
v/s Ratio Perm				0.10								
v/c Ratio		0.36		0.31	0.12					0.21	0.68	
Uniform Delay, d1		26.4		13.4	11.1					22.4	27.6	
Progression Factor		1.00		2.20	2.14					1.00	1.00	
Incremental Delay, d2		1.1		1.3	0.1					0.9	3.5	
Delay (s)		27.4		30.7	23.8					23.3	31.0	
Level of Service		C		C	C					C	C	
Approach Delay (s)		27.4			27.0			0.0			30.2	
Approach LOS		C			C			A			C	

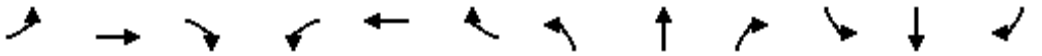
Intersection Summary			
HCM Average Control Delay	28.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	102.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	60.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	141	222	0	0	299	113	73	511	219	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	9	12	13	12	13	12	12	12
Total Lost time (s)	4.0	4.0			4.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.96		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1674	3196			2848		1767	1782	1560			
Flt Permitted	0.36	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	642	3196			2848		1767	1782	1560			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	148	234	0	0	315	119	77	538	231	0	0	0
RTOR Reduction (vph)	0	0	0	0	39	0	0	0	163	0	0	0
Lane Group Flow (vph)	148	234	0	0	395	0	77	538	68	0	0	0
Confl. Peds. (#/hr)	9		13	13		9			1	1		
Confl. Bikes (#/hr)	3					3						
Heavy Vehicles (%)	2%	7%	0%	0%	3%	1%	0%	1%	0%	0%	0%	0%
Turn Type	pm+pt						custom		Perm			
Protected Phases	4	1 4			1		2	2				
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	59.0	63.0			26.0		30.0	30.0	30.0			
Effective Green, g (s)	59.0	63.0			26.0		30.0	30.0	30.0			
Actuated g/C Ratio	0.58	0.62			0.25		0.29	0.29	0.29			
Clearance Time (s)	4.0				4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	705	1974			726		520	524	459			
v/s Ratio Prot	c0.07	0.07			c0.14		0.04	c0.30				
v/s Ratio Perm	0.05								0.04			
v/c Ratio	0.21	0.12			0.54		0.15	1.03	0.15			
Uniform Delay, d1	10.2	8.0			32.9		26.6	36.0	26.6			
Progression Factor	0.42	0.43			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.6	0.1			2.9		0.6	46.3	0.7			
Delay (s)	4.9	3.6			35.8		27.2	82.3	27.2			
Level of Service	A	A			D		C	F	C			
Approach Delay (s)		4.1			35.8			62.3			0.0	
Approach LOS		A			D			E			A	

Intersection Summary			
HCM Average Control Delay	42.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	102.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	60.8%	ICU Level of Service	B
Analysis Period (min)	15		

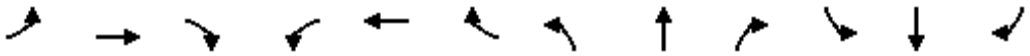
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	486	455	77	507	0	0	0	0	11	434	277
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	11	12	12	12	12	10	10	12
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	1.00
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.93		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3097		1710	3306					1596	3192	1530
Flt Permitted		1.00		0.12	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3097		209	3306					1596	3192	1530
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	506	474	80	528	0	0	0	0	11	452	289
RTOR Reduction (vph)	0	169	0	0	0	0	0	0	0	0	0	191
Lane Group Flow (vph)	0	811	0	80	528	0	0	0	0	11	452	98
Confl. Peds. (#/hr)	8		8	8		8	3					3
Confl. Bikes (#/hr)	9					9			61	61		
Heavy Vehicles (%)	0%	1%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type				pm+pt						Split		Prot
Protected Phases		8		7	7 8					6	6	6
Permitted Phases				7 8								
Actuated Green, G (s)		36.0		54.0	58.0					34.0	34.0	34.0
Effective Green, g (s)		36.0		54.0	58.0					34.0	34.0	34.0
Actuated g/C Ratio		0.36		0.54	0.58					0.34	0.34	0.34
Clearance Time (s)		4.0		4.0						4.0	4.0	4.0
Lane Grp Cap (vph)		1115		383	1917					543	1085	520
v/s Ratio Prot		c0.26		0.04	c0.16					0.01	c0.14	0.06
v/s Ratio Perm				0.08								
v/c Ratio		0.73		0.21	0.28					0.02	0.42	0.19
Uniform Delay, d1		27.7		13.9	10.5					21.9	25.4	23.3
Progression Factor		1.00		1.01	1.19					1.00	1.00	1.00
Incremental Delay, d2		4.2		0.9	0.3					0.1	1.2	0.8
Delay (s)		31.9		15.0	12.8					22.0	26.6	24.1
Level of Service		C		B	B					C	C	C
Approach Delay (s)		31.9			13.1			0.0			25.5	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM Average Control Delay	25.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	89.0%	ICU Level of Service	E
Analysis Period (min)	15		

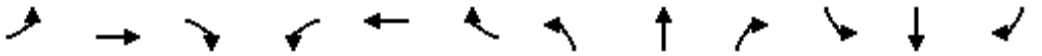
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	396	101	0	0	142	6	441	456	55	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	10	12	11	11	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	0.91	0.91			0.95		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.99		1.00	1.00	0.85			
Flt Protected	0.95	0.97			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1469	3110			3168		1555	1653	1530			
Flt Permitted	0.66	0.72			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	1014	2316			3168		1555	1653	1530			
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	408	104	0	0	146	6	455	470	57	0	0	0
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	36	0	0	0
Lane Group Flow (vph)	204	308	0	0	149	0	455	470	21	0	0	0
Confl. Peds. (#/hr)	13		6	6		13			8	8		
Confl. Bikes (#/hr)	1					1			2	2		
Heavy Vehicles (%)	2%	1%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%
Turn Type	pm+pt						custom		custom			
Protected Phases	4	1 4			1		2	2	2			
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Effective Green, g (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Actuated g/C Ratio	0.51	0.51			0.15		0.37	0.37	0.37			
Clearance Time (s)	4.0				4.0		4.0	4.0	4.0			
Lane Grp Cap (vph)	681	1467			475		575	612	566			
v/s Ratio Prot	c0.11	0.08			c0.05		c0.29	0.28	0.01			
v/s Ratio Perm	0.04	0.03										
v/c Ratio	0.30	0.21			0.31		0.79	0.77	0.04			
Uniform Delay, d1	13.9	13.4			37.9		28.1	27.7	20.1			
Progression Factor	0.25	0.26			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.7	0.2			1.7		10.7	9.0	0.1			
Delay (s)	4.3	3.8			39.6		38.7	36.7	20.2			
Level of Service	A	A			D		D	D	C			
Approach Delay (s)		4.0			39.6			36.7			0.0	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM Average Control Delay	26.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	89.0%	ICU Level of Service	E
Analysis Period (min)	15		

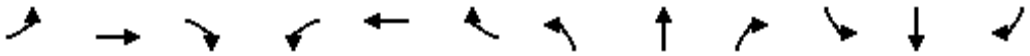
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	78	217	102	117	255	121	80	663	75	102	875	64
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	9	10	9	9	10	9
Total Lost time (s)		4.0			4.0		4.0	3.5	4.0	4.0	3.5	4.0
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		0.99			0.99		1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.96			0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		2939			2921		1508	3069	1309	1508	3099	1298
Flt Permitted		0.74			0.75		0.16	1.00	1.00	0.27	1.00	1.00
Satd. Flow (perm)		2205			2207		261	3069	1309	433	3099	1298
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	81	226	106	122	266	126	83	691	78	106	911	67
RTOR Reduction (vph)	0	40	0	0	37	0	0	0	48	0	0	33
Lane Group Flow (vph)	0	373	0	0	477	0	83	691	30	106	911	34
Confl. Peds. (#/hr)	35		30	30		35	34		8	8		34
Confl. Bikes (#/hr)	1					1	1					1
Heavy Vehicles (%)	1%	4%	0%	1%	3%	3%	2%	4%	2%	2%	3%	2%
Turn Type	pm+pt			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		35.0			27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)		36.0			28.0		36.0	33.5	33.0	36.0	33.5	33.0
Actuated g/C Ratio		0.42			0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)		5.0			5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)		986			727		169	1210	508	234	1221	504
v/s Ratio Prot		c0.03					c0.02	0.23		0.02	c0.29	
v/s Ratio Perm		0.13			c0.22		0.18		0.02	0.17		0.03
v/c Ratio		0.38			0.66		0.49	0.57	0.06	0.45	0.75	0.07
Uniform Delay, d1		16.8			24.4		16.6	20.1	16.3	15.8	22.1	16.3
Progression Factor		1.00			1.00		1.27	0.69	0.53	1.11	1.17	1.77
Incremental Delay, d2		1.1			4.6		9.1	1.8	0.2	4.6	3.1	0.2
Delay (s)		17.9			29.0		30.0	15.6	8.9	22.1	28.9	29.1
Level of Service		B			C		C	B	A	C	C	C
Approach Delay (s)		17.9			29.0			16.4			28.3	
Approach LOS		B			C			B			C	

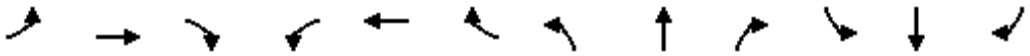
Intersection Summary			
HCM Average Control Delay	23.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	76	318	0	0	375	100	52	43	36	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.97			0.96				
Flt Protected		0.99			1.00			0.98				
Satd. Flow (prot)		1731			1698			1650				
Flt Permitted		0.84			1.00			0.98				
Satd. Flow (perm)		1465			1698			1650				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	84	353	0	0	417	111	58	48	40	0	0	0
RTOR Reduction (vph)	0	0	0	0	15	0	0	21	0	0	0	0
Lane Group Flow (vph)	0	437	0	0	513	0	0	125	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		38.0			38.0			19.0				
Effective Green, g (s)		38.0			38.0			19.0				
Actuated g/C Ratio		0.58			0.58			0.29				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		856			993			482				
v/s Ratio Prot					c0.30							
v/s Ratio Perm		0.30						0.08				
v/c Ratio		0.51			0.52			0.26				
Uniform Delay, d1		8.0			8.0			17.6				
Progression Factor		1.00			0.98			1.00				
Incremental Delay, d2		2.2			1.5			1.3				
Delay (s)		10.2			9.4			18.9				
Level of Service		B			A			B				
Approach Delay (s)		10.2			9.4			18.9			0.0	
Approach LOS		B			A			B			A	

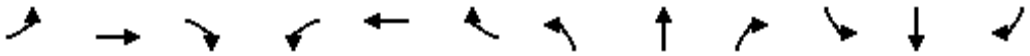
Intersection Summary			
HCM Average Control Delay	10.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	19	306	27	51	402	68	27	112	40	56	148	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	10	12	12	10	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			0.98	
Flpb, ped/bikes		1.00			1.00			0.99			1.00	
Frt		0.99			0.98			0.97			0.97	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1957			1933			2960			2983	
Flt Permitted		0.96			0.93			0.89			0.85	
Satd. Flow (perm)		1889			1811			2661			2580	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	21	340	30	57	447	76	30	124	44	62	164	47
RTOR Reduction (vph)	0	5	0	0	9	0	0	26	0	0	27	0
Lane Group Flow (vph)	0	386	0	0	571	0	0	172	0	0	246	0
Confl. Peds. (#/hr)	32		25	25		32	59		24	24		59
Confl. Bikes (#/hr)	3		2	2		3	4		2	2		4
Heavy Vehicles (%)	0%	3%	0%	3%	3%	0%	0%	0%	7%	4%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0			27.0			27.0	
Effective Green, g (s)		30.0			30.0			27.0			27.0	
Actuated g/C Ratio		0.46			0.46			0.42			0.42	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		872			836			1105			1072	
v/s Ratio Prot												
v/s Ratio Perm		0.20			c0.32			0.06			c0.10	
v/c Ratio		0.44			0.68			0.16			0.23	
Uniform Delay, d1		11.8			13.8			11.9			12.3	
Progression Factor		0.57			0.36			1.29			0.46	
Incremental Delay, d2		1.4			3.7			0.3			0.5	
Delay (s)		8.2			8.7			15.6			6.2	
Level of Service		A			A			B			A	
Approach Delay (s)		8.2			8.7			15.6			6.2	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM Average Control Delay	9.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.3%	ICU Level of Service	E
Analysis Period (min)	15		

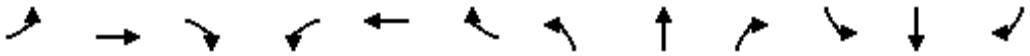
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	41	279	39	82	532	96	43	217	98	82	215	59
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	9	10	10	9	10	10	12	10	10	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00		0.99	1.00		0.99	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.95		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1511	3039		1570	3078		1587	2961		1585	3074	
Flt Permitted	0.26	1.00		0.52	1.00		0.57	1.00		0.54	1.00	
Satd. Flow (perm)	418	3039		854	3078		945	2961		904	3074	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	46	310	43	91	591	107	48	241	109	91	239	66
RTOR Reduction (vph)	0	17	0	0	22	0	0	50	0	0	30	0
Lane Group Flow (vph)	46	336	0	91	676	0	48	300	0	91	275	0
Confl. Peds. (#/hr)	20		31	31		20	16		20	20		16
Confl. Bikes (#/hr)							1		3	3		1
Heavy Vehicles (%)	5%	3%	0%	0%	1%	0%	0%	2%	2%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	141	1029		289	1042		509	1594		487	1655	
v/s Ratio Prot		0.11			c0.22			c0.10			0.09	
v/s Ratio Perm	0.11			0.11			0.05			0.10		
v/c Ratio	0.33	0.33		0.31	0.65		0.09	0.19		0.19	0.17	
Uniform Delay, d1	16.0	16.0		15.9	18.2		7.3	7.7		7.7	7.6	
Progression Factor	0.79	0.75		1.12	1.13		1.12	1.26		1.10	1.10	
Incremental Delay, d2	5.7	0.8		2.8	3.0		0.4	0.3		0.8	0.2	
Delay (s)	18.4	12.8		20.7	23.6		8.5	10.0		9.3	8.6	
Level of Service	B	B		C	C		A	A		A	A	
Approach Delay (s)		13.4			23.3			9.8			8.8	
Approach LOS		B			C			A			A	

Intersection Summary			
HCM Average Control Delay	15.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.8%	ICU Level of Service	A
Analysis Period (min)	15		

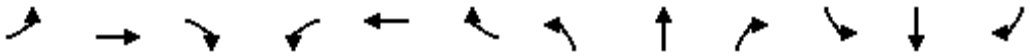
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	55	287	96	103	382	48	164	245	130	46	295	64
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	9	10	9	9	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99			0.99			0.98	
Flpb, ped/bikes	0.98	1.00		0.99	1.00			0.98			1.00	
Frt	1.00	0.96		1.00	0.98			0.96			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.99	
Satd. Flow (prot)	1507	2988		1430	3719			3403			3530	
Flt Permitted	0.47	1.00		0.51	1.00			0.69			0.85	
Satd. Flow (perm)	748	2988		761	3719			2397			3030	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	58	302	101	108	402	51	173	258	137	48	311	67
RTOR Reduction (vph)	0	50	0	0	15	0	0	47	0	0	23	0
Lane Group Flow (vph)	58	353	0	108	438	0	0	521	0	0	403	0
Confl. Peds. (#/hr)	38		17	17		38	125		53	53		125
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	3%	0%	7%	2%	0%	0%	6%	10%	2%	5%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Effective Green, g (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48			0.40			0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	357	1425		363	1774			959			1212	
v/s Ratio Prot		0.12			0.12							
v/s Ratio Perm	0.08			c0.14				c0.22			0.13	
v/c Ratio	0.16	0.25		0.30	0.25			0.54			0.33	
Uniform Delay, d1	9.6	10.1		10.4	10.1			15.0			13.5	
Progression Factor	1.55	1.81		1.10	1.09			1.07			0.76	
Incremental Delay, d2	0.9	0.4		1.9	0.3			1.3			0.7	
Delay (s)	15.9	18.6		13.3	11.3			17.4			10.9	
Level of Service	B	B		B	B			B			B	
Approach Delay (s)		18.3			11.7			17.4			10.9	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	14.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.6%	ICU Level of Service	B
Analysis Period (min)	15		

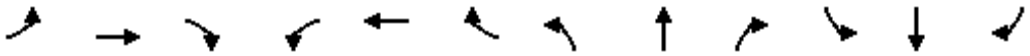
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	86	311	86	88	284	88	115	79	45	45	79	115
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	16	12	12	16	12
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		0.95			1.00			1.00	
Frt		1.00	0.85		0.97			0.97			0.94	
Flt Protected		0.99	1.00		0.99			0.98			0.99	
Satd. Flow (prot)		1671	1436		3088			1885			1835	
Flt Permitted		0.80	1.00		0.78			0.68			0.91	
Satd. Flow (perm)		1356	1436		2443			1320			1679	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	96	346	96	98	316	98	128	88	50	50	88	128
RTOR Reduction (vph)	0	0	46	0	32	0	0	13	0	0	51	0
Lane Group Flow (vph)	0	442	50	0	480	0	0	253	0	0	215	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		34.0	34.0		34.0			21.0			21.0	
Effective Green, g (s)		34.0	34.0		34.0			21.0			21.0	
Actuated g/C Ratio		0.52	0.52		0.52			0.32			0.32	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Grp Cap (vph)		709	751		1278			426			542	
v/s Ratio Prot												
v/s Ratio Perm		c0.33	0.03		0.20			c0.19			0.13	
v/c Ratio		0.62	0.07		0.38			0.59			0.40	
Uniform Delay, d1		11.0	7.7		9.2			18.4			17.1	
Progression Factor		1.41	3.20		0.54			1.00			1.00	
Incremental Delay, d2		3.9	0.2		0.8			6.0			2.2	
Delay (s)		19.4	24.7		5.8			24.4			19.2	
Level of Service		B	C		A			C			B	
Approach Delay (s)		20.4			5.8			24.4			19.2	
Approach LOS		C			A			C			B	

Intersection Summary			
HCM Average Control Delay	16.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	79.1%	ICU Level of Service	D
Analysis Period (min)	15		

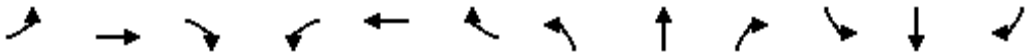
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	291	32	25	316	58	27	130	46	62	145	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	15	8	16	8	8	16	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.98		1.00	0.98			0.97			0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1443	3021		1566	3020			3582			3594	
Flt Permitted	0.49	1.00		0.54	1.00			0.89			0.84	
Satd. Flow (perm)	752	3021		883	3020			3226			3068	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	66	323	36	28	351	64	30	144	51	69	161	72
RTOR Reduction (vph)	0	13	0	0	23	0	0	30	0	0	42	0
Lane Group Flow (vph)	66	346	0	28	392	0	0	195	0	0	260	0
Confl. Peds. (#/hr)	24		47	47		24	9		36	36		9
Confl. Bikes (#/hr)			4	4			1					1
Heavy Vehicles (%)	9%	4%	0%	0%	3%	0%	0%	1%	10%	0%	0%	8%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	30.0	30.0		30.0	30.0			27.0			27.0	
Effective Green, g (s)	30.0	30.0		30.0	30.0			27.0			27.0	
Actuated g/C Ratio	0.46	0.46		0.46	0.46			0.42			0.42	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	347	1394		408	1394			1340			1274	
v/s Ratio Prot		0.11			c0.13							
v/s Ratio Perm	0.09			0.03				0.06			c0.08	
v/c Ratio	0.19	0.25		0.07	0.28			0.15			0.20	
Uniform Delay, d1	10.3	10.6		9.7	10.8			11.8			12.1	
Progression Factor	0.63	0.63		0.83	0.66			0.95			0.41	
Incremental Delay, d2	1.0	0.3		0.2	0.2			0.2			0.3	
Delay (s)	7.5	7.0		8.2	7.4			11.4			5.3	
Level of Service	A	A		A	A			B			A	
Approach Delay (s)		7.1			7.4			11.4			5.3	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM Average Control Delay	7.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

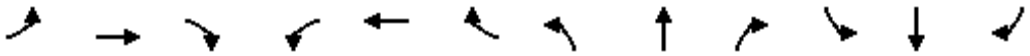


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	47	456	30	83	487	213	24	118	109	323	248	78
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.99			0.96			0.93			0.98	
Flt Protected		1.00			0.99			1.00			0.98	
Satd. Flow (prot)		3278			3168			3089			3181	
Flt Permitted		0.78			0.79			0.90			0.71	
Satd. Flow (perm)		2560			2523			2807			2305	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	52	507	33	92	541	237	27	131	121	359	276	87
RTOR Reduction (vph)	0	7	0	0	60	0	0	65	0	0	16	0
Lane Group Flow (vph)	0	585	0	0	810	0	0	214	0	0	706	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0			30.0			17.0	
Effective Green, g (s)		25.0			25.0			30.0			17.0	
Actuated g/C Ratio		0.38			0.38			0.46			0.26	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		985			970			1339			603	
v/s Ratio Prot								c0.02				
v/s Ratio Perm		0.23			c0.32			0.05			c0.31	
v/c Ratio		0.59			0.84			0.16			1.28dl	
Uniform Delay, d1		16.0			18.1			10.2			24.0	
Progression Factor		1.47			1.00			1.00			0.81	
Incremental Delay, d2		2.6			8.5			0.3			93.0	
Delay (s)		26.1			26.6			10.4			112.4	
Level of Service		C			C			B			F	
Approach Delay (s)		26.1			26.6			10.4			112.4	
Approach LOS		C			C			B			F	

Intersection Summary			
HCM Average Control Delay	49.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	84.0%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

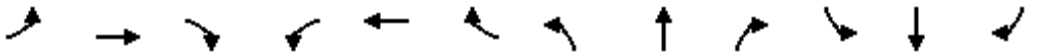
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	875	135	46	762	0	79	0	35	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	10	10	12	12	12	12	12	12	12
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			1.00				
Frt		0.98			1.00			0.96				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		3037			3090			1619				
Flt Permitted		1.00			0.81			0.79				
Satd. Flow (perm)		3037			2504			1329				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	972	150	51	847	0	88	0	39	0	0	0
RTOR Reduction (vph)	0	17	0	0	0	0	0	18	0	0	0	0
Lane Group Flow (vph)	0	1105	0	0	898	0	0	109	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	custom			Perm			Perm			Perm		
Protected Phases		4 5 6 11			8			2			2	
Permitted Phases	4 6 11			8			2			2		
Actuated Green, G (s)		65.0			33.0			16.0				
Effective Green, g (s)		58.0			33.0			16.0				
Actuated g/C Ratio		0.64			0.37			0.18				
Clearance Time (s)					5.0			5.0				
Lane Grp Cap (vph)		1957			918			236				
v/s Ratio Prot		c0.36										
v/s Ratio Perm					c0.36			c0.08				
v/c Ratio		0.56			0.98			0.46				
Uniform Delay, d1		8.9			28.1			33.1				
Progression Factor		0.13			1.42			1.00				
Incremental Delay, d2		0.3			23.9			6.4				
Delay (s)		1.5			63.8			39.5				
Level of Service		A			E			D				
Approach Delay (s)		1.5			63.8			39.5			0.0	
Approach LOS		A			E			D			A	

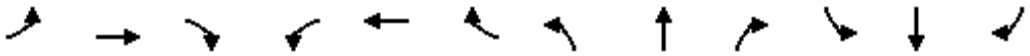
Intersection Summary			
HCM Average Control Delay	29.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	218	633	24	108	586	178	59	4	103	205	10	206
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	10	12	12	12	12	16	12	12	12	12
Total Lost time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85		0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (prot)	1550	3192		1660	3320	1485		1783		1660	1748	1485
Flt Permitted	0.31	1.00		0.34	1.00	1.00		0.88		0.44	1.00	1.00
Satd. Flow (perm)	502	3192		593	3320	1485		1591		773	1748	1485
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	242	703	27	120	651	198	66	4	114	228	11	229
RTOR Reduction (vph)	0	2	0	0	0	90	0	89	0	0	0	132
Lane Group Flow (vph)	242	728	0	120	651	108	0	95	0	228	11	97
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	55.2	43.0		48.1	38.9	48.9		11.8		24.8	24.8	38.1
Effective Green, g (s)	55.2	43.0		48.1	38.9	48.9		11.8		24.8	24.8	38.1
Actuated g/C Ratio	0.61	0.48		0.53	0.43	0.54		0.13		0.28	0.28	0.42
Clearance Time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Vehicle Extension (s)	4.0	3.0		4.0	3.0	3.0		4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	463	1525		426	1435	807		209		312	482	629
v/s Ratio Prot	c0.08	0.23		0.03	0.20	0.01				c0.08	0.01	0.02
v/s Ratio Perm	c0.24			0.12		0.06		0.06		c0.12		0.04
v/c Ratio	0.52	0.48		0.28	0.45	0.13		0.45		0.73	0.02	0.15
Uniform Delay, d1	8.9	15.9		10.6	18.0	10.1		36.1		28.4	23.8	16.0
Progression Factor	2.60	1.89		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	1.2	0.9		0.5	1.0	0.1		2.1		8.5	0.0	0.2
Delay (s)	24.2	30.9		11.1	19.1	10.2		38.2		36.9	23.8	16.2
Level of Service	C	C		B	B	B		D		D	C	B
Approach Delay (s)		29.2			16.3			38.2			26.4	
Approach LOS		C			B			D			C	

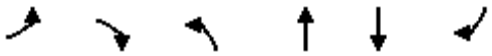
Intersection Summary					
HCM Average Control Delay	24.5	HCM Level of Service		C	
HCM Volume to Capacity ratio	0.56				
Actuated Cycle Length (s)	90.0	Sum of lost time (s)		6.0	
Intersection Capacity Utilization	60.2%	ICU Level of Service		B	
Analysis Period (min)	15				
c Critical Lane Group					



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	511	431	2	323	0	0	0	0	18	0	548
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	568	479	2	359	0	0	0	0	20	0	609
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		498										
pX, platoon unblocked												
vC, conflicting volume	359			568			752	931	284	647	931	179
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	359			568			752	931	284	647	931	179
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	94	100	27
cM capacity (veh/h)	1189			994			79	263	710	353	263	829

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	284	284	479	122	239	20	609
Volume Left	0	0	0	2	0	20	0
Volume Right	0	0	479	0	0	0	609
cSH	1700	1700	1700	994	1700	353	829
Volume to Capacity	0.17	0.17	0.28	0.00	0.14	0.06	0.73
Queue Length 95th (ft)	0	0	0	0	0	4	167
Control Delay (s)	0.0	0.0	0.0	0.2	0.0	15.8	20.3
Lane LOS				A		C	C
Approach Delay (s)	0.0			0.1		20.2	
Approach LOS						C	

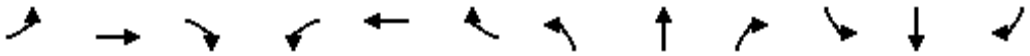
Intersection Summary				
Average Delay	6.2			
Intersection Capacity Utilization	52.0%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	529	0	325	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	588	0	361	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	294	294	361
Volume Left (vph)	294	294	361
Volume Right (vph)	0	0	0
Hadj (s)	0.55	0.55	0.25
Departure Headway (s)	6.1	6.1	5.6
Degree Utilization, x	0.50	0.50	0.56
Capacity (veh/h)	571	573	620
Control Delay (s)	13.9	13.9	15.3
Approach Delay (s)	13.9		15.3
Approach LOS	B		C

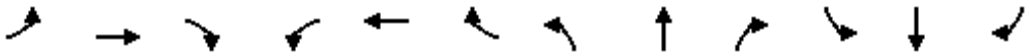
Intersection Summary			
Delay	14.5		
HCM Level of Service	B		
Intersection Capacity Utilization	41.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	483	64	208	525	0	0	0	0	101	21	58
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)		3.0		4.0	4.0						5.0	
Lane Util. Factor		0.95		1.00	0.95						0.95	
Frt		0.98		1.00	1.00						0.95	
Flt Protected		1.00		0.95	1.00						0.97	
Satd. Flow (prot)		3153		1605	3210						3074	
Flt Permitted		1.00		0.34	1.00						0.97	
Satd. Flow (perm)		3153		574	3210						3074	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	537	71	231	583	0	0	0	0	112	23	64
RTOR Reduction (vph)	0	12	0	0	0	0	0	0	0	0	44	0
Lane Group Flow (vph)	0	596	0	231	583	0	0	0	0	0	155	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type				pm+pt						Split		
Protected Phases		4		3	8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		36.0		49.0	49.0						27.0	
Effective Green, g (s)		36.0		49.0	49.0						27.0	
Actuated g/C Ratio		0.42		0.58	0.58						0.32	
Clearance Time (s)		3.0		4.0	4.0						5.0	
Lane Grp Cap (vph)		1335		452	1850						976	
v/s Ratio Prot		0.19		c0.06	0.18						c0.05	
v/s Ratio Perm				c0.23								
v/c Ratio		0.45		0.51	0.32						0.16	
Uniform Delay, d1		17.4		16.5	9.3						20.8	
Progression Factor		1.00		0.37	0.17						1.00	
Incremental Delay, d2		1.1		3.2	0.3						0.3	
Delay (s)		18.5		9.2	2.0						21.2	
Level of Service		B		A	A						C	
Approach Delay (s)		18.5			4.0			0.0			21.2	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	11.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	45.6%	ICU Level of Service	A
Analysis Period (min)	15		

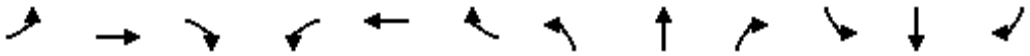
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	95	489	0	0	669	124	64	90	63	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	11	11	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0			3.0			5.0				
Lane Util. Factor	1.00	0.95			0.95			0.91				
Frt	1.00	1.00			0.98			0.96				
Flt Protected	0.95	1.00			1.00			0.99				
Satd. Flow (prot)	1660	3320			3134			4497				
Flt Permitted	0.20	1.00			1.00			0.99				
Satd. Flow (perm)	351	3320			3134			4497				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	106	543	0	0	743	138	71	100	70	0	0	0
RTOR Reduction (vph)	0	0	0	0	18	0	0	48	0	0	0	0
Lane Group Flow (vph)	106	543	0	0	863	0	0	193	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt						Split					
Protected Phases	7	4			8		2	2				
Permitted Phases	4											
Actuated Green, G (s)	48.0	48.0			35.0			27.0				
Effective Green, g (s)	48.0	48.0			35.0			27.0				
Actuated g/C Ratio	0.56	0.56			0.41			0.32				
Clearance Time (s)	5.0	5.0			3.0			5.0				
Lane Grp Cap (vph)	352	1875			1290			1428				
v/s Ratio Prot	0.04	c0.16			c0.28			c0.04				
v/s Ratio Perm	0.13											
v/c Ratio	0.30	0.29			0.67			0.14				
Uniform Delay, d1	19.1	9.6			20.3			20.7				
Progression Factor	0.44	0.31			1.00			1.00				
Incremental Delay, d2	2.0	0.4			2.8			0.2				
Delay (s)	10.4	3.3			23.1			20.9				
Level of Service	B	A			C			C				
Approach Delay (s)		4.5			23.1			20.9			0.0	
Approach LOS		A			C			C			A	

Intersection Summary			
HCM Average Control Delay	16.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.6%	ICU Level of Service	A
Analysis Period (min)	15		

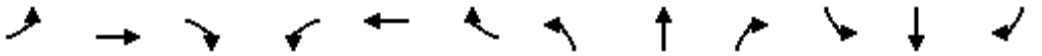
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	114	358	114	119	426	89	129	78	37	31	85	141
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	12	15	12	12	15	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		0.97			0.98			0.98			0.93	
Flt Protected		0.99			0.99			0.97			0.99	
Satd. Flow (prot)		2979			3005			1835			1769	
Flt Permitted		0.62			0.65			0.73			0.94	
Satd. Flow (perm)		1874			1968			1369			1680	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	127	398	127	132	473	99	143	87	41	34	94	157
RTOR Reduction (vph)	0	32	0	0	20	0	0	10	0	0	68	0
Lane Group Flow (vph)	0	620	0	0	684	0	0	261	0	0	217	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		23.0			23.0			32.0			32.0	
Effective Green, g (s)		23.0			23.0			32.0			32.0	
Actuated g/C Ratio		0.35			0.35			0.49			0.49	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		663			696			674			827	
v/s Ratio Prot												
v/s Ratio Perm		0.33			c0.35			c0.19			0.13	
v/c Ratio		0.93			0.98			0.39			0.26	
Uniform Delay, d1		20.3			20.8			10.4			9.6	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		22.2			30.2			1.7			0.8	
Delay (s)		42.4			51.0			12.0			10.4	
Level of Service		D			D			B			B	
Approach Delay (s)		42.4			51.0			12.0			10.4	
Approach LOS		D			D			B			B	

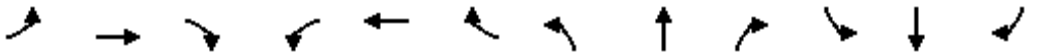
Intersection Summary			
HCM Average Control Delay	36.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	83.4%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	106	229	88	199	420	125	118	511	74	106	898	140
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	12	10	16	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.96		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1562	2993		1574	3644		1508	3069	1333	1520	3099	1336
Flt Permitted	0.31	1.00		0.50	1.00		0.14	1.00	1.00	0.36	1.00	1.00
Satd. Flow (perm)	510	2993		836	3644		214	3069	1333	576	3099	1336
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	112	241	93	209	442	132	124	538	78	112	945	147
RTOR Reduction (vph)	0	48	0	0	33	0	0	0	50	0	0	93
Lane Group Flow (vph)	112	286	0	209	541	0	124	538	28	112	945	54
Confl. Peds. (#/hr)	19		16	16		19	22		25	25		22
Heavy Vehicles (%)	2%	2%	0%	1%	2%	2%	2%	4%	0%	1%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	32.0	27.0		32.0	27.0		38.0	31.0	31.0	38.0	31.0	31.0
Effective Green, g (s)	30.0	28.0		30.0	28.0		36.0	31.0	31.0	36.0	31.0	31.0
Actuated g/C Ratio	0.35	0.33		0.35	0.33		0.42	0.36	0.36	0.42	0.36	0.36
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	230	986		330	1200		182	1119	486	311	1130	487
v/s Ratio Prot	0.02	0.10		c0.03	0.15		c0.05	0.18		0.03	c0.30	
v/s Ratio Perm	0.15			c0.19			0.24		0.02	0.13		0.04
v/c Ratio	0.49	0.29		0.63	0.45		0.68	0.48	0.06	0.36	0.84	0.11
Uniform Delay, d1	19.9	21.1		22.2	22.4		17.6	20.8	17.5	15.5	24.7	17.9
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.41	1.06	2.39
Incremental Delay, d2	7.2	0.7		8.9	1.2		18.7	1.5	0.2	2.4	5.6	0.3
Delay (s)	27.1	21.9		31.2	23.7		36.3	22.3	17.8	24.3	31.7	43.0
Level of Service	C	C		C	C		D	C	B	C	C	D
Approach Delay (s)		23.2			25.7			24.1			32.3	
Approach LOS		C			C			C			C	

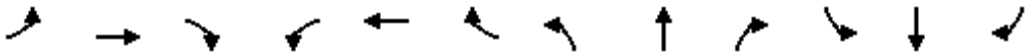
Intersection Summary			
HCM Average Control Delay	27.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	71.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	48	348	30	83	597	84	31	95	51	51	122	63
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	16	12	12	16	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00	0.98		1.00	0.99
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected		0.99	1.00		0.99	1.00		0.99	1.00		0.99	1.00
Satd. Flow (prot)		1965	1466		1990	1480		2015	1506		1995	1511
Flt Permitted		0.61	1.00		0.87	1.00		0.91	1.00		0.89	1.00
Satd. Flow (perm)		1199	1466		1749	1480		1863	1506		1809	1511
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	51	366	32	87	628	88	33	100	54	54	128	66
RTOR Reduction (vph)	0	0	17	0	0	47	0	0	32	0	0	39
Lane Group Flow (vph)	0	417	15	0	715	41	0	133	22	0	182	27
Confl. Peds. (#/hr)	11		20	20		11	1		4	4		1
Confl. Bikes (#/hr)	1		1	1		1			1	1		
Heavy Vehicles (%)	4%	3%	0%	0%	2%	0%	0%	0%	0%	0%	1%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Effective Green, g (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Actuated g/C Ratio		0.46	0.46		0.46	0.46		0.42	0.42		0.42	0.42
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		553	677		807	683		774	626		751	628
v/s Ratio Prot												
v/s Ratio Perm		0.35	0.01		c0.41	0.03		0.07	0.01		c0.10	0.02
v/c Ratio		0.75	0.02		0.89	0.06		0.17	0.04		0.24	0.04
Uniform Delay, d1		14.5	9.5		15.9	9.7		12.0	11.3		12.4	11.3
Progression Factor		1.00	1.00		0.45	0.05		1.09	1.29		1.03	0.89
Incremental Delay, d2		9.2	0.1		11.8	0.1		0.5	0.1		0.7	0.1
Delay (s)		23.7	9.6		18.9	0.6		13.5	14.6		13.5	10.2
Level of Service		C	A		B	A		B	B		B	B
Approach Delay (s)		22.7			16.9			13.8			12.6	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM Average Control Delay	17.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	100.1%	ICU Level of Service	G
Analysis Period (min)	15		

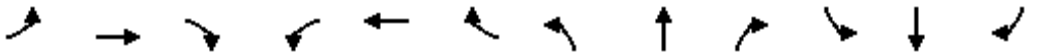
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	75	385	20	51	564	91	10	107	23	119	203	62
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.98		1.00	0.97		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1550	3076		1550	3035		1550	3016		1550	2990	
Flt Permitted	0.95	1.00		0.49	1.00		0.56	1.00		0.66	1.00	
Satd. Flow (perm)	1550	3076		802	3035		912	3016		1077	2990	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	83	428	22	57	627	101	11	119	26	132	226	69
RTOR Reduction (vph)	0	6	0	0	20	0	0	15	0	0	40	0
Lane Group Flow (vph)	83	444	0	57	708	0	11	130	0	132	255	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Prot			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Effective Green, g (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.11	0.49		0.34	0.34		0.42	0.42		0.42	0.42	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	167	1514		271	1027		379	1253		447	1242	
v/s Ratio Prot	c0.05	0.14			c0.23			0.04			0.09	
v/s Ratio Perm				0.07			0.01			c0.12		
v/c Ratio	0.50	0.29		0.21	0.69		0.03	0.10		0.30	0.21	
Uniform Delay, d1	27.3	9.8		15.3	18.6		11.2	11.6		12.7	12.1	
Progression Factor	1.16	0.56		0.92	0.97		0.85	0.86		1.12	1.12	
Incremental Delay, d2	8.6	0.4		1.0	2.2		0.1	0.2		1.7	0.4	
Delay (s)	40.5	5.9		15.2	20.2		9.7	10.1		15.9	13.9	
Level of Service	D	A		B	C		A	B		B	B	
Approach Delay (s)		11.3			19.8			10.1			14.5	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	15.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	48.6%	ICU Level of Service	A
Analysis Period (min)	15		

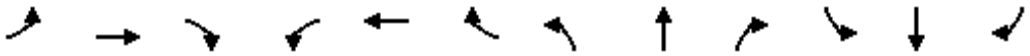
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	63	263	165	241	320	61	412	300	189	55	295	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.94		1.00	0.98			0.97			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.99	
Satd. Flow (prot)	1550	2920		1550	3024			3144			3236	
Flt Permitted	0.50	1.00		0.95	1.00			0.64			0.68	
Satd. Flow (perm)	823	2920		1550	3024			2049			2229	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	70	292	183	268	356	68	458	333	210	61	328	56
RTOR Reduction (vph)	0	127	0	0	24	0	0	37	0	0	17	0
Lane Group Flow (vph)	70	348	0	268	400	0	0	964	0	0	428	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Prot			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4						2			6		
Actuated Green, G (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Effective Green, g (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Actuated g/C Ratio	0.31	0.31		0.09	0.45			0.38			0.38	
Clearance Time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	253	898		143	1349			788			857	
v/s Ratio Prot		c0.12		c0.17	0.13							
v/s Ratio Perm	0.09							c0.47			0.19	
v/c Ratio	0.28	0.39		1.87	0.30			1.34dl			0.50	
Uniform Delay, d1	17.0	17.7		29.5	11.5			20.0			15.2	
Progression Factor	0.81	0.68		1.28	1.17			1.03			0.69	
Incremental Delay, d2	2.6	1.2		405.6	0.3			111.6			2.0	
Delay (s)	16.5	13.2		443.3	13.7			132.3			12.6	
Level of Service	B	B		F	B			F			B	
Approach Delay (s)		13.6			180.1			132.3			12.6	
Approach LOS		B			F			F			B	

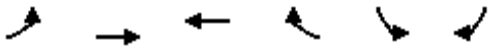
Intersection Summary			
HCM Average Control Delay	100.6	HCM Level of Service	F
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	80.4%	ICU Level of Service	D
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	26	454	16	73	629	73	54	108	162	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	14	12	10	15	10
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			0.95				
Frt		1.00			0.99			0.93				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		1620			1603			3249				
Flt Permitted		0.94			0.91			0.99				
Satd. Flow (perm)		1532			1466			3249				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	29	504	18	81	699	81	60	120	180	0	0	0
RTOR Reduction (vph)	0	1	0	0	5	0	0	137	0	0	0	0
Lane Group Flow (vph)	0	550	0	0	856	0	0	223	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		41.5			41.5			15.5				
Effective Green, g (s)		41.5			41.5			15.5				
Actuated g/C Ratio		0.64			0.64			0.24				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		3.0			3.0			8.0				
Lane Grp Cap (vph)		978			936			775				
v/s Ratio Prot												
v/s Ratio Perm		0.36			c0.58			0.07				
v/c Ratio		0.56			0.91			0.29				
Uniform Delay, d1		6.6			10.2			20.2				
Progression Factor		1.06			1.00			1.00				
Incremental Delay, d2		1.5			14.9			0.9				
Delay (s)		8.5			25.1			21.1				
Level of Service		A			C			C				
Approach Delay (s)		8.5			25.1			21.1			0.0	
Approach LOS		A			C			C			A	

Intersection Summary			
HCM Average Control Delay	19.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	83.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	133	473	596	38	117	172
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	140	498	627	40	123	181
Pedestrians		5	6		17	
Lane Width (ft)		16.0	16.0		10.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		1	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1319	491			
pX, platoon unblocked	0.83				0.83	0.83
vC, conflicting volume	684				1448	669
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	522				1438	504
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	83				0	61
cM capacity (veh/h)	848				101	469

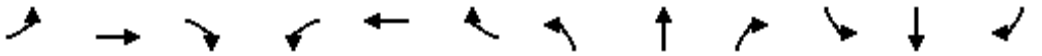
Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	638	667	123	181
Volume Left	140	0	123	0
Volume Right	0	40	0	181
cSH	848	1700	101	469
Volume to Capacity	0.17	0.39	1.22	0.39
Queue Length 95th (ft)	15	0	207	45
Control Delay (s)	4.0	0.0	236.8	17.4
Lane LOS	A		F	C
Approach Delay (s)	4.0	0.0	106.2	
Approach LOS			F	

Intersection Summary			
Average Delay	21.7		
Intersection Capacity Utilization	87.5%	ICU Level of Service	E
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	704	0	1	607	3	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frt	1.00			1.00	0.88	
Flt Protected	1.00			1.00	1.00	
Satd. Flow (prot)	1748			1747	1525	
Flt Permitted	1.00			1.00	1.00	
Satd. Flow (perm)	1748			1746	1525	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	782	0	1	674	3	32
RTOR Reduction (vph)	0	0	0	0	27	0
Lane Group Flow (vph)	782	0	0	675	8	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type			Perm			
Protected Phases	1 2 4			4	3	
Permitted Phases			4			
Actuated Green, G (s)	63.0			31.0	14.0	
Effective Green, g (s)	59.0			31.0	14.0	
Actuated g/C Ratio	0.69			0.36	0.16	
Clearance Time (s)				4.0	4.0	
Lane Grp Cap (vph)	1213			637	251	
v/s Ratio Prot	c0.45				c0.01	
v/s Ratio Perm				c0.39		
v/c Ratio	0.64			1.06	0.03	
Uniform Delay, d1	7.2			27.0	29.8	
Progression Factor	0.12			1.00	1.00	
Incremental Delay, d2	0.2			52.5	0.2	
Delay (s)	1.1			79.5	30.1	
Level of Service	A			E	C	
Approach Delay (s)	1.1			79.5	30.1	
Approach LOS	A			E	C	

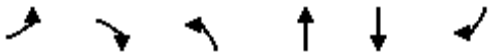
Intersection Summary			
HCM Average Control Delay	37.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	49.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	246	604	30	389	0	0	0	0	17	6	246
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	273	671	33	432	0	0	0	0	19	7	273
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	432			273			1111	1108	472	636	772	432
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	432			273			1111	1108	472	636	772	432
tC, single (s)	4.1			4.2			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			100	100	100	95	98	52
cM capacity (veh/h)	1138			1272			84	206	544	360	324	571

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	182	762	466	26	273
Volume Left	0	0	33	19	0
Volume Right	0	671	0	0	273
cSH	1700	1700	1272	349	571
Volume to Capacity	0.11	0.45	0.03	0.07	0.48
Queue Length 95th (ft)	0	0	2	6	64
Control Delay (s)	0.0	0.0	0.8	16.1	16.9
Lane LOS			A	C	C
Approach Delay (s)	0.0		0.8	16.9	
Approach LOS				C	

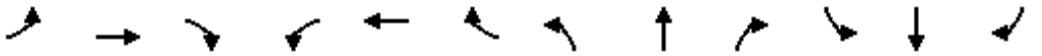
Intersection Summary				
Average Delay	3.2			
Intersection Capacity Utilization	57.7%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	263	0	420	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	292	0	467	0	0	0

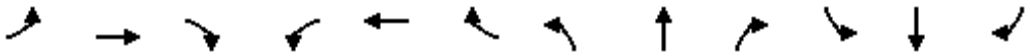
Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	146	146	467
Volume Left (vph)	146	146	467
Volume Right (vph)	0	0	0
Hadj (s)	0.55	0.55	0.25
Departure Headway (s)	6.3	6.3	5.0
Degree Utilization, x	0.26	0.26	0.65
Capacity (veh/h)	542	543	699
Control Delay (s)	10.3	10.3	16.6
Approach Delay (s)	10.3		16.6
Approach LOS	B		C

Intersection Summary			
Delay	14.2		
HCM Level of Service	B		
Intersection Capacity Utilization	39.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	493	337	263	637	0	0	0	0	281	269	372
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	13	12	12	12	12	10	10	11
Total Lost time (s)		6.0	6.0		6.0					6.0	6.0	6.0
Lane Util. Factor		0.95	1.00		0.95					0.86	0.81	0.86
Frpb, ped/bikes		1.00	0.98		1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	0.95	0.85
Flt Protected		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (prot)		3179	1232		3425					1359	3806	1133
Flt Permitted		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (perm)		3179	1232		3425					1359	3806	1133
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	519	355	277	671	0	0	0	0	296	283	392
RTOR Reduction (vph)	0	0	228	0	0	0	0	0	0	0	53	113
Lane Group Flow (vph)	0	519	127	0	948	0	0	0	0	163	559	83
Confl. Peds. (#/hr)	4		6	6		4						
Heavy Vehicles (%)	0%	4%	6%	1%	2%	0%	0%	0%	0%	1%	1%	1%
Parking (#/hr)			0									0
Turn Type			Perm	Split						Split		custom
Protected Phases		2		10 12 14	10 12 14					4	4	
Permitted Phases			2									4 2
Actuated Green, G (s)		39.0	39.0		68.1					23.0	23.0	68.0
Effective Green, g (s)		39.0	39.0		68.1					23.0	23.0	68.0
Actuated g/C Ratio		0.24	0.24		0.43					0.14	0.14	0.42
Clearance Time (s)		6.0	6.0							6.0	6.0	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		775	300		1458					195	547	482
v/s Ratio Prot		c0.16			c0.28					0.12	c0.15	
v/s Ratio Perm			0.10									0.07
v/c Ratio		0.67	0.42		0.65					0.84	1.02	0.17
Uniform Delay, d1		54.7	51.0		36.5					66.7	68.5	28.5
Progression Factor		1.00	1.00		0.04					1.00	1.00	1.00
Incremental Delay, d2		4.6	4.3		0.1					25.5	44.1	0.2
Delay (s)		59.2	55.3		1.5					92.1	112.6	28.7
Level of Service		E	E		A					F	F	C
Approach Delay (s)		57.6			1.5			0.0			92.2	
Approach LOS		E			A			A			F	

Intersection Summary			
HCM Average Control Delay	50.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	31.9
Intersection Capacity Utilization	75.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

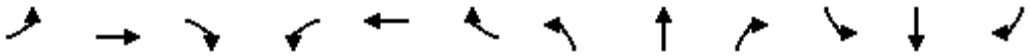


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	290	485	0	0	587	142	313	204	187	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	13	12	12	11	12	13	13	14	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0				
Lane Util. Factor	1.00	0.95			0.95	1.00	0.91	0.91				
Frt	1.00	1.00			1.00	0.85	1.00	0.94				
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (prot)	1605	3431			3210	1485	1561	3064				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (perm)	1605	3431			3210	1485	1561	3064				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	322	539	0	0	652	158	348	227	208	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	84	0	61	0	0	0	0
Lane Group Flow (vph)	322	539	0	0	652	74	264	458	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Split					Perm	Split					
Protected Phases	2 4 8	2 4 8			10		12	12				
Permitted Phases						10						
Actuated Green, G (s)	83.9	83.9			37.1	37.1	12.0	12.0				
Effective Green, g (s)	83.9	83.9			37.1	37.1	12.0	12.0				
Actuated g/C Ratio	0.52	0.52			0.23	0.23	0.08	0.08				
Clearance Time (s)					6.0	6.0	6.0	6.0				
Vehicle Extension (s)					3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	842	1799			744	344	117	230				
v/s Ratio Prot	c0.20	0.16			c0.20		c0.17	0.15				
v/s Ratio Perm						0.05						
v/c Ratio	0.38	0.30			0.88	0.22	2.26	1.99				
Uniform Delay, d1	22.6	21.5			59.2	49.7	74.0	74.0				
Progression Factor	0.06	0.06			1.00	1.00	1.00	1.00				
Incremental Delay, d2	0.2	0.1			11.3	0.3	591.8	461.2				
Delay (s)	1.5	1.3			70.5	50.0	665.8	535.2				
Level of Service	A	A			E	D	F	F				
Approach Delay (s)		1.4			66.5			579.2			0.0	
Approach LOS		A			E			F			A	

Intersection Summary			
HCM Average Control Delay	207.3	HCM Level of Service	F
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	29.0
Intersection Capacity Utilization	63.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	138	269	134	127	266	106	104	504	78	106	803	120
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	14	12	10	10	12	9	10	12
Total Lost time (s)	4.0	4.0	5.0	4.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1576	1600	1372	1594	1766		1578	3009		1537	3001	
Flt Permitted	0.28	1.00	1.00	0.42	1.00		0.14	1.00		0.32	1.00	
Satd. Flow (perm)	470	1600	1372	708	1766		229	3009		516	3001	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	145	283	141	134	280	112	109	531	82	112	845	126
RTOR Reduction (vph)	0	0	98	0	16	0	0	14	0	0	13	0
Lane Group Flow (vph)	145	283	43	134	376	0	109	599	0	112	958	0
Confl. Peds. (#/hr)	28		8	8		28	59		11	11		59
Confl. Bikes (#/hr)	3					3	1		2	2		1
Heavy Vehicles (%)	1%	5%	2%	0%	4%	0%	1%	4%	0%	0%	3%	3%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	34.1	27.1	27.1	34.1	27.1		39.6	34.1		39.6	34.1	
Effective Green, g (s)	32.1	28.1	27.1	32.1	27.1		37.6	34.1		37.6	34.1	
Actuated g/C Ratio	0.36	0.32	0.31	0.36	0.31		0.42	0.38		0.42	0.38	
Clearance Time (s)	3.0	5.0	5.0	3.0	5.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	245	507	419	316	540		166	1157		271	1154	
v/s Ratio Prot	c0.04	0.18		0.03	c0.21		c0.03	0.20		0.02	c0.32	
v/s Ratio Perm	0.17		0.03	0.12			0.25			0.15		
v/c Ratio	0.59	0.56	0.10	0.42	0.70		0.66	0.52		0.41	0.83	
Uniform Delay, d1	20.9	25.1	22.1	20.1	27.2		18.1	21.0		16.3	24.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.8	4.4	0.5	0.9	7.3		9.0	1.7		1.0	7.0	
Delay (s)	24.7	29.5	22.6	21.0	34.4		27.1	22.6		17.3	31.7	
Level of Service	C	C	C	C	C		C	C		B	C	
Approach Delay (s)		26.6			31.0			23.3			30.2	
Approach LOS		C			C			C			C	

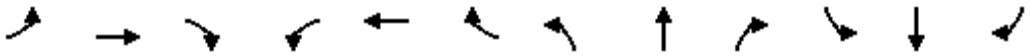
Intersection Summary			
HCM Average Control Delay	27.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	88.7	Sum of lost time (s)	17.0
Intersection Capacity Utilization	78.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	38	340	59	73	427	81	36	57	34	35	88	67
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	10	10	10	12	15	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.97		0.99			0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.96			0.95	
Flt Protected		0.99	1.00		0.99	1.00		0.99			0.99	
Satd. Flow (prot)		1970	1467		1624	1381		1866			1876	
Flt Permitted		0.93	1.00		0.90	1.00		0.90			0.94	
Satd. Flow (perm)		1837	1467		1469	1381		1703			1783	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	40	358	62	77	449	85	38	60	36	37	93	71
RTOR Reduction (vph)	0	0	31	0	0	36	0	20	0	0	30	0
Lane Group Flow (vph)	0	398	31	0	526	49	0	114	0	0	171	0
Confl. Peds. (#/hr)	12		20	20		12	8		2	2		8
Confl. Bikes (#/hr)	1		2	2		1			1	1		
Heavy Vehicles (%)	3%	3%	0%	0%	3%	0%	0%	0%	0%	0%	1%	3%
Turn Type	Perm		Perm	Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Effective Green, g (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Actuated g/C Ratio		0.49	0.49		0.49	0.49		0.42			0.42	
Clearance Time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		904	722		723	680		707			741	
v/s Ratio Prot												
v/s Ratio Perm		0.22	0.02		c0.36	0.04		0.07			c0.10	
v/c Ratio		0.44	0.04		0.73	0.07		0.16			0.23	
Uniform Delay, d1		10.7	8.6		13.1	8.7		11.9			12.3	
Progression Factor		1.00	1.00		1.92	3.36		1.00			1.45	
Incremental Delay, d2		1.6	0.1		2.7	0.1		0.5			0.7	
Delay (s)		12.3	8.7		27.7	29.3		12.4			18.5	
Level of Service		B	A		C	C		B			B	
Approach Delay (s)		11.8			27.9			12.4			18.5	
Approach LOS		B			C			B			B	

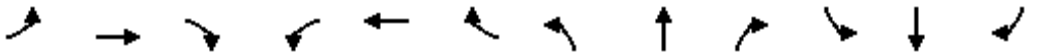
Intersection Summary			
HCM Average Control Delay	19.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	72.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	58	254	40	71	464	20	34	108	33	16	175	66
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.94		1.00	0.97		1.00	0.97		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.97	
Flt Protected		0.99	1.00		0.99	1.00		0.99	1.00		1.00	
Satd. Flow (prot)		1753	1443		1724	1487		1713	1489		1713	
Flt Permitted		0.49	1.00		0.86	1.00		0.89	1.00		0.98	
Satd. Flow (perm)		863	1443		1486	1487		1551	1489		1687	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	61	267	42	75	488	21	36	114	35	17	184	69
RTOR Reduction (vph)	0	0	27	0	0	8	0	0	18	0	19	0
Lane Group Flow (vph)	0	328	15	0	563	13	0	150	17	0	251	0
Confl. Peds. (#/hr)	19		25	25		19	3		6	6		3
Confl. Bikes (#/hr)	1		2	2		1			1	1		
Heavy Vehicles (%)	0%	2%	0%	0%	4%	0%	0%	5%	0%	0%	0%	2%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Effective Green, g (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Actuated g/C Ratio		0.35	0.35		0.35	0.35		0.49	0.49		0.49	
Clearance Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Grp Cap (vph)		305	511		526	526		764	733		831	
v/s Ratio Prot												
v/s Ratio Perm		c0.38	0.01		0.38	0.01		0.10	0.01		c0.15	
v/c Ratio		1.08	0.03		1.07	0.02		0.20	0.02		0.30	
Uniform Delay, d1		21.0	13.7		21.0	13.7		9.3	8.5		9.8	
Progression Factor		1.74	3.12		0.97	0.87		0.17	0.23		1.12	
Incremental Delay, d2		71.3	0.1		55.1	0.1		0.2	0.0		0.9	
Delay (s)		107.7	42.9		75.5	12.0		1.7	2.0		11.9	
Level of Service		F	D		E	B		A	A		B	
Approach Delay (s)		100.4			73.2			1.8			11.9	
Approach LOS		F			E			A			B	

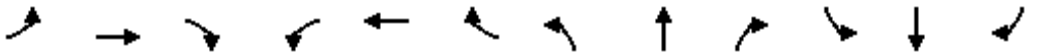
Intersection Summary			
HCM Average Control Delay	59.2	HCM Level of Service	E
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	81.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	229	35	76	8	14	11	38	255	8	30	533	521
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.95		0.98			1.00			1.00	0.94
Flpb, ped/bikes		0.98	1.00		0.99			1.00			1.00	1.00
Frt		1.00	0.85		0.96			1.00			1.00	0.85
Flt Protected		0.96	1.00		0.99			0.99			1.00	1.00
Satd. Flow (prot)		1860	1440		1765			1996			1975	1382
Flt Permitted		0.76	1.00		0.93			0.85			0.97	1.00
Satd. Flow (perm)		1468	1440		1657			1698			1928	1382
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	254	39	84	9	16	12	42	283	9	33	592	579
RTOR Reduction (vph)	0	0	49	0	9	0	0	2	0	0	0	205
Lane Group Flow (vph)	0	293	35	0	28	0	0	332	0	0	625	374
Confl. Peds. (#/hr)	37		53	53		37	39		54	54		39
Confl. Bikes (#/hr)							2					2
Heavy Vehicles (%)	4%	0%	1%	0%	0%	0%	0%	1%	0%	0%	3%	4%
Turn Type	pm+pt		Perm	Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		27.0	27.0		17.0			32.0			32.0	32.0
Effective Green, g (s)		27.0	27.0		17.0			32.0			32.0	32.0
Actuated g/C Ratio		0.42	0.42		0.26			0.49			0.49	0.49
Clearance Time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		658	598		433			836			949	680
v/s Ratio Prot		c0.05										
v/s Ratio Perm		0.13	0.02		0.02			0.20			c0.32	0.27
v/c Ratio		0.45	0.06		0.06			0.40			0.66	0.55
Uniform Delay, d1		13.6	11.4		18.0			10.4			12.4	11.5
Progression Factor		1.13	1.96		1.00			0.51			0.74	0.83
Incremental Delay, d2		1.3	0.1		0.3			1.0			2.8	2.5
Delay (s)		16.8	22.4		18.3			6.4			12.0	12.0
Level of Service		B	C		B			A			B	B
Approach Delay (s)		18.0			18.3			6.4			12.0	
Approach LOS		B			B			A			B	

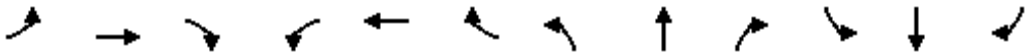
Intersection Summary			
HCM Average Control Delay	12.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	77.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



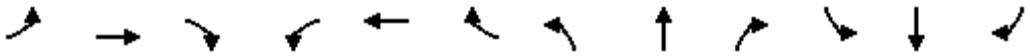
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	894	289	366	1046	0	0	0	0	513	284	334
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	11	8	8	8	11	12	14
Total Lost time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Lane Util. Factor		0.91		1.00	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.96		1.00	1.00					1.00	0.98	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.98	1.00
Satd. Flow (prot)		4573		1621	3320					1489	2913	1442
Flt Permitted		1.00		0.11	1.00					0.95	0.98	1.00
Satd. Flow (perm)		4573		193	3320					1489	2913	1442
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	941	304	385	1101	0	0	0	0	540	299	352
RTOR Reduction (vph)	0	45	0	0	0	0	0	0	0	0	9	81
Lane Group Flow (vph)	0	1200	0	385	1101	0	0	0	0	308	603	190
Confl. Peds. (#/hr)	15		11	11		15						
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	0%	3%	3%	2%	3%	0%	0%	0%	0%	1%	3%	3%
Turn Type				pm+pt						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Actuated Green, G (s)		44.0		74.9	74.9					28.1	28.1	28.1
Effective Green, g (s)		44.0		74.9	74.9					28.1	28.1	28.1
Actuated g/C Ratio		0.38		0.65	0.65					0.24	0.24	0.24
Clearance Time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Vehicle Extension (s)		7.0		3.5	7.0					3.5	3.5	3.5
Lane Grp Cap (vph)		1750		454	2162					364	712	352
v/s Ratio Prot		0.26		c0.19	0.33							
v/s Ratio Perm				c0.36						0.21	0.21	0.13
v/c Ratio		0.69		0.85	0.51					0.85	0.85	0.54
Uniform Delay, d1		29.7		28.5	10.5					41.4	41.4	37.8
Progression Factor		1.00		0.89	1.67					1.00	1.00	1.00
Incremental Delay, d2		2.2		9.6	0.6					16.7	9.4	1.9
Delay (s)		31.9		35.0	18.0					58.1	50.8	39.7
Level of Service		C		D	B					E	D	D
Approach Delay (s)		31.9			22.4			0.0			50.2	
Approach LOS		C			C			A			D	

Intersection Summary			
HCM Average Control Delay	33.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	103.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	341	1066	0	0	1005	269	406	333	302	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	11	12	12	12	12	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0		6.0				
Lane Util. Factor	0.97	0.95			0.95	1.00		0.91				
Frpb, ped/bikes	1.00	1.00			1.00	0.98		1.00				
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00				
Frt	1.00	1.00			1.00	0.85		0.96				
Flt Protected	0.95	1.00			1.00	1.00		0.98				
Satd. Flow (prot)	3144	3353			3241	1489		4521				
Flt Permitted	0.14	1.00			1.00	1.00		0.98				
Satd. Flow (perm)	479	3353			3241	1489		4521				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	359	1122	0	0	1058	283	427	351	318	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	91	0	62	0	0	0	0
Lane Group Flow (vph)	359	1122	0	0	1058	192	0	1034	0	0	0	0
Confl. Peds. (#/hr)	7		5	5		7						
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	2%	2%	0%	0%	2%	1%	2%	1%	3%	0%	0%	0%
Turn Type	pm+pt					Perm	Perm					
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8					
Actuated Green, G (s)	71.5	71.5			53.4	53.4		31.5				
Effective Green, g (s)	71.5	71.5			53.4	53.4		31.5				
Actuated g/C Ratio	0.62	0.62			0.46	0.46		0.27				
Clearance Time (s)	6.0	6.0			6.0	6.0		6.0				
Vehicle Extension (s)	3.5	7.0			7.0	7.0		5.0				
Lane Grp Cap (vph)	578	2085			1505	691		1238				
v/s Ratio Prot	0.07	c0.33			c0.33							
v/s Ratio Perm	0.32					0.13		0.23				
v/c Ratio	0.62	0.54			0.70	0.28		0.83				
Uniform Delay, d1	14.8	12.4			24.5	18.9		39.3				
Progression Factor	1.25	0.17			0.99	1.28		1.00				
Incremental Delay, d2	1.4	0.7			2.0	0.7		5.6				
Delay (s)	19.9	2.7			26.3	25.0		44.9				
Level of Service	B	A			C	C		D				
Approach Delay (s)		6.9			26.1			44.9			0.0	
Approach LOS		A			C			D			A	

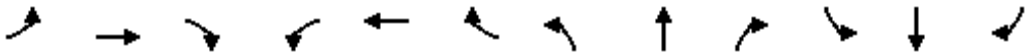
Intersection Summary			
HCM Average Control Delay	24.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	103.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	132	657	399	102	765	66	227	179	66	77	162	121
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	11	12	12	10	10	13	10	10	10
Total Lost time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		0.99	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.96		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1565	3273	1313	1601	3283		1578	3002		1540	2941	
Flt Permitted	0.11	1.00	1.00	0.39	1.00		0.39	1.00		0.59	1.00	
Satd. Flow (perm)	180	3273	1313	655	3283		652	3002		961	2941	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	139	692	420	107	805	69	239	188	69	81	171	127
RTOR Reduction (vph)	0	0	169	0	6	0	0	38	0	0	107	0
Lane Group Flow (vph)	139	692	251	107	868	0	239	219	0	81	191	0
Confl. Peds. (#/hr)	11		23	23		11	8		12	12		8
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	2%	1%	3%	3%	3%	0%	1%	1%	2%	3%	0%	1%
Parking (#/hr)			0									
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	64.9	52.4	68.8	43.4	34.4		38.1	26.6		26.2	18.2	
Effective Green, g (s)	64.9	52.4	68.8	43.4	34.4		38.1	26.6		26.2	18.2	
Actuated g/C Ratio	0.56	0.46	0.60	0.38	0.30		0.33	0.23		0.23	0.16	
Clearance Time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0		3.0	7.0		3.0	7.0	
Lane Grp Cap (vph)	427	1491	786	321	982		348	694		259	465	
v/s Ratio Prot	c0.08	c0.21	0.05	0.03	c0.26		c0.10	0.07		0.02	0.06	
v/s Ratio Perm	0.11		0.15	0.10			c0.13			0.05		
v/c Ratio	0.33	0.46	0.32	0.33	0.88		0.69	0.32		0.31	0.41	
Uniform Delay, d1	15.7	21.6	11.5	23.9	38.4		30.6	36.7		36.2	43.6	
Progression Factor	0.80	0.80	2.43	1.00	1.00		0.97	1.01		1.00	1.00	
Incremental Delay, d2	1.6	0.8	0.2	0.6	11.5		5.3	0.9		0.7	2.1	
Delay (s)	14.2	18.2	28.0	24.5	49.9		34.9	37.8		36.9	45.7	
Level of Service	B	B	C	C	D		C	D		D	D	
Approach Delay (s)		21.0			47.1			36.4			43.8	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM Average Control Delay	34.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	75.0%	ICU Level of Service	D
Analysis Period (min)	15		

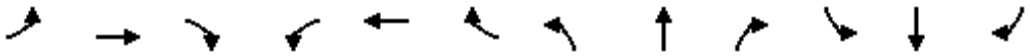
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	46	221	367	82	313	107	362	340	81	206	408	56
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	12	11	12	12	11	13	12	10	11	12
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.91		1.00	0.96		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1706	2911		1653	3237		1620	3405		1580	3183	
Flt Permitted	0.44	1.00		0.26	1.00		0.32	1.00		0.50	1.00	
Satd. Flow (perm)	784	2911		457	3237		544	3405		824	3183	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	48	233	386	86	329	113	381	358	85	217	429	59
RTOR Reduction (vph)	0	237	0	0	27	0	0	18	0	0	9	0
Lane Group Flow (vph)	48	382	0	86	415	0	381	425	0	217	479	0
Confl. Peds. (#/hr)	12		3	3		12	5					5
Heavy Vehicles (%)	0%	2%	2%	0%	1%	1%	2%	1%	0%	1%	2%	0%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	41.2	34.5		44.4	36.1		56.2	44.2		40.1	32.1	
Effective Green, g (s)	41.2	34.5		44.4	36.1		56.2	44.2		40.1	32.1	
Actuated g/C Ratio	0.36	0.30		0.39	0.31		0.49	0.38		0.35	0.28	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.5	7.0		3.5	7.0		3.5	7.0		3.5	7.0	
Lane Grp Cap (vph)	335	873		263	1016		454	1309		340	888	
v/s Ratio Prot	0.01	c0.13		c0.02	0.13		c0.15	0.12		0.04	0.15	
v/s Ratio Perm	0.04			0.10			c0.26			0.18		
v/c Ratio	0.14	0.44		0.33	0.41		0.84	0.32		0.64	0.54	
Uniform Delay, d1	24.4	32.4		23.7	31.0		20.8	24.9		28.8	35.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.99	0.97	
Incremental Delay, d2	0.2	1.6		0.9	1.2		13.1	0.7		3.9	2.2	
Delay (s)	24.7	34.0		24.6	32.3		33.9	25.6		32.2	36.4	
Level of Service	C	C		C	C		C	C		C	D	
Approach Delay (s)		33.3			31.0			29.4			35.1	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM Average Control Delay	32.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	75.6%	ICU Level of Service	D
Analysis Period (min)	15		

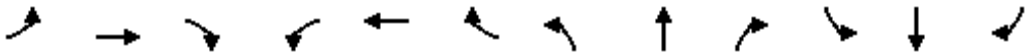
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	101	619	135	10	543	135	102	281	9	205	578	174
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	9	11	12	9	9	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.97		1.00	1.00		1.00	0.97	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3034			3003		1452	3227		1522	2872	
Flt Permitted		0.59			0.94		0.21	1.00		0.55	1.00	
Satd. Flow (perm)		1799			2815		317	3227		883	2872	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	112	688	150	11	603	150	113	312	10	228	642	193
RTOR Reduction (vph)	0	24	0	0	33	0	0	4	0	0	44	0
Lane Group Flow (vph)	0	926	0	0	731	0	113	318	0	228	791	0
Confl. Peds. (#/hr)	4		2	2		4	8		4	4		8
Confl. Bikes (#/hr)							2					2
Heavy Vehicles (%)	1%	2%	2%	0%	2%	6%	6%	2%	0%	1%	3%	3%
Turn Type	pm+pt			Perm			pm+pt			pm+pt		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			17.0		28.0	24.0		28.0	24.0	
Effective Green, g (s)		25.0			17.0		28.0	24.0		28.0	24.0	
Actuated g/C Ratio		0.38			0.26		0.43	0.37		0.43	0.37	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		768			736		206	1192		420	1060	
v/s Ratio Prot		c0.07					c0.03	0.10		0.03	c0.28	
v/s Ratio Perm		c0.39			0.26		0.20			0.20		
v/c Ratio		1.21			0.99		0.55	0.27		0.54	0.75	
Uniform Delay, d1		20.0			23.9		12.3	14.3		12.7	17.9	
Progression Factor		1.00			1.46		1.05	0.59		1.00	1.00	
Incremental Delay, d2		104.7			8.4		9.7	0.5		5.0	4.8	
Delay (s)		124.7			43.5		22.6	8.9		17.7	22.7	
Level of Service		F			D		C	A		B	C	
Approach Delay (s)		124.7			43.5			12.5			21.6	
Approach LOS		F			D			B			C	

Intersection Summary			
HCM Average Control Delay	56.1	HCM Level of Service	E
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.7%	ICU Level of Service	E
Analysis Period (min)	15		

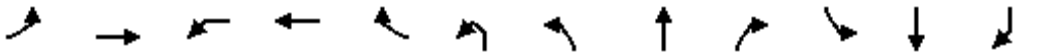
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	67	229	136	117	284	27	70	450	81	33	662	66
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.94		1.00	0.99		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1708	1899		1600	2011		1676	3217		1435	3274	
Flt Permitted	0.47	1.00		0.41	1.00		0.31	1.00		0.43	1.00	
Satd. Flow (perm)	852	1899		686	2011		552	3217		643	3274	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	69	236	140	121	293	28	72	464	84	34	682	68
RTOR Reduction (vph)	0	33	0	0	5	0	0	23	0	0	12	0
Lane Group Flow (vph)	69	343	0	121	316	0	72	525	0	34	738	0
Confl. Peds. (#/hr)	3		20	20		3	2		3	3		2
Confl. Bikes (#/hr)			1	1			2		2	2		2
Heavy Vehicles (%)	0%	0%	1%	6%	0%	0%	2%	3%	6%	19%	3%	2%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.48	0.48		0.48	0.48	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	315	701		253	743		263	1534		307	1561	
v/s Ratio Prot		c0.18			0.16			0.16			c0.23	
v/s Ratio Perm	0.08			0.18			0.13			0.05		
v/c Ratio	0.22	0.49		0.48	0.43		0.27	0.34		0.11	0.47	
Uniform Delay, d1	14.1	15.8		15.7	15.3		10.2	10.6		9.4	11.5	
Progression Factor	1.00	1.00		1.33	1.34		1.00	1.00		1.14	0.92	
Incremental Delay, d2	1.6	2.4		0.6	0.2		2.6	0.6		0.4	0.5	
Delay (s)	15.7	18.2		21.5	20.7		12.8	11.2		11.1	11.1	
Level of Service	B	B		C	C		B	B		B	B	
Approach Delay (s)		17.8			20.9			11.4			11.1	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM Average Control Delay	14.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	71.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	808	360	770	32	3	10	9	46	12	0	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	10	10	10	12	12	16	12	12	16	12
Total Lost time (s)		5.0		5.0				4.0			4.0	
Lane Util. Factor		0.95		0.95				1.00			1.00	
Frpb, ped/bikes		1.00		1.00				0.99			0.99	
Flpb, ped/bikes		1.00		1.00				1.00			1.00	
Frt		1.00		1.00				0.91			0.95	
Flt Protected		1.00		0.98				0.99			0.97	
Satd. Flow (prot)		3160		3083				1811			1846	
Flt Permitted		0.95		0.57				0.96			0.87	
Satd. Flow (perm)		3008		1770				1749			1650	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	2	851	379	811	34	3	11	9	48	13	0	3
RTOR Reduction (vph)	0	0	0	3	0	0	0	38	0	0	4	0
Lane Group Flow (vph)	0	853	0	1221	0	0	0	33	0	0	17	0
Confl. Peds. (#/hr)	7		4		7		7		2	2		7
Confl. Bikes (#/hr)							2		2	2		2
Heavy Vehicles (%)	0%	1%	2%	1%	6%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Perm		custom				Perm			Perm		
Protected Phases		8	7	4				2			6	
Permitted Phases	8		4 7				2			6		
Actuated Green, G (s)		18.0		27.0				14.0			14.0	
Effective Green, g (s)		18.0		27.0				14.0			14.0	
Actuated g/C Ratio		0.28		0.42				0.22			0.22	
Clearance Time (s)		5.0		5.0				4.0			4.0	
Lane Grp Cap (vph)		833		856				377			355	
v/s Ratio Prot				c0.13								
v/s Ratio Perm		0.28		c0.46				c0.02			0.01	
v/c Ratio		1.02		1.80dl				0.09			0.05	
Uniform Delay, d1		23.5		19.0				20.4			20.2	
Progression Factor		1.41		0.68				1.00			1.00	
Incremental Delay, d2		16.3		197.5				0.5			0.3	
Delay (s)		49.5		210.5				20.9			20.5	
Level of Service		D		F				C			C	
Approach Delay (s)		49.5		210.5				20.9			20.5	
Approach LOS		D		F				C			C	

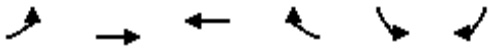
Intersection Summary			
HCM Average Control Delay	140.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	105.6%	ICU Level of Service	G
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group



Movement	SBR2	NEL	NER
Lane Configurations			
Volume (vph)	5	3	276
Ideal Flow (vphpl)	1800	1800	1800
Lane Width	12	12	12
Total Lost time (s)		5.0	
Lane Util. Factor		1.00	
Frpb, ped/bikes		1.00	
Flpb, ped/bikes		1.00	
Frt		0.87	
Flt Protected		1.00	
Satd. Flow (prot)		1559	
Flt Permitted		1.00	
Satd. Flow (perm)		1559	
Peak-hour factor, PHF	0.95	0.95	0.95
Adj. Flow (vph)	5	3	291
RTOR Reduction (vph)	0	0	0
Lane Group Flow (vph)	0	294	0
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Heavy Vehicles (%)	0%	0%	0%
Turn Type			
Protected Phases		3	
Permitted Phases			
Actuated Green, G (s)		10.0	
Effective Green, g (s)		10.0	
Actuated g/C Ratio		0.15	
Clearance Time (s)		5.0	
Lane Grp Cap (vph)		240	
v/s Ratio Prot		c0.19	
v/s Ratio Perm			
v/c Ratio		1.23	
Uniform Delay, d1		27.5	
Progression Factor		0.85	
Incremental Delay, d2		130.3	
Delay (s)		153.6	
Level of Service		F	
Approach Delay (s)		153.6	
Approach LOS		F	

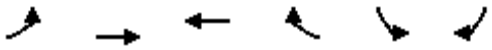
Intersection Summary



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	256	864	946	131	108	222
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frt		1.00	0.98		1.00	0.85
Flt Protected		0.99	1.00		0.95	1.00
Satd. Flow (prot)		3283	3260		1660	1485
Flt Permitted		0.53	1.00		0.95	1.00
Satd. Flow (perm)		1759	3260		1660	1485
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	284	960	1051	146	120	247
RTOR Reduction (vph)	0	0	17	0	0	84
Lane Group Flow (vph)	0	1244	1180	0	120	163
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		40.0	40.0		17.0	17.0
Effective Green, g (s)		40.0	40.0		17.0	17.0
Actuated g/C Ratio		0.62	0.62		0.26	0.26
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1082	2006		434	388
v/s Ratio Prot			0.36		0.07	
v/s Ratio Perm		c0.71				c0.11
v/c Ratio		1.46dl	0.59		0.28	0.42
Uniform Delay, d1		12.5	7.5		19.1	19.9
Progression Factor		1.26	0.71		1.12	1.19
Incremental Delay, d2		70.3	0.9		1.5	3.1
Delay (s)		86.0	6.3		22.9	26.7
Level of Service		F	A		C	C
Approach Delay (s)		86.0	6.3		25.5	
Approach LOS		F	A		C	

Intersection Summary			
HCM Average Control Delay	44.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	81.4%	ICU Level of Service	D
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group



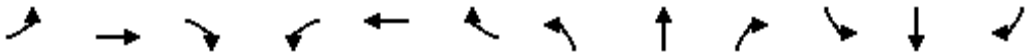
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	79	896	993	191	281	86
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	12	10	11	12	10	10
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frpb, ped/bikes		1.00	1.00		1.00	0.99
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.98		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3119	3112		1506	1343
Flt Permitted		0.69	1.00		0.95	1.00
Satd. Flow (perm)		2172	3112		1506	1343
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	83	943	1045	201	296	91
RTOR Reduction (vph)	0	0	24	0	0	48
Lane Group Flow (vph)	0	1026	1222	0	296	43
Confl. Peds. (#/hr)	2			2		1
Heavy Vehicles (%)	1%	2%	2%	10%	6%	5%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		34.0	34.0		23.0	23.0
Effective Green, g (s)		34.0	34.0		23.0	23.0
Actuated g/C Ratio		0.52	0.52		0.35	0.35
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1136	1628		533	475
v/s Ratio Prot			0.39		c0.20	
v/s Ratio Perm		c0.47				0.03
v/c Ratio		0.90	0.75		0.56	0.09
Uniform Delay, d1		14.0	12.2		16.9	14.0
Progression Factor		1.12	1.52		1.73	2.91
Incremental Delay, d2		1.3	1.6		3.4	0.3
Delay (s)		17.0	20.1		32.5	41.1
Level of Service		B	C		C	D
Approach Delay (s)		17.0	20.1		34.5	
Approach LOS		B	C		C	

Intersection Summary			
HCM Average Control Delay	21.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	90.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



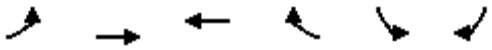
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	783	251	395	1071	195	124
Ideal Flow (vphpl)	2300	1800	1800	2300	1800	1800
Lane Width	15	12	14	16	15	12
Total Lost time (s)	5.0		5.0	5.0	5.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.97		1.00	1.00	0.95	
Flt Protected	1.00		0.95	1.00	0.97	
Satd. Flow (prot)	2399		1788	2506	1737	
Flt Permitted	1.00		0.13	1.00	0.97	
Satd. Flow (perm)	2399		243	2506	1737	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	799	256	403	1093	199	127
RTOR Reduction (vph)	18	0	0	0	35	0
Lane Group Flow (vph)	1037	0	403	1093	291	0
Confl. Peds. (#/hr)						1
Heavy Vehicles (%)	2%	2%	2%	4%	7%	0%
Turn Type			Perm			
Protected Phases	4			8	2	
Permitted Phases			8			
Actuated Green, G (s)	31.0		31.0	31.0	24.0	
Effective Green, g (s)	31.0		31.0	31.0	24.0	
Actuated g/C Ratio	0.48		0.48	0.48	0.37	
Clearance Time (s)	5.0		5.0	5.0	5.0	
Lane Grp Cap (vph)	1144		116	1195	641	
v/s Ratio Prot	0.43			0.44	c0.17	
v/s Ratio Perm			c1.66			
v/c Ratio	0.91		3.47	0.91	0.45	
Uniform Delay, d1	15.7		17.0	15.8	15.5	
Progression Factor	1.43		1.00	1.00	1.00	
Incremental Delay, d2	7.1		1134.7	12.2	2.3	
Delay (s)	29.5		1151.7	28.0	17.8	
Level of Service	C		F	C	B	
Approach Delay (s)	29.5			330.7	17.8	
Approach LOS	C			F	B	

Intersection Summary			
HCM Average Control Delay	184.8	HCM Level of Service	F
HCM Volume to Capacity ratio	2.16		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	101.7%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	1582	37	108	835	1	59	0	149	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	15	13	11	11	12	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0	4.0	3.0	3.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00			
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1881	3431	1479	1589	3320	1530		1938	1500			
Flt Permitted	0.31	1.00	1.00	0.07	1.00	1.00		0.76	1.00			
Satd. Flow (perm)	610	3431	1479	125	3320	1530		1545	1500			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	1758	41	120	928	1	66	0	166	0	0	0
RTOR Reduction (vph)	0	0	12	0	0	0	0	0	144	0	0	0
Lane Group Flow (vph)	1	1758	29	120	928	1	0	66	22	0	0	0
Heavy Vehicles (%)	0%	3%	0%	4%	3%	0%	0%	0%	2%	0%	0%	0%
Turn Type	Perm		Perm	custom		custom	Perm		Perm	Perm		
Protected Phases		4		3	3 8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)	50.4	50.4	50.4	67.9	67.9	67.9		9.1	9.1			
Effective Green, g (s)	50.4	50.4	50.4	67.9	67.9	67.9		9.1	9.1			
Actuated g/C Ratio	0.59	0.59	0.59	0.80	0.80	0.80		0.11	0.11			
Clearance Time (s)	4.0	4.0	4.0	3.0		4.0		4.0	4.0			
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0			
Lane Grp Cap (vph)	362	2034	877	350	2652	1222		165	161			
v/s Ratio Prot		c0.51		0.06	c0.28							
v/s Ratio Perm	0.00		0.02	0.22		0.00		c0.04	0.01			
v/c Ratio	0.00	0.86	0.03	0.34	0.35	0.00		0.40	0.14			
Uniform Delay, d1	7.1	14.4	7.2	12.8	2.4	1.7		35.4	34.4			
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00			
Incremental Delay, d2	0.0	5.2	0.1	0.6	0.1	0.0		1.6	0.4			
Delay (s)	7.1	19.6	7.3	13.4	2.5	1.7		37.0	34.8			
Level of Service	A	B	A	B	A	A		D	C			
Approach Delay (s)		19.4			3.7			35.4			0.0	
Approach LOS		B			A			D			A	

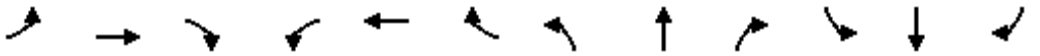
Intersection Summary			
HCM Average Control Delay	15.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	67.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	11	938	813	29	71	14
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10
Total Lost time (s)		5.0	5.0		3.0	
Lane Util. Factor		0.95	0.95		1.00	
Frt		1.00	0.99		0.98	
Flt Protected		1.00	1.00		0.96	
Satd. Flow (prot)		3097	3083		1530	
Flt Permitted		0.94	1.00		0.96	
Satd. Flow (perm)		2913	3083		1530	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	12	1042	903	32	79	16
RTOR Reduction (vph)	0	0	3	0	8	0
Lane Group Flow (vph)	0	1054	932	0	87	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Perm					
Protected Phases		4	8 2 11		5	
Permitted Phases	4					
Actuated Green, G (s)		33.0	64.0		7.0	
Effective Green, g (s)		33.0	64.0		7.0	
Actuated g/C Ratio		0.37	0.71		0.08	
Clearance Time (s)		5.0			3.0	
Lane Grp Cap (vph)		1068	2192		119	
v/s Ratio Prot			c0.30		c0.06	
v/s Ratio Perm		c0.36				
v/c Ratio		0.99	0.43		0.73	
Uniform Delay, d1		28.3	5.4		40.6	
Progression Factor		1.00	0.01		1.00	
Incremental Delay, d2		24.6	0.2		32.1	
Delay (s)		52.9	0.3		72.7	
Level of Service		D	A		E	
Approach Delay (s)		52.9	0.3		72.7	
Approach LOS		D	A		E	

Intersection Summary			
HCM Average Control Delay	30.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	48.1%	ICU Level of Service	A
Analysis Period (min)	15		

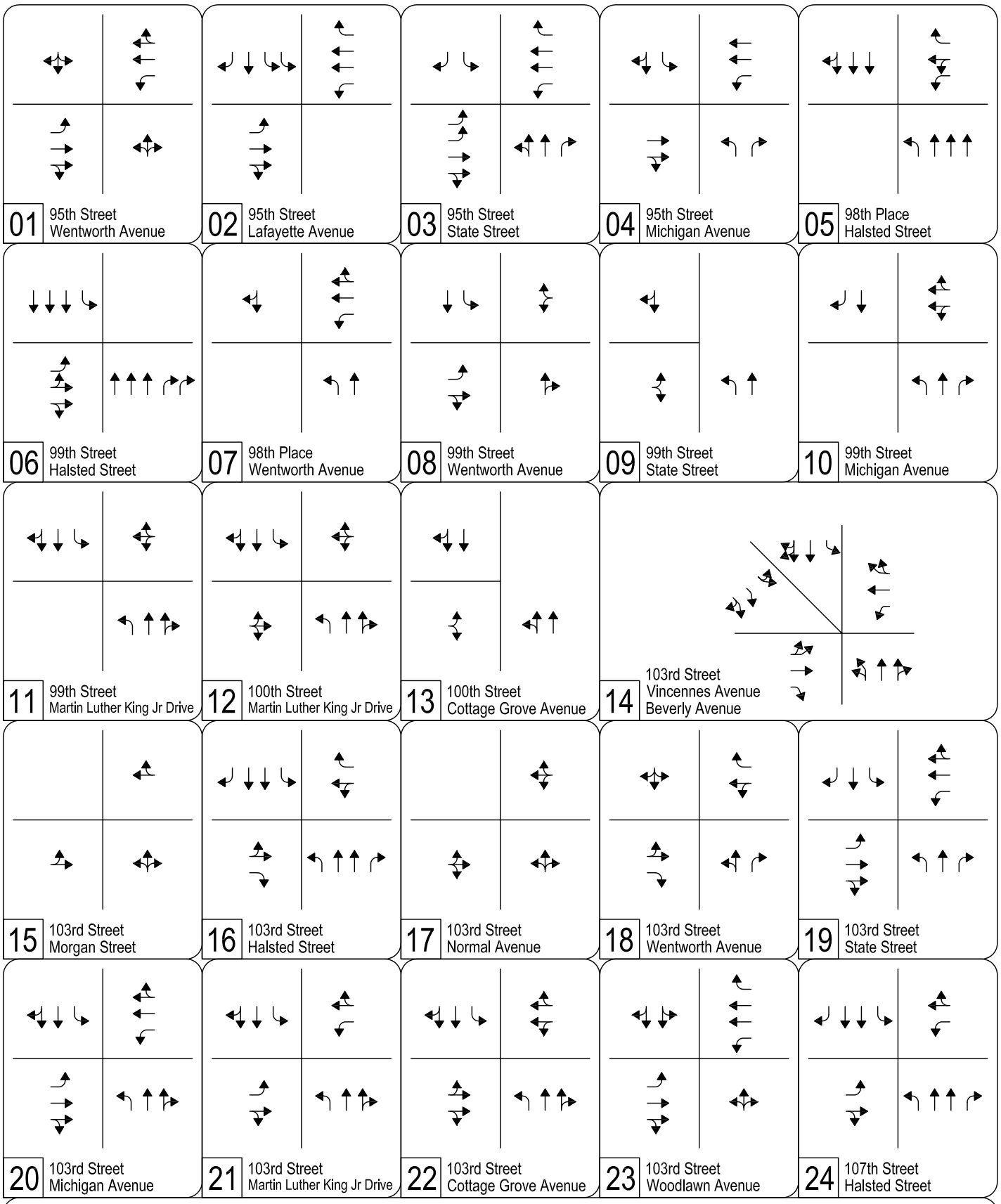
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	98	516	0	1	571	38	3	2	28	192	0	141
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12	12	11	12	11
Total Lost time (s)		4.0			4.0			3.0			3.0	3.0
Lane Util. Factor		1.00			0.95			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			0.94			1.00	0.98
Flpb, ped/bikes		1.00			1.00			1.00			0.99	1.00
Frt		1.00			0.99			0.88			1.00	0.85
Flt Protected		0.99			1.00			1.00			0.95	1.00
Satd. Flow (prot)		1765			3341			1467			1670	1348
Flt Permitted		0.79			0.95			0.93			0.88	1.00
Satd. Flow (perm)		1409			3191			1370			1545	1348
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	109	573	0	1	634	42	3	2	31	213	0	157
RTOR Reduction (vph)	0	0	0	0	6	0	0	28	0	0	0	105
Lane Group Flow (vph)	0	682	0	0	671	0	0	8	0	0	213	52
Confl. Peds. (#/hr)	60		44	44		60	14		10	10		14
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	0%	1%	0%	0%	1%	3%	20%	0%	0%	1%	0%	7%
Turn Type	Perm			Prot			Perm			pm+pt		Perm
Protected Phases		4		3	3 4			1		2	1 2	
Permitted Phases	4				3		1	1		1 2		1 2
Actuated Green, G (s)		31.0			45.0			9.0			25.0	28.0
Effective Green, g (s)		31.0			45.0			9.0			25.0	28.0
Actuated g/C Ratio		0.36			0.53			0.11			0.29	0.33
Clearance Time (s)		4.0						3.0				
Lane Grp Cap (vph)		514			1714			145			478	444
v/s Ratio Prot					c0.06						c0.08	
v/s Ratio Perm		c0.48			0.14			0.01			c0.05	0.04
v/c Ratio		1.33			0.39			0.06			0.45	0.12
Uniform Delay, d1		27.0			11.9			34.2			24.4	19.9
Progression Factor		1.00			1.31			1.00			1.00	1.00
Incremental Delay, d2		160.1			0.1			0.8			3.0	0.5
Delay (s)		187.1			15.6			34.9			27.4	20.4
Level of Service		F			B			C			C	C
Approach Delay (s)		187.1			15.6			34.9			24.4	
Approach LOS		F			B			C			C	

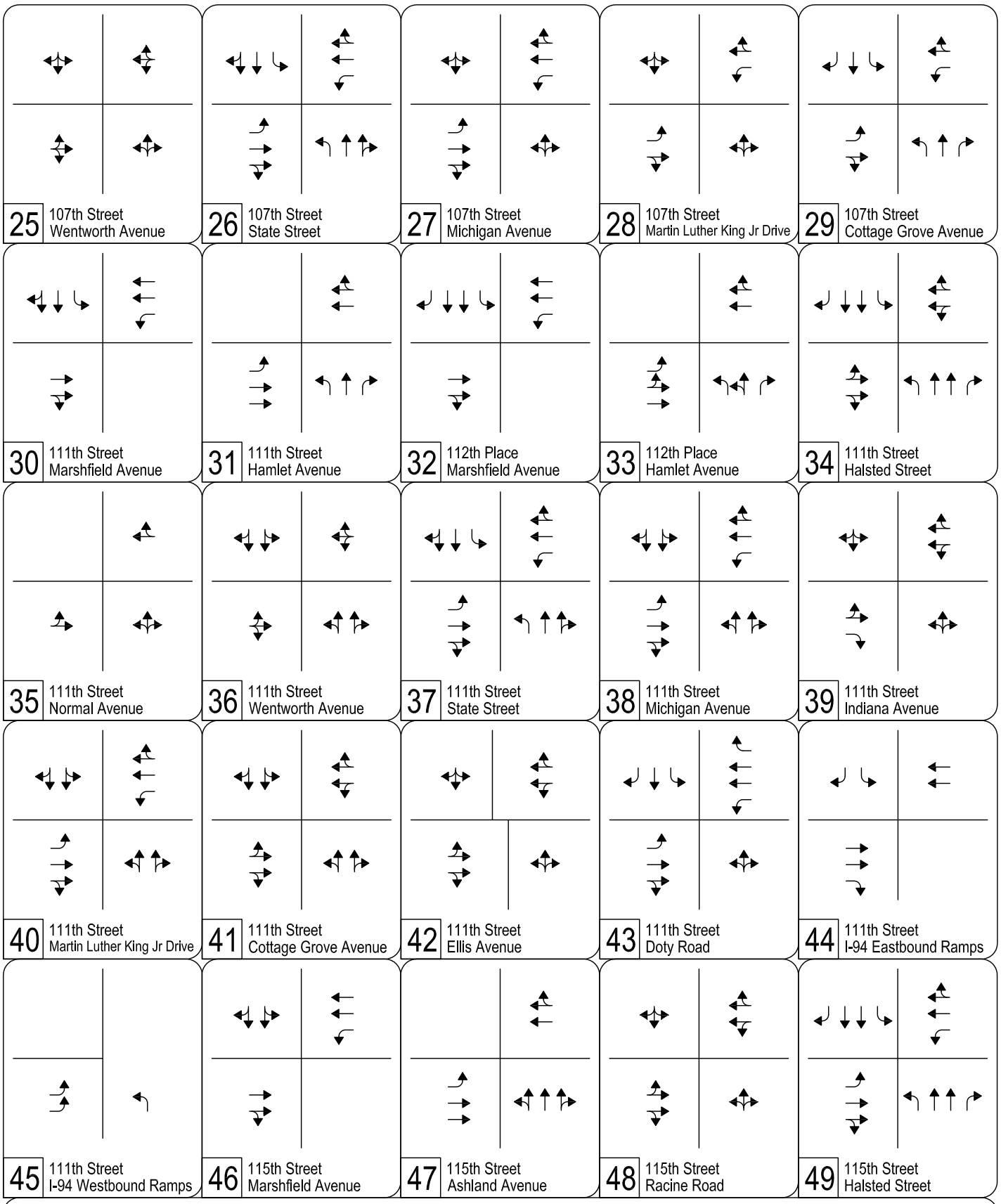
Intersection Summary			
HCM Average Control Delay	84.1	HCM Level of Service	F
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	80.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



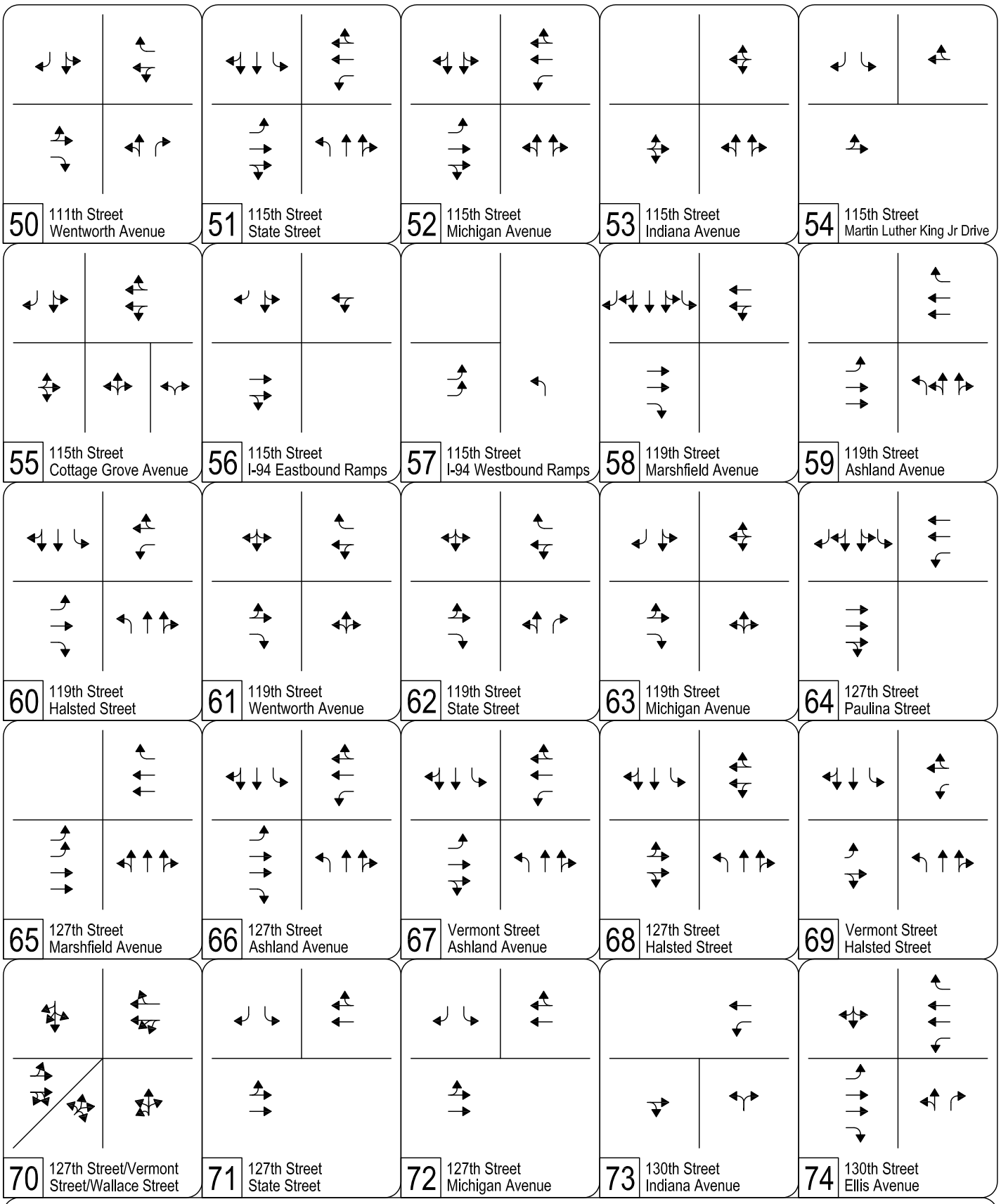
BRT Alternative (2030) Intersection Lane Geometry

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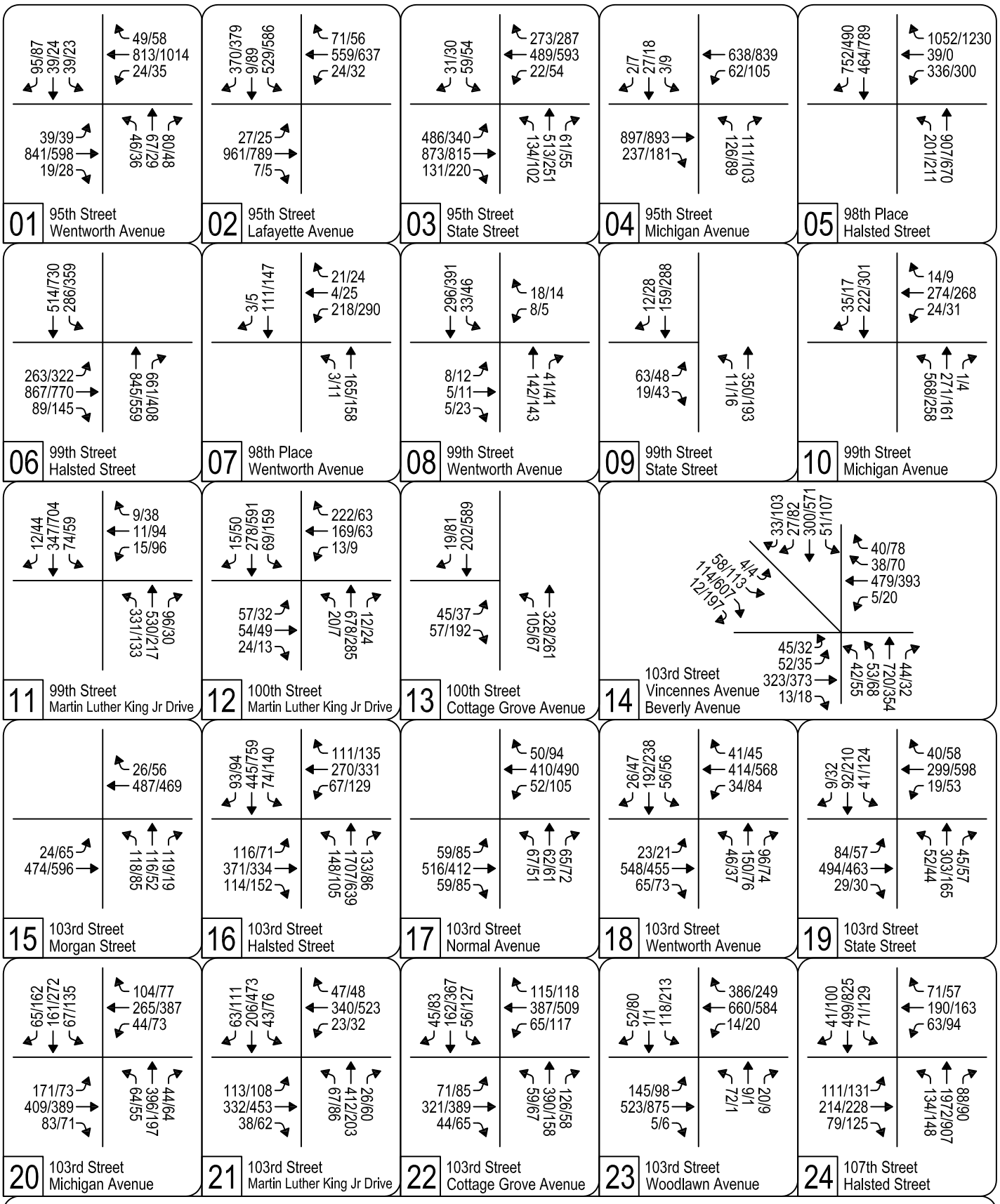
BRT Alternative (2030) Intersection Lane Geometry

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BRT Alternative (2030) Intersection Lane Geometry

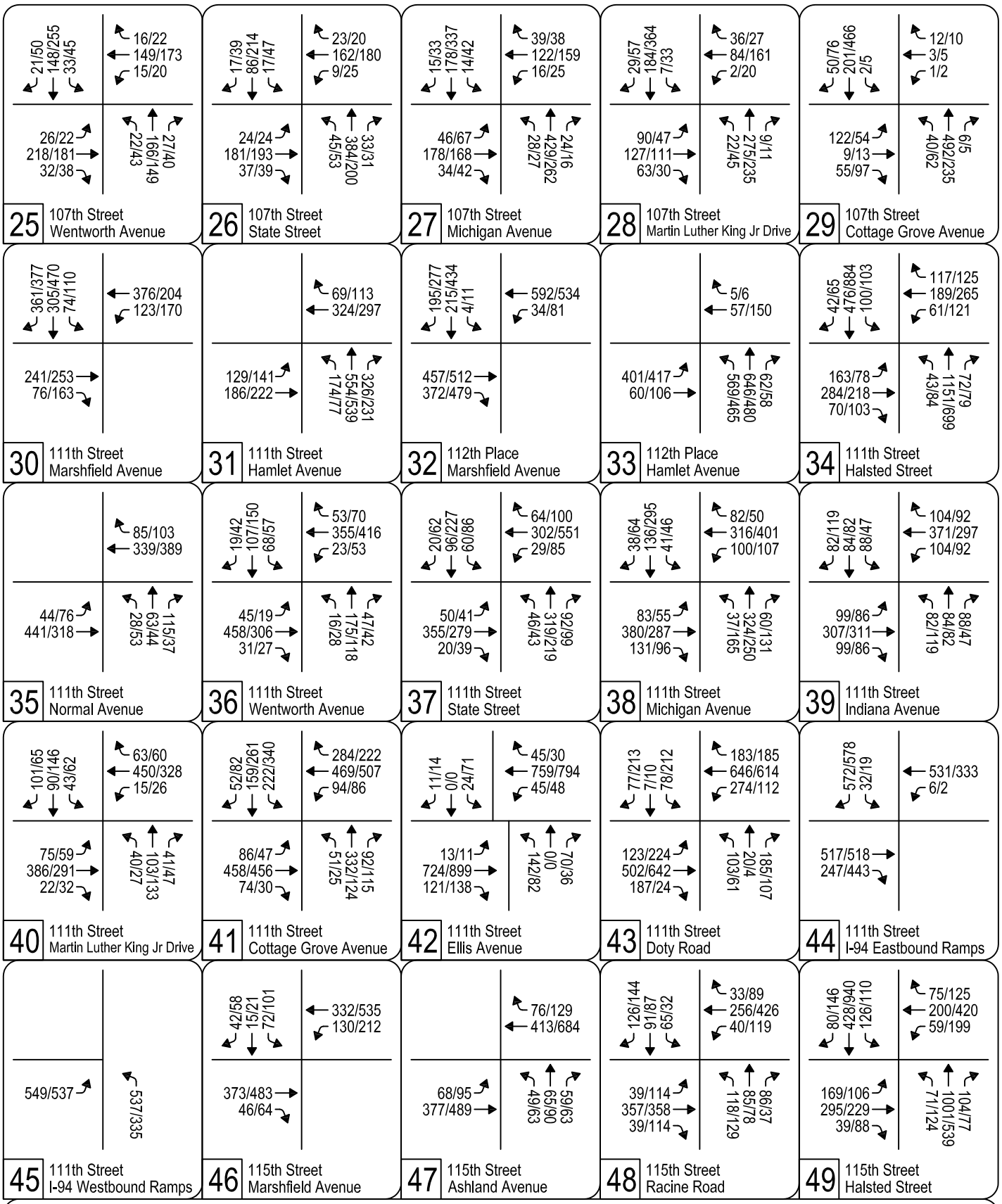
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BRT Alternative (2030) Intersection Traffic Volumes

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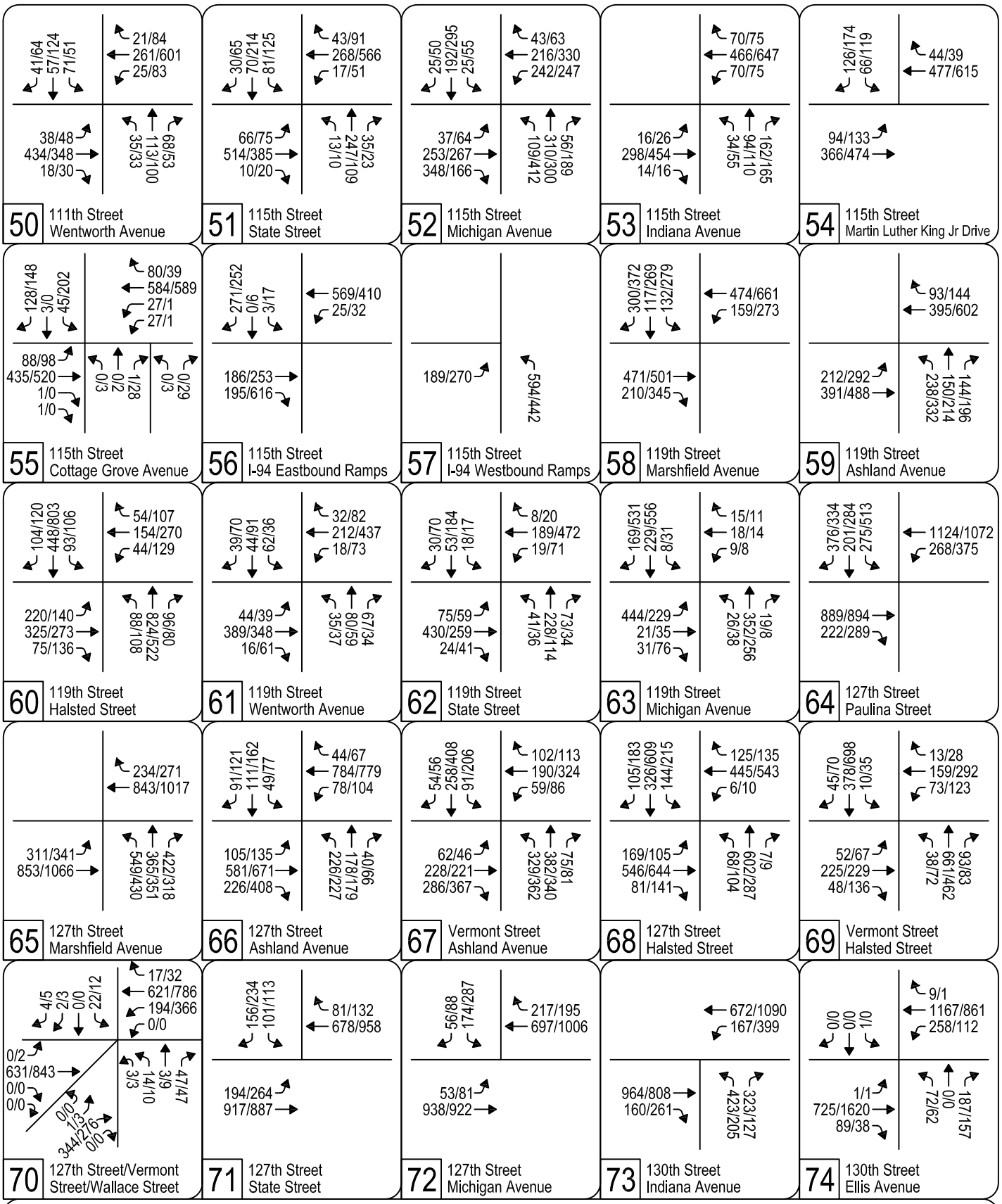
Legend: AM/PM Peak Hour Volumes



BRT Alternative (2030) Intersection Traffic Volumes

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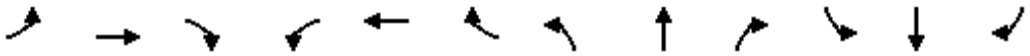
Legend: AM/PM Peak Hour Volumes



BRT Alternative (2030) Intersection Traffic Volumes

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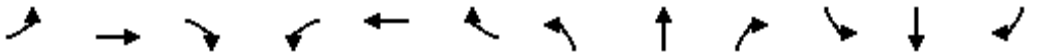
Legend: AM/PM Peak Hour Volumes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	841	19	24	813	49	46	67	80	39	39	95
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	16	10	10	16	8	15	8	8	14	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			0.99			0.99	
Flpb, ped/bikes	0.99	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	0.99			0.94			0.93	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1417	2976		1592	2979			1754			1670	
Flt Permitted	0.25	1.00		0.25	1.00			0.90			0.90	
Satd. Flow (perm)	369	2976		417	2979			1596			1526	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	41	885	20	25	856	52	48	71	84	41	41	100
RTOR Reduction (vph)	0	2	0	0	7	0	0	39	0	0	59	0
Lane Group Flow (vph)	41	903	0	25	901	0	0	164	0	0	123	0
Confl. Peds. (#/hr)	61		11	11		61	3		5	5		3
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	11%	7%	0%	0%	6%	2%	2%	7%	4%	5%	7%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			22.0			22.0	
Effective Green, g (s)	34.0	34.0		34.0	34.0			23.0			23.0	
Actuated g/C Ratio	0.52	0.52		0.52	0.52			0.35			0.35	
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0			5.0	
Lane Grp Cap (vph)	193	1557		218	1558			565			540	
v/s Ratio Prot		c0.30			0.30							
v/s Ratio Perm	0.11			0.06				c0.10			0.08	
v/c Ratio	0.21	0.58		0.11	0.58			0.29			0.23	
Uniform Delay, d1	8.3	10.6		7.9	10.6			15.1			14.8	
Progression Factor	1.00	1.00		0.83	1.16			1.00			1.00	
Incremental Delay, d2	2.5	1.6		0.9	1.4			1.3			1.0	
Delay (s)	10.8	12.2		7.5	13.7			16.4			15.7	
Level of Service	B	B		A	B			B			B	
Approach Delay (s)		12.1			13.5			16.4			15.7	
Approach LOS		B			B			B			B	

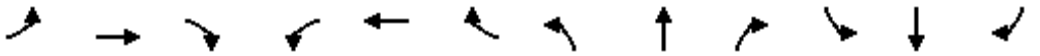
Intersection Summary			
HCM Average Control Delay	13.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	27	961	7	24	559	71	0	0	0	529	9	370
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00				0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.67				1.00	1.00	0.96
Flpb, ped/bikes	0.91	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	778	3285		1710	3138	512				3100	1440	1399
Flt Permitted	0.43	1.00		0.14	1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	352	3285		248	3138	512				3100	1440	1399
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	28	1012	7	25	588	75	0	0	0	557	9	389
RTOR Reduction (vph)	0	1	0	0	0	33	0	0	0	0	0	172
Lane Group Flow (vph)	28	1018	0	25	588	42	0	0	0	557	9	217
Confl. Peds. (#/hr)	354		13	13		354	22		22	22		22
Confl. Bikes (#/hr)	4					4			1	1		
Heavy Vehicles (%)	100%	4%	0%	0%	9%	100%	0%	0%	0%	7%	25%	5%
Turn Type	pm+pt			pm+pt		Perm				Split		Perm
Protected Phases	7	4		3	8					6	6	
Permitted Phases	4			8		8						6
Actuated Green, G (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Effective Green, g (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Actuated g/C Ratio	0.33	0.33		0.56	0.56	0.56				0.23	0.23	0.23
Clearance Time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Grp Cap (vph)	162	1087		634	1762	288				715	332	323
v/s Ratio Prot	0.02	c0.31		0.01	c0.19					c0.18	0.01	
v/s Ratio Perm	0.04			0.01		0.08						0.16
v/c Ratio	0.17	0.94		0.04	0.33	0.15				0.78	0.03	0.67
Uniform Delay, d1	31.6	42.2		15.1	15.4	13.6				46.9	38.7	45.5
Progression Factor	0.80	0.82		0.29	0.62	1.93				1.00	1.00	1.00
Incremental Delay, d2	2.0	14.1		0.1	0.3	0.7				8.2	0.2	10.7
Delay (s)	27.1	48.9		4.4	9.8	26.9				55.1	38.9	56.2
Level of Service	C	D		A	A	C				E	D	E
Approach Delay (s)		48.3			11.5			0.0			55.4	
Approach LOS		D			B			A			E	

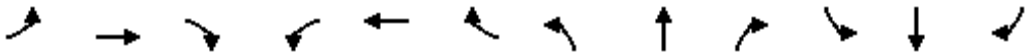
Intersection Summary			
HCM Average Control Delay	41.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	52.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	486	873	131	22	489	273	134	513	61	59	0	31
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.65		1.00	0.95	1.00		0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.98		1.00	1.00	0.85		1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (prot)	3190	3107		1555	2923	944		3300	1419	855		738
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (perm)	3190	3107		1555	2923	944		3300	1419	855		738
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	512	919	138	23	515	287	141	540	64	62	0	33
RTOR Reduction (vph)	0	9	0	0	0	158	0	0	25	0	0	30
Lane Group Flow (vph)	512	1048	0	23	515	129	0	681	39	62	0	3
Confl. Peds. (#/hr)	425		21	21		425	6		34	34		6
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	4%	8%	3%	10%	17%	5%	1%	3%	2%	100%	0%	100%
Turn Type	Prot			Prot		Perm	Split		Perm	Prot		custom
Protected Phases	7	4		3	8		2	2		6		
Permitted Phases						8			2			6
Actuated Green, G (s)	40.0	62.0		9.0	31.0	31.0		31.0	31.0	10.0		10.0
Effective Green, g (s)	40.0	62.0		9.0	31.0	31.0		31.0	31.0	10.0		10.0
Actuated g/C Ratio	0.31	0.48		0.07	0.24	0.24		0.24	0.24	0.08		0.08
Clearance Time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	982	1482		108	697	225		787	338	66		57
v/s Ratio Prot	0.16	c0.34		0.01	c0.18			c0.21		c0.07		
v/s Ratio Perm						0.14			0.03			0.00
v/c Ratio	0.52	0.71		0.21	0.74	0.57		0.87	0.11	0.94		0.04
Uniform Delay, d1	37.1	26.8		57.2	45.8	43.6		47.5	38.8	59.7		55.6
Progression Factor	0.75	0.22		1.00	1.00	1.00		0.94	0.89	1.00		1.00
Incremental Delay, d2	0.9	1.3		4.5	6.9	10.1		12.1	0.7	88.5		0.3
Delay (s)	28.8	7.1		61.6	52.7	53.8		56.9	35.2	148.2		55.9
Level of Service	C	A		E	D	D		E	D	F		E
Approach Delay (s)		14.2			53.3			55.0			116.1	
Approach LOS		B			D			E			F	

Intersection Summary			
HCM Average Control Delay	36.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	72.8%	ICU Level of Service	C
Analysis Period (min)	15		

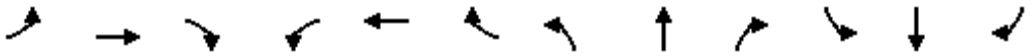
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	897	237	62	638	0	126	0	111	3	27	2
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	11	11	8	12	12	12	14	15	12
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes		0.99		1.00	1.00		1.00		0.98	1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00		1.00		1.00	0.99	1.00	
Frt		0.97		1.00	1.00		1.00		0.85	1.00	0.99	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		2852		1650	3005		1390		1465	1803	1961	
Flt Permitted		1.00		0.15	1.00		0.74		1.00	0.95	1.00	
Satd. Flow (perm)		2852		260	3005		1078		1465	1803	1961	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	997	263	69	709	0	140	0	123	3	30	2
RTOR Reduction (vph)	0	24	0	0	0	0	0	0	77	0	1	0
Lane Group Flow (vph)	0	1236	0	69	709	0	140	0	46	3	31	0
Confl. Peds. (#/hr)	49		15	15		49			12	12		
Heavy Vehicles (%)	0%	6%	14%	0%	10%	0%	23%	0%	2%	0%	0%	0%
Turn Type				Perm			custom		custom	Perm		
Protected Phases		4			8						6	
Permitted Phases				8			2		2	6		
Actuated Green, G (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Effective Green, g (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Actuated g/C Ratio		0.60		0.60	0.60		0.32		0.32	0.32	0.32	
Clearance Time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)		1711		156	1803		345		469	577	628	
v/s Ratio Prot		c0.43			0.24						0.02	
v/s Ratio Perm				0.27			c0.13		0.03	0.00		
v/c Ratio		0.72		0.44	0.39		0.41		0.10	0.01	0.05	
Uniform Delay, d1		14.1		10.9	10.5		26.6		23.9	23.2	23.5	
Progression Factor		1.00		1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		2.7		8.8	0.6		3.5		0.4	0.0	0.1	
Delay (s)		16.8		19.7	11.1		30.1		24.3	23.2	23.6	
Level of Service		B		B	B		C		C	C	C	
Approach Delay (s)		16.8			11.9			27.4			23.6	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	16.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.1%	ICU Level of Service	B
Analysis Period (min)	15		

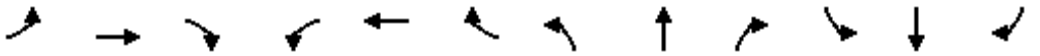
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	336	39	1052	201	907	0	0	464	752
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	12	10	10	12	12	11	12
Total Lost time (s)				4.0	4.0	5.0	3.0	4.0			4.0	
Lane Util. Factor				0.95	0.95	1.00	1.00	0.91			0.91	
Frpb, ped/bikes				1.00	1.00	0.99	1.00	1.00			0.98	
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00			1.00	
Frt				1.00	1.00	0.85	1.00	1.00			0.91	
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (prot)				1525	1629	1479	1550	4368			3933	
Flt Permitted				0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (perm)				1525	1629	1479	1550	4368			3933	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	343	40	1073	205	926	0	0	473	767
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	343	40	1073	205	926	0	0	1240	0
Confl. Peds. (#/hr)	2					2	12		8	8		12
Heavy Vehicles (%)	0%	0%	0%	3%	5%	2%	3%	5%	0%	0%	5%	8%
Turn Type				Perm		Perm	Prot					
Protected Phases					8		5	2			6	
Permitted Phases				8		8						
Actuated Green, G (s)				30.0	30.0	30.0	32.0	66.0			31.0	
Effective Green, g (s)				31.0	31.0	30.0	32.0	66.0			31.0	
Actuated g/C Ratio				0.30	0.30	0.29	0.30	0.63			0.30	
Clearance Time (s)				5.0	5.0	5.0	3.0	4.0			4.0	
Lane Grp Cap (vph)				450	481	423	472	2746			1161	
v/s Ratio Prot							c0.13	0.21			c0.32	
v/s Ratio Perm				0.22	0.02	c0.73						
v/c Ratio				0.76	0.08	2.54	0.43	0.34			1.91dr	
Uniform Delay, d1				33.6	26.7	37.5	29.2	9.2			37.0	
Progression Factor				1.00	1.00	1.00	0.66	2.38			1.00	
Incremental Delay, d2				11.6	0.3	698.4	2.0	0.2			46.6	
Delay (s)				45.2	27.1	735.9	21.2	22.1			83.6	
Level of Service				D	C	F	C	C			F	
Approach Delay (s)		0.0			553.8			21.9			83.6	
Approach LOS		A			F			C			F	

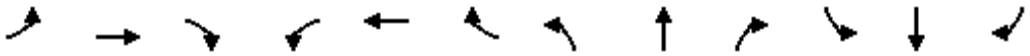
Intersection Summary			
HCM Average Control Delay	244.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.32		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.0%	ICU Level of Service	F
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group



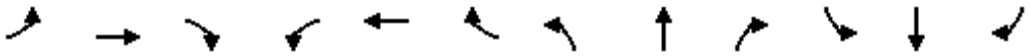
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	263	867	89	0	0	0	0	845	661	286	514	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	13	12	12	12	12	12	10	10	8	12	12	12
Total Lost time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Util. Factor	0.91	0.91						0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00						1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00						1.00	1.00	1.00	1.00	
Frt	1.00	0.99						1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1497	3185						4368	2187	1583	4636	
Flt Permitted	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1497	3185						4368	2187	1583	4636	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	271	894	92	0	0	0	0	871	681	295	530	0
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	244	1006	0	0	0	0	0	871	681	295	530	0
Confl. Peds. (#/hr)	4		14	14		4	4		3	3		4
Heavy Vehicles (%)	7%	1%	0%	0%	0%	0%	0%	5%	4%	8%	6%	0%
Turn Type	Perm								Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Actuated Green, G (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Effective Green, g (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Actuated g/C Ratio	0.32	0.32						0.27	0.27	0.30	0.59	
Clearance Time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Grp Cap (vph)	485	1031						1165	583	467	2737	
v/s Ratio Prot								0.20		c0.19	0.11	
v/s Ratio Perm	0.16	0.32							c0.31			
v/c Ratio	0.50	0.98						0.75	1.17	0.63	0.19	
Uniform Delay, d1	28.7	35.1						35.3	38.5	32.1	9.9	
Progression Factor	1.00	1.00						0.43	0.46	1.06	0.43	
Incremental Delay, d2	3.7	22.8						0.4	77.5	2.4	0.1	
Delay (s)	32.4	57.9						15.7	95.2	36.4	4.3	
Level of Service	C	E						B	F	D	A	
Approach Delay (s)		52.9			0.0			50.6			15.8	
Approach LOS		D			A			D			B	

Intersection Summary			
HCM Average Control Delay	43.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



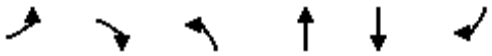
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	218	4	21	3	165	0	0	111	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	14	12	12	16	12
Total Lost time (s)				4.0	4.0		4.0	4.0			-3.0	
Lane Util. Factor				1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes				1.00	0.98		1.00	1.00			1.00	
Flpb, ped/bikes				1.00	1.00		1.00	1.00			1.00	
Frt				1.00	0.87		1.00	1.00			1.00	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1578	2709		1285	1882			1960	
Flt Permitted				0.95	1.00		0.58	1.00			1.00	
Satd. Flow (perm)				1578	2709		788	1882			1960	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	242	4	23	3	183	0	0	123	3
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	242	9	0	3	183	0	0	125	0
Confl. Peds. (#/hr)	2		2	2		2	3					3
Heavy Vehicles (%)	0%	0%	0%	8%	25%	5%	33%	2%	0%	0%	3%	33%
Turn Type				Perm			pm+pt					
Protected Phases					8		7	2			6	
Permitted Phases				8			2					
Actuated Green, G (s)				27.0	27.0		50.0	50.0			40.0	
Effective Green, g (s)				27.0	27.0		50.0	50.0			46.0	
Actuated g/C Ratio				0.32	0.32		0.59	0.59			0.54	
Clearance Time (s)				4.0	4.0		4.0	4.0			3.0	
Lane Grp Cap (vph)				501	861		504	1107			1061	
v/s Ratio Prot					0.00		0.00	c0.10			0.06	
v/s Ratio Perm				c0.15			0.00					
v/c Ratio				0.48	0.01		0.01	0.17			0.12	
Uniform Delay, d1				23.4	19.9		9.9	8.0			9.6	
Progression Factor				1.00	1.00		1.06	1.19			1.00	
Incremental Delay, d2				3.3	0.0		0.0	0.3			0.2	
Delay (s)				26.7	19.9		10.5	9.8			9.8	
Level of Service				C	B		B	A			A	
Approach Delay (s)		0.0			26.0			9.8			9.8	
Approach LOS		A			C			A			A	

Intersection Summary			
HCM Average Control Delay	17.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



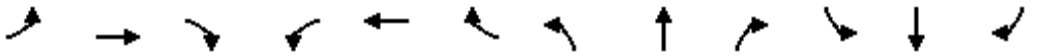
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	8	5	5	8	0	18	0	142	41	33	296	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	16	15	12	8	12	8	12	12	12	10	13	12
Total Lost time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99			1.00			1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00			1.00		1.00	1.00	
Frt	1.00	0.93			0.91			0.97		1.00	1.00	
Flt Protected	0.95	1.00			0.99			1.00		0.95	1.00	
Satd. Flow (prot)	1938	1809			1603			1686		1595	1755	
Flt Permitted	0.74	1.00			0.96			1.00		0.60	1.00	
Satd. Flow (perm)	1509	1809			1558			1686		1010	1755	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	8	5	5	8	0	19	0	149	43	35	312	0
RTOR Reduction (vph)	0	3	0	0	13	0	0	12	0	0	0	0
Lane Group Flow (vph)	8	7	0	0	14	0	0	180	0	35	312	0
Confl. Peds. (#/hr)			3	3			5		2	2		5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	3%	0%	6%	0%
Turn Type	Perm			Perm						pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Effective Green, g (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Actuated g/C Ratio	0.32	0.32			0.32			0.47		0.59	0.59	
Clearance Time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Grp Cap (vph)	479	575			495			793		642	1032	
v/s Ratio Prot		0.00						0.11		0.00	c0.18	
v/s Ratio Perm	0.01				c0.01					0.03		
v/c Ratio	0.02	0.01			0.03			0.23		0.05	0.30	
Uniform Delay, d1	19.9	19.9			20.0			13.3		8.5	8.8	
Progression Factor	1.00	1.00			1.00			1.00		0.99	0.90	
Incremental Delay, d2	0.1	0.0			0.1			0.7		0.2	0.7	
Delay (s)	20.0	19.9			20.1			14.0		8.6	8.6	
Level of Service	B	B			C			B		A	A	
Approach Delay (s)		19.9			20.1			14.0			8.6	
Approach LOS		B			C			B			A	

Intersection Summary			
HCM Average Control Delay	11.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.21		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



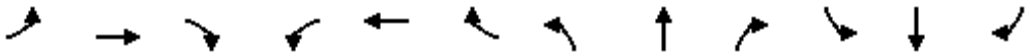
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	63	19	11	350	159	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	14	12	13	12	10	12
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	0.99		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.97		1.00	1.00	0.99	
Flt Protected	0.96		0.95	1.00	1.00	
Satd. Flow (prot)	1782		1767	1765	1634	
Flt Permitted	0.96		0.64	1.00	1.00	
Satd. Flow (perm)	1782		1187	1765	1634	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	70	21	12	389	177	13
RTOR Reduction (vph)	14	0	0	0	4	0
Lane Group Flow (vph)	77	0	12	389	186	0
Confl. Peds. (#/hr)		2				
Heavy Vehicles (%)	0%	0%	0%	2%	2%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.0		36.0	36.0	36.0	
Effective Green, g (s)	21.0		36.0	36.0	36.0	
Actuated g/C Ratio	0.32		0.55	0.55	0.55	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	576		657	978	905	
v/s Ratio Prot	c0.04			c0.22	0.11	
v/s Ratio Perm			0.01			
v/c Ratio	0.13		0.02	0.40	0.21	
Uniform Delay, d1	15.6		6.5	8.3	7.3	
Progression Factor	1.00		0.31	0.51	1.12	
Incremental Delay, d2	0.5		0.0	1.1	0.4	
Delay (s)	16.0		2.1	5.4	8.6	
Level of Service	B		A	A	A	
Approach Delay (s)	16.0			5.3	8.6	
Approach LOS	B			A	A	

Intersection Summary			
HCM Average Control Delay	7.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	39.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	24	274	14	568	271	1	0	222	35
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	14	16	12	12	15	12	12	13	10
Total Lost time (s)					4.0		4.0	4.0			3.0	3.0
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Frt					0.99		1.00	1.00			1.00	0.85
Flt Protected					1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3737		1660	1752			1603	1298
Flt Permitted					1.00		0.54	1.00			1.00	1.00
Satd. Flow (perm)					3737		943	1752			1603	1298
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	27	304	16	631	301	1	0	247	39
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	0	0	0	22
Lane Group Flow (vph)	0	0	0	0	343	0	631	302	0	0	247	17
Confl. Peds. (#/hr)									30	30		
Heavy Vehicles (%)	0%	0%	0%	11%	2%	0%	3%	13%	0%	0%	16%	10%
Turn Type				Split			pm+pt					Perm
Protected Phases				8	8		7	2			6	
Permitted Phases							2					6
Actuated Green, G (s)					26.0		51.0	51.0			38.0	38.0
Effective Green, g (s)					26.0		51.0	51.0			38.0	38.0
Actuated g/C Ratio					0.31		0.60	0.60			0.45	0.45
Clearance Time (s)					4.0		4.0	4.0			3.0	3.0
Lane Grp Cap (vph)					1143		650	1051			717	580
v/s Ratio Prot					c0.09		c0.11	0.17			0.15	
v/s Ratio Perm							c0.47					0.01
v/c Ratio					0.30		0.97	0.29			0.34	0.03
Uniform Delay, d1					22.5		17.9	8.2			15.4	13.2
Progression Factor					1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2					0.7		28.8	0.7			1.3	0.1
Delay (s)					23.2		46.7	8.9			16.7	13.3
Level of Service					C		D	A			B	B
Approach Delay (s)		0.0			23.2			34.5			16.2	
Approach LOS		A			C			C			B	

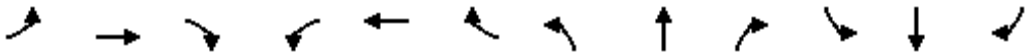
Intersection Summary			
HCM Average Control Delay	28.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	64.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	15	11	9	331	530	96	74	347	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	15	12	12	12	12	12	13	12
Total Lost time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.97		1.00	0.98		1.00	1.00	
Flt Protected					0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1803		1692	3237		1707	3353	
Flt Permitted					0.98		0.50	1.00		0.31	1.00	
Satd. Flow (perm)					1803		882	3237		563	3353	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	17	12	10	368	589	107	82	386	13
RTOR Reduction (vph)	0	0	0	0	7	0	0	20	0	0	3	0
Lane Group Flow (vph)	0	0	0	0	32	0	368	676	0	82	396	0
Confl. Peds. (#/hr)	2					2	6		20	20		6
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	0%	0%	0%	11%	0%	1%	3%	0%	0%	5%	0%
Turn Type				Split			pm+pt			pm+pt		
Protected Phases				8	8		5	2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)					23.0		41.0	34.0		41.0	34.0	
Effective Green, g (s)					23.0		41.0	34.0		41.0	34.0	
Actuated g/C Ratio					0.31		0.55	0.45		0.55	0.45	
Clearance Time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Grp Cap (vph)					553		558	1467		415	1520	
v/s Ratio Prot					c0.02		c0.06	0.21		0.02	0.12	
v/s Ratio Perm							c0.30			0.09		
v/c Ratio					0.06		0.66	0.46		0.20	0.26	
Uniform Delay, d1					18.4		13.9	14.2		12.4	12.7	
Progression Factor					1.00		0.69	0.74		1.00	1.00	
Incremental Delay, d2					0.2		5.5	1.0		1.1	0.4	
Delay (s)					18.6		15.1	11.4		13.4	13.1	
Level of Service					B		B	B		B	B	
Approach Delay (s)		0.0			18.6			12.7			13.2	
Approach LOS		A			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	15		

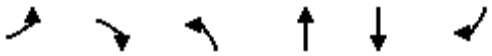
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	57	54	24	13	169	222	20	678	12	69	278	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	16	12	12	10	11	12	12	11	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.93		1.00	1.00		1.00	0.99	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1946			1626		1596	3232		1641	3132	
Flt Permitted		0.68			0.99		0.56	1.00		0.33	1.00	
Satd. Flow (perm)		1354			1613		947	3232		573	3132	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	60	57	25	14	178	234	21	714	13	73	293	16
RTOR Reduction (vph)	0	10	0	0	59	0	0	2	0	0	5	0
Lane Group Flow (vph)	0	132	0	0	367	0	21	725	0	73	304	0
Confl. Peds. (#/hr)									6	6		
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	0%	0%	12%	2%	2%	0%	2%	0%	4%	5%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Effective Green, g (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Actuated g/C Ratio		0.33			0.33		0.56	0.56		0.56	0.56	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		451			538		530	1810		321	1754	
v/s Ratio Prot								c0.22			0.10	
v/s Ratio Perm		0.10			c0.23		0.02			0.13		
v/c Ratio		0.29			0.68		0.04	0.40		0.23	0.17	
Uniform Delay, d1		18.5			21.6		7.4	9.4		8.3	8.0	
Progression Factor		1.00			1.00		1.00	1.00		0.17	0.07	
Incremental Delay, d2		1.6			6.9		0.1	0.7		1.6	0.2	
Delay (s)		20.1			28.4		7.6	10.0		3.0	0.8	
Level of Service		C			C		A	B		A	A	
Approach Delay (s)		20.1			28.4			10.0			1.2	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM Average Control Delay	13.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.9%	ICU Level of Service	C
Analysis Period (min)	15		

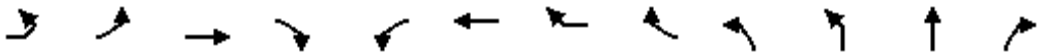
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	45	57	105	328	202	19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	50	63	117	364	224	21

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	113	238	243	150	96
Volume Left (vph)	50	117	0	0	0
Volume Right (vph)	63	0	0	0	21
Hadj (s)	-0.16	0.33	0.09	0.09	-0.07
Departure Headway (s)	5.3	5.4	5.2	5.4	5.2
Degree Utilization, x	0.17	0.36	0.35	0.22	0.14
Capacity (veh/h)	624	652	683	641	659
Control Delay (s)	9.3	10.2	9.7	8.8	7.9
Approach Delay (s)	9.3	9.9		8.4	
Approach LOS	A	A		A	

Intersection Summary			
Delay	9.4		
HCM Level of Service	A		
Intersection Capacity Utilization	35.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	45	52	323	13	5	479	38	40	42	53	720	44
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	0.95	
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.97			1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Frt		1.00	1.00	0.85	1.00	1.00	0.85			1.00	0.99	
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	
Satd. Flow (prot)		1575	1731	1530	1710	1731	1487			1710	3291	
Flt Permitted		0.11	1.00	1.00	0.55	1.00	1.00			0.39	1.00	
Satd. Flow (perm)		187	1731	1530	984	1731	1487			700	3291	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	50	58	359	14	6	532	42	44	47	59	800	49
RTOR Reduction (vph)	0	0	0	7	0	0	31	0	0	0	5	0
Lane Group Flow (vph)	0	108	359	7	6	532	55	0	0	106	844	0
Confl. Peds. (#/hr)		5					5					6
Heavy Vehicles (%)	8%	9%	4%	0%	0%	4%	0%	0%	0%	0%	3%	0%
Turn Type	Perm	pm+pt		Perm	Perm		Perm		Perm	Perm		
Protected Phases		7	4			8					2	
Permitted Phases	4	4		4	8		8		2	2		
Actuated Green, G (s)		50.0	50.0	50.0	32.0	32.0	32.0			25.0	25.0	
Effective Green, g (s)		50.0	50.0	50.0	32.0	32.0	32.0			25.0	25.0	
Actuated g/C Ratio		0.48	0.48	0.48	0.30	0.30	0.30			0.24	0.24	
Clearance Time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Grp Cap (vph)		281	824	729	300	528	453			167	784	
v/s Ratio Prot		0.05	c0.21			c0.31					c0.26	
v/s Ratio Perm		0.13		0.00	0.01		0.04			0.15		
v/c Ratio		0.38	0.44	0.01	0.02	1.01	0.12			0.63	1.08	
Uniform Delay, d1		20.2	18.2	14.5	25.5	36.5	26.4			35.9	40.0	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Incremental Delay, d2		3.9	1.7	0.0	0.1	41.1	0.6			17.0	54.9	
Delay (s)		24.1	19.9	14.5	25.7	77.6	26.9			52.9	94.9	
Level of Service		C	B	B	C	E	C			D	F	
Approach Delay (s)			20.7			70.1					90.3	
Approach LOS			C			E					F	

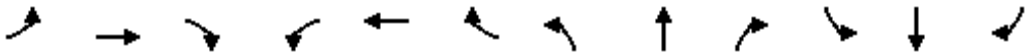
Intersection Summary			
HCM Average Control Delay	62.2	HCM Level of Service	E
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	79.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations								
Volume (vph)	51	300	27	33	4	58	114	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5				4.5	4.5	
Lane Util. Factor	1.00	0.95				1.00	0.88	
Frpb, ped/bikes	1.00	1.00				1.00	1.00	
Flpb, ped/bikes	1.00	1.00				1.00	1.00	
Frt	1.00	0.97				1.00	0.85	
Flt Protected	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1706	3279				1710	2621	
Flt Permitted	0.16	1.00				0.95	1.00	
Satd. Flow (perm)	293	3279				1710	2621	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	57	333	30	37	4	64	127	13
RTOR Reduction (vph)	0	8	0	0	0	0	7	0
Lane Group Flow (vph)	57	392	0	0	0	68	133	0
Confl. Peds. (#/hr)	6							
Heavy Vehicles (%)	0%	2%	0%	0%	0%	0%	3%	0%
Turn Type	Perm				Split		Perm	
Protected Phases		6			9	9		
Permitted Phases	6						9	
Actuated Green, G (s)	24.5	24.5				17.5	17.5	
Effective Green, g (s)	24.5	24.5				17.5	17.5	
Actuated g/C Ratio	0.23	0.23				0.17	0.17	
Clearance Time (s)	4.5	4.5				4.5	4.5	
Lane Grp Cap (vph)	68	765				285	437	
v/s Ratio Prot		0.12				0.04		
v/s Ratio Perm	0.19						c0.05	
v/c Ratio	0.84	0.51				0.24	0.31	
Uniform Delay, d1	38.4	35.1				38.0	38.4	
Progression Factor	1.00	1.00				1.00	1.00	
Incremental Delay, d2	69.9	2.4				2.0	1.8	
Delay (s)	108.3	37.5				39.9	40.2	
Level of Service	F	D				D	D	
Approach Delay (s)		46.3				40.1		
Approach LOS		D				D		

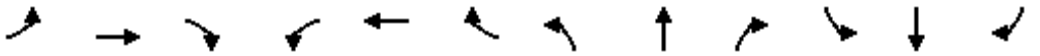
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	474	0	0	487	26	118	116	119	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	11	11	16	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.99			0.95				
Flt Protected		1.00			1.00			0.98				
Satd. Flow (prot)		1653			1930			1770				
Flt Permitted		0.96			1.00			0.98				
Satd. Flow (perm)		1596			1930			1770				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	527	0	0	541	29	131	129	132	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	554	0	0	570	0	0	392	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		31.0			31.0			26.0				
Effective Green, g (s)		31.0			31.0			26.0				
Actuated g/C Ratio		0.48			0.48			0.40				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		761			920			708				
v/s Ratio Prot					0.30							
v/s Ratio Perm		c0.35						0.22				
v/c Ratio		0.73			0.62			0.55				
Uniform Delay, d1		13.6			12.6			15.0				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		6.0			3.1			3.1				
Delay (s)		19.7			15.8			18.1				
Level of Service		B			B			B				
Approach Delay (s)		19.7			15.8			18.1			0.0	
Approach LOS		B			B			B			A	

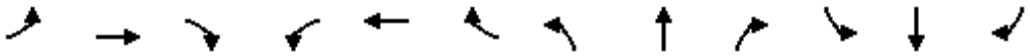
Intersection Summary			
HCM Average Control Delay	17.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	74.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	116	371	114	67	270	111	148	1707	133	74	445	93
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	9	9	10	9
Total Lost time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.96	1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1922	1426		1923	1396	1500	3099	1284	1425	2956	1265
Flt Permitted		0.65	1.00		0.57	1.00	0.40	1.00	1.00	0.09	1.00	1.00
Satd. Flow (perm)		1270	1426		1113	1396	627	3099	1284	142	2956	1265
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	122	391	120	71	284	117	156	1797	140	78	468	98
RTOR Reduction (vph)	0	0	71	0	0	69	0	0	30	0	0	59
Lane Group Flow (vph)	0	513	49	0	355	48	156	1797	110	78	468	39
Confl. Peds. (#/hr)	42		39	39		42	20		8	8		20
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	6%	4%	3%	0%	6%	5%	6%	3%	4%	8%	8%	4%
Turn Type	pm+pt		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		43.0	43.0		43.0	43.0	53.0	44.3	44.3	49.0	42.3	42.3
Effective Green, g (s)		43.0	43.0		43.0	43.0	53.0	44.3	44.3	49.0	42.3	42.3
Actuated g/C Ratio		0.41	0.41		0.41	0.41	0.50	0.42	0.42	0.47	0.40	0.40
Clearance Time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		520	584		456	572	389	1307	542	148	1191	510
v/s Ratio Prot							c0.03	c0.58		c0.03	0.16	
v/s Ratio Perm		c0.40	0.03		0.32	0.03	0.17		0.09	0.21		0.03
v/c Ratio		0.99	0.08		0.78	0.08	0.40	1.37	0.20	0.53	0.39	0.08
Uniform Delay, d1		30.7	19.0		26.9	19.0	14.7	30.4	19.2	23.2	22.2	19.3
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.15	0.76	0.42
Incremental Delay, d2		35.7	0.3		12.3	0.3	0.7	173.6	0.8	3.3	0.9	0.3
Delay (s)		66.4	19.2		39.2	19.2	15.4	204.0	20.0	29.9	17.9	8.3
Level of Service		E	B		D	B	B	F	C	C	B	A
Approach Delay (s)		57.4			34.3			177.6			17.9	
Approach LOS		E			C			F			B	

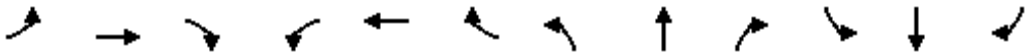
Intersection Summary			
HCM Average Control Delay	113.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	113.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	516	59	52	410	50	67	62	65	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		0.99			0.99			0.95				
Flt Protected		1.00			0.99			0.98				
Satd. Flow (prot)		1629			1627			1770				
Flt Permitted		0.91			0.89			0.98				
Satd. Flow (perm)		1494			1459			1770				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	66	573	66	58	456	56	74	69	72	0	0	0
RTOR Reduction (vph)	0	6	0	0	6	0	0	28	0	0	0	0
Lane Group Flow (vph)	0	699	0	0	564	0	0	187	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		38.0			38.0			19.0				
Effective Green, g (s)		38.0			38.0			19.0				
Actuated g/C Ratio		0.58			0.58			0.29				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		873			853			517				
v/s Ratio Prot												
v/s Ratio Perm		c0.47			0.39			0.11				
v/c Ratio		0.80			0.66			0.36				
Uniform Delay, d1		10.5			9.1			18.2				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		7.6			4.0			2.0				
Delay (s)		18.2			13.1			20.2				
Level of Service		B			B			C				
Approach Delay (s)		18.2			13.1			20.2			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM Average Control Delay	16.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	64.6%	ICU Level of Service	C
Analysis Period (min)	15		

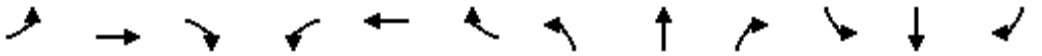
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	548	65	34	414	41	46	150	96	56	192	26
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	11	12	12	15	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.97		1.00	0.95		1.00	0.98		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		0.99	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.99	
Flt Protected		1.00	1.00		1.00	1.00		0.99	1.00		0.99	
Satd. Flow (prot)		1656	1255		1634	1288		1663	1490		1775	
Flt Permitted		0.98	1.00		0.94	1.00		0.89	1.00		0.90	
Satd. Flow (perm)		1619	1255		1536	1288		1493	1490		1613	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	24	577	68	36	436	43	48	158	101	59	202	27
RTOR Reduction (vph)	0	0	29	0	0	17	0	0	69	0	5	0
Lane Group Flow (vph)	0	601	39	0	472	26	0	206	32	0	283	0
Confl. Peds. (#/hr)	33		15	15		33	68		5	5		68
Confl. Bikes (#/hr)	4					4						
Heavy Vehicles (%)	0%	5%	14%	19%	5%	9%	2%	2%	1%	10%	7%	8%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Effective Green, g (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.32	0.32		0.32	
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Grp Cap (vph)		928	720		881	738		478	477		516	
v/s Ratio Prot												
v/s Ratio Perm		c0.37	0.03		0.31	0.02		0.14	0.02		c0.18	
v/c Ratio		0.65	0.05		0.54	0.03		0.43	0.07		0.55	
Uniform Delay, d1		10.9	7.0		9.9	7.0		20.1	17.7		21.0	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		3.5	0.1		2.3	0.1		2.8	0.3		4.2	
Delay (s)		14.3	7.2		12.2	7.1		22.9	18.0		25.2	
Level of Service		B	A		B	A		C	B		C	
Approach Delay (s)		13.6			11.8			21.3			25.2	
Approach LOS		B			B			C			C	

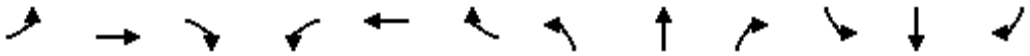
Intersection Summary			
HCM Average Control Delay	16.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	92.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



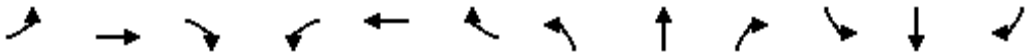
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	84	494	29	19	299	40	52	303	45	41	92	9
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	11	16	8	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.98	1.00	1.00	0.99
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1463	2993		1459	3530		1534	1647	1301	1517	1541	1156
Flt Permitted	0.53	1.00		0.39	1.00		0.69	1.00	1.00	0.45	1.00	1.00
Satd. Flow (perm)	809	2993		602	3530		1116	1647	1301	720	1541	1156
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	93	549	32	21	332	44	58	337	50	46	102	10
RTOR Reduction (vph)	0	6	0	0	16	0	0	0	26	0	0	6
Lane Group Flow (vph)	93	575	0	21	360	0	58	337	24	46	102	4
Confl. Peds. (#/hr)	16		9	9		16	1		5	5		1
Heavy Vehicles (%)	8%	6%	0%	13%	8%	3%	4%	2%	8%	5%	9%	22%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Effective Green, g (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	386	1427		287	1684		446	659	520	288	616	462
v/s Ratio Prot		c0.19			0.10			c0.20			0.07	
v/s Ratio Perm	0.11			0.03			0.05		0.02	0.06		0.00
v/c Ratio	0.24	0.40		0.07	0.21		0.13	0.51	0.05	0.16	0.17	0.01
Uniform Delay, d1	10.0	11.0		9.2	9.9		12.3	14.7	11.9	12.5	12.5	11.7
Progression Factor	1.00	1.00		1.00	1.00		0.63	0.77	0.35	0.55	0.55	0.31
Incremental Delay, d2	1.5	0.8		0.5	0.3		0.6	2.8	0.2	1.2	0.6	0.0
Delay (s)	11.5	11.9		9.7	10.2		8.3	14.0	4.3	8.1	7.5	3.7
Level of Service	B	B		A	B		A	B	A	A	A	A
Approach Delay (s)		11.8			10.2			12.2			7.4	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



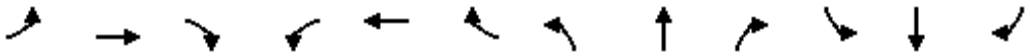
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	171	409	83	44	265	104	64	396	44	67	161	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	11	10	11	11	10	11	11	10	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.98		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.96	1.00		1.00	1.00		0.99	1.00		0.97	1.00	
Frt	1.00	0.97		1.00	0.96		1.00	0.99		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1466	3059		1588	2939		1542	3028		1405	2760	
Flt Permitted	0.51	1.00		0.42	1.00		0.60	1.00		0.44	1.00	
Satd. Flow (perm)	784	3059		707	2939		981	3028		652	2760	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	180	431	87	46	279	109	67	417	46	71	169	68
RTOR Reduction (vph)	0	0	0	0	0	0	0	11	0	0	40	0
Lane Group Flow (vph)	180	518	0	46	388	0	67	452	0	71	197	0
Confl. Peds. (#/hr)	98		10	10		98	28		52	52		28
Heavy Vehicles (%)	5%	5%	4%	0%	5%	7%	2%	6%	13%	10%	11%	20%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.41	0.41		0.41	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	376	1468		339	1411		405	1252		269	1141	
v/s Ratio Prot		0.17			0.13			c0.15			0.07	
v/s Ratio Perm	c0.23			0.07			0.07			0.11		
v/c Ratio	0.48	0.35		0.14	0.27		0.17	0.36		0.26	0.17	
Uniform Delay, d1	13.2	12.2		10.8	11.7		13.9	15.2		14.5	13.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.3	0.7		0.8	0.5		0.9	0.8		2.4	0.3	
Delay (s)	17.5	12.9		11.7	12.2		14.7	16.0		16.9	14.2	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		14.1			12.1			15.8			14.8	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	14.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	113	332	38	23	340	47	67	412	26	43	206	63
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	8	16	12	9	10	10	9	10	10
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1533	1576		1474	1842		1534	3073		1372	2867	
Flt Permitted	0.43	1.00		0.46	1.00		0.58	1.00		0.41	1.00	
Satd. Flow (perm)	700	1576		708	1842		933	3073		597	2867	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	119	349	40	24	358	49	71	434	27	45	217	66
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	119	389	0	24	407	0	71	461	0	45	283	0
Confl. Peds. (#/hr)	7		23	23		7	10		8	8		10
Confl. Bikes (#/hr)	1		2	2		1	1		1	1		1
Heavy Vehicles (%)	4%	8%	10%	0%	9%	5%	0%	3%	0%	12%	7%	6%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	47.0	41.8		40.6	38.6		26.8	22.2		23.6	20.6	
Effective Green, g (s)	47.0	39.8		40.6	36.6		26.8	20.2		23.6	18.6	
Actuated g/C Ratio	0.55	0.47		0.48	0.43		0.32	0.24		0.28	0.22	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	438	738		356	793		327	730		193	627	
v/s Ratio Prot	c0.02	c0.25		0.00	0.22		c0.01	c0.15		0.01	0.10	
v/s Ratio Perm	0.13			0.03			0.06			0.06		
v/c Ratio	0.27	0.53		0.07	0.51		0.22	0.63		0.23	0.45	
Uniform Delay, d1	14.0	16.0		15.1	17.7		21.6	29.1		26.1	28.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	2.7		0.1	2.4		0.3	4.1		0.6	2.3	
Delay (s)	14.3	18.6		15.1	20.1		21.9	33.2		26.8	31.1	
Level of Service	B	B		B	C		C	C		C	C	
Approach Delay (s)		17.6			19.8			31.7			30.5	
Approach LOS		B			B			C			C	

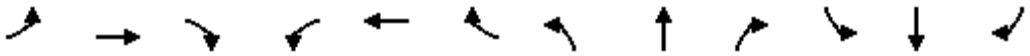
Intersection Summary			
HCM Average Control Delay	24.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	64.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	71	321	44	65	387	115	59	390	126	56	162	45
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	11	11	11	11	12	12	10	10	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		0.99	1.00	
Frt		0.98			0.97		1.00	0.96		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3492			2914		1614	3156		1581	2901	
Flt Permitted		0.78			0.84		0.61	1.00		0.38	1.00	
Satd. Flow (perm)		2730			2467		1034	3156		628	2901	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	79	357	49	72	430	128	66	433	140	62	180	50
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	485	0	0	630	0	66	573	0	62	230	0
Confl. Peds. (#/hr)	20		16	16		20	5		33	33		5
Confl. Bikes (#/hr)	2					2			2	2		
Heavy Vehicles (%)	9%	9%	0%	24%	7%	6%	2%	4%	2%	0%	5%	9%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.0			33.0		32.0	32.0		32.0	32.0	
Effective Green, g (s)		34.0			34.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio		0.45			0.45		0.44	0.44		0.44	0.44	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		1238			1118		455	1389		276	1276	
v/s Ratio Prot								c0.18			0.08	
v/s Ratio Perm		0.18			c0.26		0.06			0.10		
v/c Ratio		0.39			0.56		0.15	0.41		0.22	0.18	
Uniform Delay, d1		13.6			15.1		12.6	14.4		13.0	12.8	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.9			2.1		0.7	0.9		1.9	0.3	
Delay (s)		14.6			17.1		13.2	15.3		14.9	13.1	
Level of Service		B			B		B	B		B	B	
Approach Delay (s)		14.6			17.1			15.1			13.5	
Approach LOS		B			B			B			B	

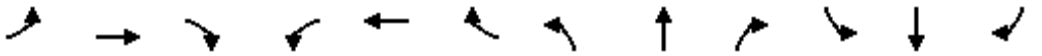
Intersection Summary			
HCM Average Control Delay	15.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	145	523	5	14	660	386	72	9	20	118	1	52
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	12	12	12	12	12	13	13	13
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	1.00		1.00	1.00	0.85		0.97			0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97			0.97	
Satd. Flow (prot)	1574	3144		1629	3257	1457		1611			3105	
Flt Permitted	0.35	1.00		0.42	1.00	1.00		0.69			0.75	
Satd. Flow (perm)	582	3144		720	3257	1457		1158			2398	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	161	581	6	16	733	429	80	10	22	131	1	58
RTOR Reduction (vph)	0	1	0	0	0	150	0	12	0	0	44	0
Lane Group Flow (vph)	161	586	0	16	733	279	0	100	0	0	146	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	46.0	46.0		46.0	46.0	46.0		16.7			16.7	
Effective Green, g (s)	46.0	46.0		46.0	46.0	46.0		16.7			16.7	
Actuated g/C Ratio	0.65	0.65		0.65	0.65	0.65		0.24			0.24	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		8.0			8.0	
Lane Grp Cap (vph)	379	2046		468	2119	948		274			566	
v/s Ratio Prot		0.19			0.23							
v/s Ratio Perm	c0.28			0.02		0.19		c0.09			0.06	
v/c Ratio	0.42	0.29		0.03	0.35	0.29		0.36			0.26	
Uniform Delay, d1	6.0	5.3		4.4	5.6	5.3		22.6			22.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	3.5	0.4		0.1	0.4	0.8		3.5			1.0	
Delay (s)	9.4	5.7		4.5	6.0	6.1		26.1			23.0	
Level of Service	A	A		A	A	A		C			C	
Approach Delay (s)		6.5			6.0			26.1			23.0	
Approach LOS		A			A			C			C	

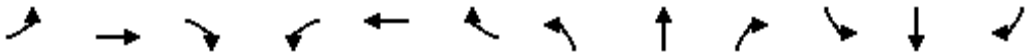
Intersection Summary			
HCM Average Control Delay	8.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	70.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	111	214	79	63	190	71	134	1972	88	71	499	41
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	9	12	10	10	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.96	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.96		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1548	1496		1547	1584		1493	3069	1271	1452	2983	1301
Flt Permitted	0.37	1.00		0.31	1.00		0.39	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	608	1496		513	1584		612	3069	1271	180	2983	1301
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	117	225	83	66	200	75	141	2076	93	75	525	43
RTOR Reduction (vph)	0	16	0	0	16	0	0	0	18	0	0	25
Lane Group Flow (vph)	117	292	0	66	259	0	141	2076	75	75	525	18
Confl. Peds. (#/hr)	4		9	9		4	6		16	16		6
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	3%	3%	4%	3%	1%	2%	3%	4%	4%	6%	7%	3%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	28.0	21.0		28.0	21.0		42.0	35.0	35.0	42.0	35.0	35.0
Effective Green, g (s)	26.0	22.0		26.0	22.0		40.0	35.0	35.0	40.0	35.0	35.0
Actuated g/C Ratio	0.31	0.26		0.31	0.26		0.47	0.41	0.41	0.47	0.41	0.41
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	252	387		230	410		350	1264	523	174	1228	536
v/s Ratio Prot	c0.03	c0.20		0.02	0.16		0.03	c0.68		c0.03	0.18	
v/s Ratio Perm	0.11			0.07			0.16		0.06	0.17		0.01
v/c Ratio	0.46	0.76		0.29	0.63		0.40	1.64	0.14	0.43	0.43	0.03
Uniform Delay, d1	22.5	29.0		21.9	27.9		13.3	25.0	15.6	18.1	17.8	14.9
Progression Factor	1.00	1.00		1.00	1.00		0.61	0.70	0.49	1.00	1.00	1.00
Incremental Delay, d2	6.0	12.9		3.1	7.2		2.8	292.0	0.5	7.6	1.1	0.1
Delay (s)	28.6	41.9		25.0	35.2		11.0	309.6	8.1	25.7	18.9	15.0
Level of Service	C	D		C	D		B	F	A	C	B	B
Approach Delay (s)		38.2			33.2			279.3			19.5	
Approach LOS		D			C			F			B	

Intersection Summary			
HCM Average Control Delay	184.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	96.8%	ICU Level of Service	F
Analysis Period (min)	15		

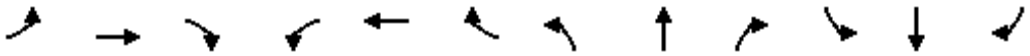
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	26	218	32	15	149	16	22	166	27	33	148	21
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	14	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.99			0.98			0.99	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1837			1839			1899			1931	
Flt Permitted		0.97			0.97			0.96			0.94	
Satd. Flow (perm)		1782			1791			1840			1822	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	27	225	33	15	154	16	23	171	28	34	153	22
RTOR Reduction (vph)	0	7	0	0	5	0	0	8	0	0	6	0
Lane Group Flow (vph)	0	278	0	0	180	0	0	214	0	0	203	0
Confl. Peds. (#/hr)	5		11	11		5	7		34	34		7
Confl. Bikes (#/hr)			3	3								
Heavy Vehicles (%)	4%	2%	0%	20%	1%	0%	12%	3%	8%	0%	3%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.42			0.42			0.46			0.46	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		740			744			849			841	
v/s Ratio Prot												
v/s Ratio Perm		c0.16			0.10			c0.12			0.11	
v/c Ratio		0.38			0.24			0.25			0.24	
Uniform Delay, d1		13.2			12.3			10.7			10.6	
Progression Factor		1.00			0.66			1.11			1.00	
Incremental Delay, d2		1.5			0.8			0.7			0.7	
Delay (s)		14.6			9.0			12.5			11.3	
Level of Service		B			A			B			B	
Approach Delay (s)		14.6			9.0			12.5			11.3	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	12.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.0%	ICU Level of Service	A
Analysis Period (min)	15		

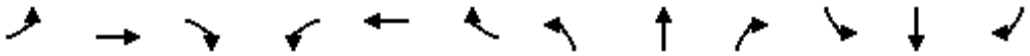
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	181	37	9	162	23	45	384	33	17	86	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.96	1.00		1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.98		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1466	2989		1302	3018		1529	3093		1492	2868	
Flt Permitted	0.62	1.00		0.60	1.00		0.68	1.00		0.48	1.00	
Satd. Flow (perm)	960	2989		825	3018		1093	3093		757	2868	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	201	41	10	180	26	50	427	37	19	96	19
RTOR Reduction (vph)	0	26	0	0	18	0	0	10	0	0	8	0
Lane Group Flow (vph)	27	216	0	10	188	0	50	454	0	19	107	0
Confl. Peds. (#/hr)	35		6	6		35	18					18
Confl. Bikes (#/hr)	14		32	32		14	23		7	7		23
Heavy Vehicles (%)	4%	4%	0%	22%	2%	6%	3%	2%	0%	7%	8%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0		39.0	39.0		39.0	39.0	
Effective Green, g (s)	19.0	19.0		19.0	19.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.58	0.58		0.58	0.58	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	281	874		241	882		639	1808		443	1677	
v/s Ratio Prot		c0.07			0.06			c0.15			0.04	
v/s Ratio Perm	0.03			0.01			0.05			0.03		
v/c Ratio	0.10	0.25		0.04	0.21		0.08	0.25		0.04	0.06	
Uniform Delay, d1	16.7	17.5		16.5	17.4		5.9	6.6		5.8	5.8	
Progression Factor	0.73	0.73		0.76	0.74		0.92	0.95		0.52	0.46	
Incremental Delay, d2	0.6	0.6		0.3	0.5		0.2	0.3		0.2	0.1	
Delay (s)	12.8	13.5		12.8	13.4		5.6	6.6		3.1	2.8	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		13.4			13.4			6.5			2.8	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	9.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	41.6%	ICU Level of Service	A
Analysis Period (min)	15		

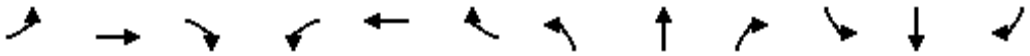
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	46	178	34	16	122	39	28	429	24	14	178	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	9	9	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.98		1.00	0.96			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1556	2952		1515	2866			1878			1807	
Flt Permitted	0.64	1.00		0.60	1.00			0.98			0.96	
Satd. Flow (perm)	1046	2952		965	2866			1838			1742	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	51	198	38	18	136	43	31	477	27	16	198	17
RTOR Reduction (vph)	0	23	0	0	26	0	0	3	0	0	4	0
Lane Group Flow (vph)	51	213	0	18	153	0	0	532	0	0	227	0
Confl. Peds. (#/hr)	10		29	29		10	17		10	10		17
Confl. Bikes (#/hr)									2	2		
Heavy Vehicles (%)	2%	4%	10%	0%	4%	0%	0%	8%	4%	0%	13%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Effective Green, g (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40			0.48			0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	418	1181		386	1146			877			831	
v/s Ratio Prot		c0.07			0.05							
v/s Ratio Perm	0.05			0.02				c0.29			0.13	
v/c Ratio	0.12	0.18		0.05	0.13			0.61			0.27	
Uniform Delay, d1	12.3	12.6		11.9	12.4			12.5			10.2	
Progression Factor	1.02	0.93		0.85	0.87			0.98			1.00	
Incremental Delay, d2	0.6	0.3		0.2	0.2			3.0			0.8	
Delay (s)	13.1	12.1		10.4	11.0			15.3			11.0	
Level of Service	B	B		B	B			B			B	
Approach Delay (s)		12.3			11.0			15.3			11.0	
Approach LOS		B			B			B			B	

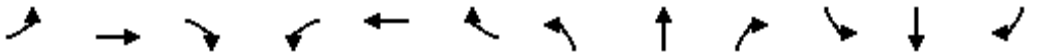
Intersection Summary			
HCM Average Control Delay	13.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



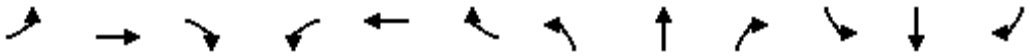
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	90	127	63	2	84	36	22	275	9	7	184	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	16	12	10	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.95		1.00	0.95			1.00			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1605	1876		1587	1870			1971			1933	
Flt Permitted	0.67	1.00		0.56	1.00			0.97			0.99	
Satd. Flow (perm)	1135	1876		942	1870			1925			1916	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	100	141	70	2	93	40	24	306	10	8	204	32
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	100	211	0	2	133	0	0	340	0	0	244	0
Confl. Peds. (#/hr)			8	8			1		8	8		1
Heavy Vehicles (%)	3%	3%	2%	0%	6%	0%	0%	3%	0%	0%	4%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Effective Green, g (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Actuated g/C Ratio	0.31	0.31		0.31	0.31			0.57			0.57	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	349	577		290	575			1096			1091	
v/s Ratio Prot		c0.11			0.07							
v/s Ratio Perm	0.09			0.00				c0.18			0.13	
v/c Ratio	0.29	0.37		0.01	0.23			0.31			0.22	
Uniform Delay, d1	17.1	17.6		15.6	16.8			7.3			6.9	
Progression Factor	0.91	0.90		0.89	0.92			0.99			1.00	
Incremental Delay, d2	2.0	1.8		0.0	0.9			0.7			0.5	
Delay (s)	17.6	17.6		14.0	16.4			8.0			7.4	
Level of Service	B	B		B	B			A			A	
Approach Delay (s)		17.6			16.3			8.0			7.4	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	122	9	55	1	3	12	40	492	6	2	201	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	10	11	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.97		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	0.98	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.87		1.00	0.88		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1603	1672		1710	1422		1491	1631	1392	1649	1907	1427
Flt Permitted	0.75	1.00		0.71	1.00		0.62	1.00	1.00	0.37	1.00	1.00
Satd. Flow (perm)	1260	1672		1279	1422		971	1631	1392	648	1907	1427
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	136	10	61	1	3	13	44	547	7	2	223	56
RTOR Reduction (vph)	0	44	0	0	9	0	0	0	3	0	0	22
Lane Group Flow (vph)	136	27	0	1	7	0	44	547	4	2	223	34
Confl. Peds. (#/hr)	9					9	1		6	6		1
Heavy Vehicles (%)	5%	14%	5%	0%	67%	12%	7%	3%	0%	0%	7%	5%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	17.0	17.0		17.0	17.0		39.0	39.0	39.0	39.0	39.0	39.0
Effective Green, g (s)	18.0	18.0		18.0	18.0		39.0	39.0	39.0	39.0	39.0	39.0
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.60	0.60	0.60	0.60	0.60	0.60
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	349	463		354	394		583	979	835	389	1144	856
v/s Ratio Prot		0.02			0.00			c0.34			0.12	
v/s Ratio Perm	c0.11			0.00			0.05		0.00	0.00		0.02
v/c Ratio	0.39	0.06		0.00	0.02		0.08	0.56	0.01	0.01	0.19	0.04
Uniform Delay, d1	19.0	17.3		17.0	17.1		5.4	7.8	5.2	5.2	5.9	5.3
Progression Factor	1.46	2.41		1.00	1.00		1.17	1.10	1.33	1.00	1.00	1.00
Incremental Delay, d2	3.2	0.2		0.0	0.1		0.2	1.7	0.0	0.0	0.4	0.1
Delay (s)	31.0	41.8		17.0	17.1		6.5	10.3	6.9	5.2	6.3	5.4
Level of Service	C	D		B	B		A	B	A	A	A	A
Approach Delay (s)		34.7			17.1			10.0			6.1	
Approach LOS		C			B			A			A	

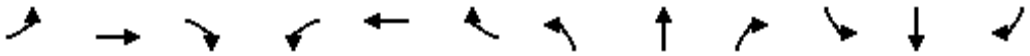
Intersection Summary			
HCM Average Control Delay	13.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	241	76	123	376	0	0	0	0	74	305	361
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)		4.0		3.0	3.0					5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	
Frpb, ped/bikes		0.99		1.00	1.00					1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Frt		0.96		1.00	1.00					1.00	0.92	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		2826		1621	3288					1574	2907	
Flt Permitted		1.00		0.50	1.00					0.95	1.00	
Satd. Flow (perm)		2826		846	3288					1574	2907	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	254	80	129	396	0	0	0	0	78	321	380
RTOR Reduction (vph)	0	30	0	0	0	0	0	0	0	0	214	0
Lane Group Flow (vph)	0	304	0	129	396	0	0	0	0	78	487	0
Confl. Peds. (#/hr)	14		32	32		14	14					14
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	9%	4%	5%	4%	0%	0%	0%	0%	5%	2%	4%
Turn Type				D.P+P						custom		
Protected Phases		8		7	7 8					6	6	
Permitted Phases				8						6		
Actuated Green, G (s)		33.0		56.0	59.0					32.0	32.0	
Effective Green, g (s)		33.0		56.0	59.0					32.0	32.0	
Actuated g/C Ratio		0.33		0.56	0.59					0.32	0.32	
Clearance Time (s)		4.0		3.0						5.0	5.0	
Lane Grp Cap (vph)		933		652	1940					504	930	
v/s Ratio Prot		c0.11		0.05	c0.12					0.05	c0.17	
v/s Ratio Perm				0.07								
v/c Ratio		0.33		0.20	0.20					0.15	0.52	
Uniform Delay, d1		25.1		10.6	9.6					24.3	27.8	
Progression Factor		1.00		1.95	2.06					1.00	1.00	
Incremental Delay, d2		0.9		0.6	0.2					0.7	2.1	
Delay (s)		26.1		21.2	19.8					25.0	29.9	
Level of Service		C		C	B					C	C	
Approach Delay (s)		26.1			20.2			0.0			29.4	
Approach LOS		C			C			A			C	

Intersection Summary			
HCM Average Control Delay	25.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

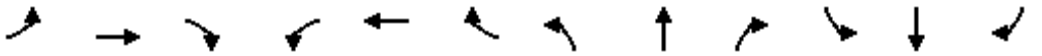
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	129	186	0	0	324	69	174	554	326	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	9	12	13	12	13	12	12	12
Total Lost time (s)	4.0	4.0			4.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.97		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1673	3054			2831		1750	1782	1514			
Flt Permitted	0.34	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	603	3054			2831		1750	1782	1514			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	136	196	0	0	341	73	183	583	343	0	0	0
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	230	0	0	0
Lane Group Flow (vph)	136	196	0	0	396	0	183	583	113	0	0	0
Confl. Peds. (#/hr)	14		16	16		14			1	1		
Confl. Bikes (#/hr)	1					1			1	1		
Heavy Vehicles (%)	2%	12%	0%	0%	5%	4%	1%	1%	3%	0%	0%	0%
Turn Type	pm+pt						custom		Perm			
Protected Phases	4	1 4			1		2	2				
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	54.0	58.0			21.0		33.0	33.0	33.0			
Effective Green, g (s)	54.0	58.0			21.0		33.0	33.0	33.0			
Actuated g/C Ratio	0.54	0.58			0.21		0.33	0.33	0.33			
Clearance Time (s)	4.0				4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	679	1771			595		578	588	500			
v/s Ratio Prot	c0.07	0.06			c0.14		0.10	c0.33				
v/s Ratio Perm	0.04								0.07			
v/c Ratio	0.20	0.11			0.67		0.32	0.99	0.23			
Uniform Delay, d1	11.8	9.4			36.3		25.1	33.4	24.3			
Progression Factor	0.24	0.25			1.00		0.75	0.79	1.93			
Incremental Delay, d2	0.6	0.1			5.8		0.9	27.7	0.7			
Delay (s)	3.5	2.5			42.1		19.8	54.1	47.6			
Level of Service	A	A			D		B	D	D			
Approach Delay (s)		2.9			42.1			46.4			0.0	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM Average Control Delay	37.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

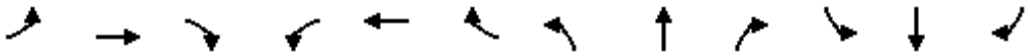
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	457	372	34	592	0	0	0	0	4	215	195
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	11	12	12	12	12	10	10	12
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	1.00
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.93		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3107		1613	3273					1596	3160	1443
Flt Permitted		1.00		0.17	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3107		284	3273					1596	3160	1443
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	476	388	35	617	0	0	0	0	4	224	203
RTOR Reduction (vph)	0	147	0	0	0	0	0	0	0	0	0	134
Lane Group Flow (vph)	0	717	0	35	617	0	0	0	0	4	224	69
Confl. Peds. (#/hr)	22		3	3		22						
Confl. Bikes (#/hr)	4					4			32	32		
Heavy Vehicles (%)	0%	2%	2%	6%	1%	0%	0%	0%	0%	0%	1%	6%
Turn Type				pm+pt						Split		Prot
Protected Phases		8		7	7 8					6	6	6
Permitted Phases				7 8								
Actuated Green, G (s)		36.0		54.0	58.0					34.0	34.0	34.0
Effective Green, g (s)		36.0		54.0	58.0					34.0	34.0	34.0
Actuated g/C Ratio		0.36		0.54	0.58					0.34	0.34	0.34
Clearance Time (s)		4.0		4.0						4.0	4.0	4.0
Lane Grp Cap (vph)		1119		393	1898					543	1074	491
v/s Ratio Prot		c0.23		0.02	c0.19					0.00	c0.07	0.05
v/s Ratio Perm				0.03								
v/c Ratio		0.64		0.09	0.33					0.01	0.21	0.14
Uniform Delay, d1		26.6		12.5	10.9					21.8	23.4	22.9
Progression Factor		1.00		0.54	0.68					0.73	0.79	0.92
Incremental Delay, d2		2.8		0.2	0.2					0.0	0.4	0.5
Delay (s)		29.4		6.9	7.6					16.0	18.9	21.5
Level of Service		C		A	A					B	B	C
Approach Delay (s)		29.4			7.5			0.0			20.1	
Approach LOS		C			A			A			C	

Intersection Summary			
HCM Average Control Delay	20.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.4%	ICU Level of Service	E
Analysis Period (min)	15		

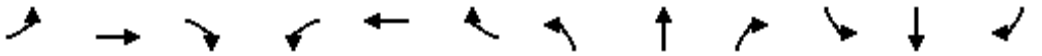
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	401	60	0	0	57	5	569	646	62	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	10	12	11	11	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	0.91	0.91			0.95		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	1.00			
Flpb, ped/bikes	0.99	0.99			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.99		1.00	1.00	0.85			
Flt Protected	0.95	0.96			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1444	3042			3079		1555	1637	1500			
Flt Permitted	0.71	0.74			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	1084	2339			3079		1555	1637	1500			
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	413	62	0	0	59	5	587	666	64	0	0	0
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	38	0	0	0
Lane Group Flow (vph)	206	269	0	0	60	0	587	666	26	0	0	0
Confl. Peds. (#/hr)	30		2	2		30			4	4		
Confl. Bikes (#/hr)	3					3			2	2		
Heavy Vehicles (%)	3%	2%	0%	0%	2%	0%	1%	1%	2%	0%	0%	0%
Turn Type	pm+pt						custom		custom			
Protected Phases	4	1 4			1		2	2	2			
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Effective Green, g (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Actuated g/C Ratio	0.51	0.51			0.15		0.37	0.37	0.37			
Clearance Time (s)	4.0				4.0		4.0	4.0	4.0			
Lane Grp Cap (vph)	682	1446			462		575	606	555			
v/s Ratio Prot	c0.11	0.07			0.02		0.38	c0.41	0.02			
v/s Ratio Perm	c0.05	0.03										
v/c Ratio	0.30	0.19			0.13		1.02	1.10	0.05			
Uniform Delay, d1	14.0	13.3			36.8		31.5	31.5	20.2			
Progression Factor	0.24	0.25			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.8	0.2			0.6		42.9	66.6	0.2			
Delay (s)	4.1	3.5			37.4		74.4	98.1	20.4			
Level of Service	A	A			D		E	F	C			
Approach Delay (s)		3.8			37.4			83.8			0.0	
Approach LOS		A			D			F			A	

Intersection Summary			
HCM Average Control Delay	61.7	HCM Level of Service	E
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.4%	ICU Level of Service	E
Analysis Period (min)	15		

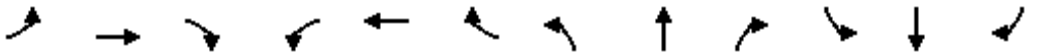
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	163	284	70	61	189	117	43	1151	72	100	476	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	9	10	9	9	10	9
Total Lost time (s)		4.0			4.0		4.0	3.5	4.0	4.0	3.5	4.0
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00			0.98		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.98			0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.98			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		2842			2770		1447	3069	1336	1494	2956	1270
Flt Permitted		0.66			0.79		0.39	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)		1916			2214		600	3069	1336	197	2956	1270
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	170	296	73	64	197	122	45	1199	75	104	496	44
RTOR Reduction (vph)	0	14	0	0	64	0	0	0	28	0	0	27
Lane Group Flow (vph)	0	525	0	0	319	0	45	1199	47	104	496	17
Confl. Peds. (#/hr)	49		20	20		49	26		8	8		26
Confl. Bikes (#/hr)	2					2						
Heavy Vehicles (%)	10%	7%	4%	9%	7%	5%	6%	4%	0%	3%	8%	5%
Turn Type	pm+pt			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		35.0			27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)		36.0			28.0		36.0	33.5	33.0	36.0	33.5	33.0
Actuated g/C Ratio		0.42			0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)		5.0			5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)		877			729		294	1210	519	144	1165	493
v/s Ratio Prot		c0.04					0.01	c0.39		c0.03	0.17	
v/s Ratio Perm		0.21			0.14		0.06		0.04	0.27		0.01
v/c Ratio		0.60			0.44		0.15	0.99	0.09	0.72	0.43	0.03
Uniform Delay, d1		18.9			22.3		14.7	25.6	16.5	19.2	18.7	16.1
Progression Factor		1.00			1.00		1.32	0.86	1.42	1.82	1.63	3.13
Incremental Delay, d2		3.0			1.9		0.6	17.7	0.2	24.6	1.0	0.1
Delay (s)		21.9			24.2		20.2	39.8	23.6	59.5	31.7	50.7
Level of Service		C			C		C	D	C	E	C	D
Approach Delay (s)		21.9			24.2			38.2			37.5	
Approach LOS		C			C			D			D	

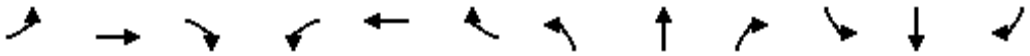
Intersection Summary			
HCM Average Control Delay	33.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	82.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	44	441	0	0	339	85	28	63	115	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.97			0.92				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		1707			1668			1574				
Flt Permitted		0.93			1.00			0.99				
Satd. Flow (perm)		1599			1668			1574				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	49	490	0	0	377	94	31	70	128	0	0	0
RTOR Reduction (vph)	0	0	0	0	14	0	0	70	0	0	0	0
Lane Group Flow (vph)	0	539	0	0	457	0	0	159	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		34.0			34.0			23.0				
Effective Green, g (s)		34.0			34.0			23.0				
Actuated g/C Ratio		0.52			0.52			0.35				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		836			872			557				
v/s Ratio Prot					0.27							
v/s Ratio Perm		c0.34						0.10				
v/c Ratio		0.64			0.52			0.28				
Uniform Delay, d1		11.2			10.2			15.1				
Progression Factor		1.00			0.56			1.00				
Incremental Delay, d2		3.8			2.0			1.3				
Delay (s)		15.0			7.7			16.4				
Level of Service		B			A			B				
Approach Delay (s)		15.0			7.7			16.4			0.0	
Approach LOS		B			A			B			A	

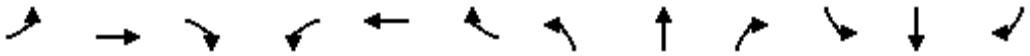
Intersection Summary			
HCM Average Control Delay	12.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	45	458	31	23	355	53	16	175	47	68	107	19
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.98			0.97			0.99	
Flt Protected		1.00			1.00			1.00			0.98	
Satd. Flow (prot)		1889			1831			3160			3149	
Flt Permitted		0.93			0.96			0.93			0.79	
Satd. Flow (perm)		1773			1759			2958			2534	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	50	509	34	26	394	59	18	194	52	76	119	21
RTOR Reduction (vph)	0	3	0	0	8	0	0	30	0	0	12	0
Lane Group Flow (vph)	0	590	0	0	471	0	0	234	0	0	204	0
Confl. Peds. (#/hr)	29		16	16		29	28		14	14		28
Confl. Bikes (#/hr)	1					1	1					1
Heavy Vehicles (%)	3%	7%	4%	12%	8%	13%	0%	4%	4%	4%	4%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0			27.0			27.0	
Effective Green, g (s)		30.0			30.0			27.0			27.0	
Actuated g/C Ratio		0.46			0.46			0.42			0.42	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		818			812			1229			1053	
v/s Ratio Prot												
v/s Ratio Perm		c0.33			0.27			0.08			c0.08	
v/c Ratio		0.72			0.58			0.19			0.19	
Uniform Delay, d1		14.1			12.9			12.1			12.1	
Progression Factor		0.65			0.55			0.94			0.70	
Incremental Delay, d2		4.5			2.9			0.3			0.4	
Delay (s)		13.6			10.0			11.7			8.9	
Level of Service		B			A			B			A	
Approach Delay (s)		13.6			10.0			11.7			8.9	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	80.3%	ICU Level of Service	D
Analysis Period (min)	15		

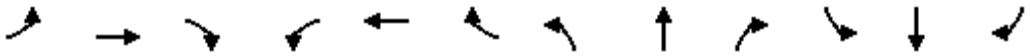
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	355	20	29	302	64	46	319	92	60	96	20
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	9	10	10	9	10	10	12	10	10	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.97		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1502	2948		1585	2934		1497	3031		1594	2943	
Flt Permitted	0.47	1.00		0.46	1.00		0.67	1.00		0.48	1.00	
Satd. Flow (perm)	744	2948		773	2934		1056	3031		806	2943	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	56	394	22	32	336	71	51	354	102	67	107	22
RTOR Reduction (vph)	0	6	0	0	28	0	0	41	0	0	10	0
Lane Group Flow (vph)	56	410	0	32	379	0	51	415	0	67	119	0
Confl. Peds. (#/hr)	25		14	14		25	12		4	4		12
Confl. Bikes (#/hr)	1					1			1	1		
Heavy Vehicles (%)	5%	7%	12%	0%	6%	2%	6%	1%	3%	0%	4%	12%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	252	998		262	993		569	1632		434	1585	
v/s Ratio Prot		c0.14			0.13			c0.14			0.04	
v/s Ratio Perm	0.08			0.04			0.05			0.08		
v/c Ratio	0.22	0.41		0.12	0.38		0.09	0.25		0.15	0.07	
Uniform Delay, d1	15.4	16.5		14.8	16.3		7.3	8.0		7.6	7.2	
Progression Factor	0.63	0.62		0.86	0.85		0.71	0.73		1.34	1.35	
Incremental Delay, d2	1.6	1.0		0.9	1.1		0.3	0.4		0.8	0.1	
Delay (s)	11.2	11.3		13.6	15.1		5.5	6.2		10.9	9.8	
Level of Service	B	B		B	B		A	A		B	A	
Approach Delay (s)		11.3			15.0			6.1			10.2	
Approach LOS		B			B			A			B	

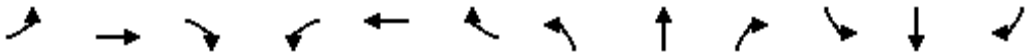
Intersection Summary			
HCM Average Control Delay	10.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	83	380	131	100	316	82	37	324	60	41	136	38
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	9	10	9	9	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.98			1.00			0.99	
Flpb, ped/bikes	0.97	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.96		1.00	0.97			0.98			0.97	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1381	2934		1337	3524			3413			3314	
Flt Permitted	0.49	1.00		0.42	1.00			0.91			0.84	
Satd. Flow (perm)	719	2934		587	3524			3134			2805	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	87	400	138	105	333	86	39	341	63	43	143	40
RTOR Reduction (vph)	0	53	0	0	35	0	0	20	0	0	24	0
Lane Group Flow (vph)	87	485	0	105	384	0	0	423	0	0	202	0
Confl. Peds. (#/hr)	53		34	34		53	67		28	28		67
Heavy Vehicles (%)	8%	5%	0%	14%	6%	1%	0%	9%	20%	5%	15%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Effective Green, g (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48			0.40			0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	343	1399		280	1681			1254			1122	
v/s Ratio Prot		0.17			0.11							
v/s Ratio Perm	0.12			c0.18				c0.13			0.07	
v/c Ratio	0.25	0.35		0.38	0.23			0.34			0.18	
Uniform Delay, d1	10.1	10.7		10.8	10.0			13.5			12.6	
Progression Factor	1.65	1.85		0.77	0.72			0.51			0.64	
Incremental Delay, d2	1.7	0.7		3.3	0.3			0.7			0.3	
Delay (s)	18.4	20.4		11.6	7.4			7.6			8.4	
Level of Service	B	C		B	A			A			A	
Approach Delay (s)		20.1			8.3			7.6			8.4	
Approach LOS		C			A			A			A	

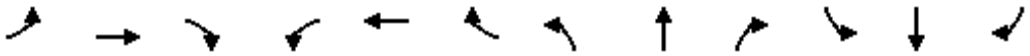
Intersection Summary			
HCM Average Control Delay	12.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	99	307	99	104	371	104	82	84	88	88	84	82
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	16	12	12	16	12
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		0.95			1.00			1.00	
Frt		1.00	0.85		0.97			0.95			0.96	
Flt Protected		0.99	1.00		0.99			0.98			0.98	
Satd. Flow (prot)		1637	1409		3036			1822			1826	
Flt Permitted		0.74	1.00		0.76			0.80			0.78	
Satd. Flow (perm)		1223	1409		2327			1482			1447	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	110	341	110	116	412	116	91	93	98	98	93	91
RTOR Reduction (vph)	0	0	52	0	29	0	0	30	0	0	26	0
Lane Group Flow (vph)	0	451	58	0	615	0	0	252	0	0	256	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		34.0	34.0		34.0			21.0			21.0	
Effective Green, g (s)		34.0	34.0		34.0			21.0			21.0	
Actuated g/C Ratio		0.52	0.52		0.52			0.32			0.32	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Grp Cap (vph)		640	737		1217			479			467	
v/s Ratio Prot												
v/s Ratio Perm		c0.37	0.04		0.26			0.17			c0.18	
v/c Ratio		0.70	0.08		0.51			0.53			0.55	
Uniform Delay, d1		11.7	7.7		10.1			17.9			18.1	
Progression Factor		1.75	4.62		0.43			1.00			1.00	
Incremental Delay, d2		6.2	0.2		1.4			4.1			4.6	
Delay (s)		26.7	35.8		5.7			22.0			22.6	
Level of Service		C	D		A			C			C	
Approach Delay (s)		28.5			5.7			22.0			22.6	
Approach LOS		C			A			C			C	

Intersection Summary			
HCM Average Control Delay	18.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	73.3%	ICU Level of Service	D
Analysis Period (min)	15		

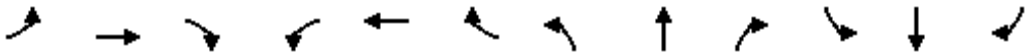
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	75	386	22	15	450	63	40	103	41	43	90	101
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	15	8	16	8	8	16	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00			0.99	
Flpb, ped/bikes	0.99	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.98			0.97			0.94	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1475	3017		1573	3003			3457			3397	
Flt Permitted	0.38	1.00		0.46	1.00			0.86			0.88	
Satd. Flow (perm)	597	3017		764	3003			3010			3010	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	83	429	24	17	500	70	44	114	46	48	100	112
RTOR Reduction (vph)	0	6	0	0	17	0	0	25	0	0	62	0
Lane Group Flow (vph)	83	447	0	17	553	0	0	179	0	0	198	0
Confl. Peds. (#/hr)	22		40	40		22	18		3	3		18
Confl. Bikes (#/hr)			2	2			1					1
Heavy Vehicles (%)	7%	5%	0%	0%	4%	2%	0%	3%	22%	0%	3%	8%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	28.0	28.0		28.0	28.0			29.0			29.0	
Effective Green, g (s)	28.0	28.0		28.0	28.0			29.0			29.0	
Actuated g/C Ratio	0.43	0.43		0.43	0.43			0.45			0.45	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	257	1300		329	1294			1343			1343	
v/s Ratio Prot		0.15			c0.18							
v/s Ratio Perm	0.14			0.02				0.06			c0.07	
v/c Ratio	0.32	0.34		0.05	0.43			0.13			0.15	
Uniform Delay, d1	12.2	12.4		10.8	12.9			10.6			10.7	
Progression Factor	0.96	0.99		1.14	1.00			1.04			0.83	
Incremental Delay, d2	2.5	0.5		0.1	0.5			0.2			0.2	
Delay (s)	14.3	12.7		12.4	13.3			11.2			9.1	
Level of Service	B	B		B	B			B			A	
Approach Delay (s)		13.0			13.3			11.2			9.1	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	12.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

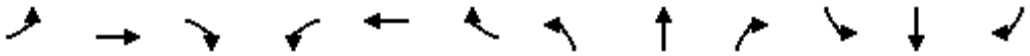


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	86	458	74	94	469	284	51	332	92	222	159	52
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.98			0.95			0.97			0.98	
Flt Protected		0.99			0.99			0.99			0.98	
Satd. Flow (prot)		3177			3076			3146			3118	
Flt Permitted		0.63			0.74			0.87			0.63	
Satd. Flow (perm)		2014			2279			2748			2005	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	96	509	82	104	521	316	57	369	102	247	177	58
RTOR Reduction (vph)	0	16	0	0	98	0	0	32	0	0	17	0
Lane Group Flow (vph)	0	671	0	0	843	0	0	496	0	0	465	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		26.0			26.0			29.0			20.0	
Effective Green, g (s)		26.0			26.0			29.0			20.0	
Actuated g/C Ratio		0.40			0.40			0.45			0.31	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		806			912			1263			617	
v/s Ratio Prot								c0.04				
v/s Ratio Perm		0.33			c0.37			0.14			c0.23	
v/c Ratio		0.83			0.92			0.39			0.96dl	
Uniform Delay, d1		17.5			18.6			12.1			20.3	
Progression Factor		1.73			1.00			1.00			0.89	
Incremental Delay, d2		9.7			16.3			0.9			8.3	
Delay (s)		40.0			34.9			13.0			26.4	
Level of Service		D			C			B			C	
Approach Delay (s)		40.0			34.9			13.0			26.4	
Approach LOS		D			C			B			C	

Intersection Summary			
HCM Average Control Delay	30.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	88.9%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

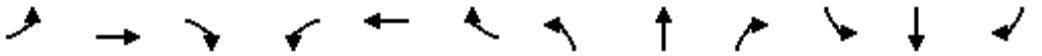
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	724	121	45	759	0	142	0	70	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	10	10	12	12	12	12	10	10	10
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			1.00				
Frt		0.98			1.00			0.96				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		2975			3032			1585				
Flt Permitted		1.00			0.84			0.80				
Satd. Flow (perm)		2975			2542			1308				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	804	134	50	843	0	158	0	78	0	0	0
RTOR Reduction (vph)	0	18	0	0	0	0	0	20	0	0	0	0
Lane Group Flow (vph)	0	920	0	0	893	0	0	216	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	custom			Perm			Perm			Perm		
Protected Phases		4 5 6 11			8			2			2	
Permitted Phases	4 6 11			8			2			2		
Actuated Green, G (s)		65.0			33.0			16.0				
Effective Green, g (s)		58.0			33.0			16.0				
Actuated g/C Ratio		0.64			0.37			0.18				
Clearance Time (s)					5.0			5.0				
Lane Grp Cap (vph)		1917			932			233				
v/s Ratio Prot		c0.31										
v/s Ratio Perm					c0.35			c0.17				
v/c Ratio		0.48			0.96			0.93				
Uniform Delay, d1		8.2			27.8			36.4				
Progression Factor		0.04			1.57			1.00				
Incremental Delay, d2		0.4			18.9			42.9				
Delay (s)		0.8			62.5			79.3				
Level of Service		A			E			E				
Approach Delay (s)		0.8			62.5			79.3			0.0	
Approach LOS		A			E			E			A	

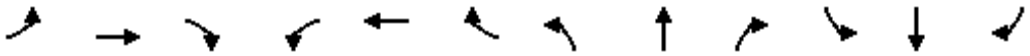
Intersection Summary			
HCM Average Control Delay	36.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	74.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	123	502	187	274	646	183	103	20	185	78	7	77
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	10	12	12	12	12	16	12	12	12	12
Total Lost time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	1.00
Frt	1.00	0.96		1.00	1.00	0.85		0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (prot)	1520	3020		1629	3257	1457		1756		1629	1714	1457
Flt Permitted	0.32	1.00		0.20	1.00	1.00		0.89		0.40	1.00	1.00
Satd. Flow (perm)	508	3020		340	3257	1457		1581		690	1714	1457
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	137	558	208	304	718	203	114	22	206	87	8	86
RTOR Reduction (vph)	0	42	0	0	0	104	0	74	0	0	0	46
Lane Group Flow (vph)	137	724	0	304	718	99	0	268	0	87	8	40
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	40.0	30.6		47.6	35.2	43.8		20.8		32.4	32.4	41.8
Effective Green, g (s)	40.0	30.6		47.6	35.2	43.8		20.8		32.4	32.4	41.8
Actuated g/C Ratio	0.44	0.34		0.53	0.39	0.49		0.23		0.36	0.36	0.46
Clearance Time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Vehicle Extension (s)	4.0	3.0		4.0	3.0	3.0		4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	331	1027		380	1274	709		365		338	617	677
v/s Ratio Prot	0.04	0.24		c0.12	0.22	0.01				c0.02	0.00	0.01
v/s Ratio Perm	0.14			c0.30		0.05		c0.17		0.07		0.02
v/c Ratio	0.41	0.71		0.80	0.56	0.14		0.73		0.26	0.01	0.06
Uniform Delay, d1	15.4	25.8		14.8	21.4	12.7		32.0		21.2	18.5	13.3
Progression Factor	1.90	1.58		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	1.0	3.7		12.0	1.8	0.1		8.0		0.4	0.0	0.1
Delay (s)	30.4	44.4		26.8	23.2	12.8		40.0		21.6	18.5	13.3
Level of Service	C	D		C	C	B		D		C	B	B
Approach Delay (s)		42.3			22.4			40.0			17.5	
Approach LOS		D			C			D			B	

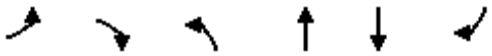
Intersection Summary			
HCM Average Control Delay	31.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	74.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	517	247	6	531	0	0	0	0	32	0	572
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	574	274	7	590	0	0	0	0	36	0	636
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		498										
pX, platoon unblocked												
vC, conflicting volume	590			574			883	1178	287	891	1178	295
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	590			574			883	1178	287	891	1178	295
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	100	100	85	100	8
cM capacity (veh/h)	961			974			19	184	701	231	184	692

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	287	287	274	203	393	36	636
Volume Left	0	0	0	7	0	36	0
Volume Right	0	0	274	0	0	0	636
cSH	1700	1700	1700	974	1700	231	692
Volume to Capacity	0.17	0.17	0.16	0.01	0.23	0.15	0.92
Queue Length 95th (ft)	0	0	0	1	0	13	307
Control Delay (s)	0.0	0.0	0.0	0.4	0.0	23.4	41.6
Lane LOS				A		C	E
Approach Delay (s)	0.0			0.1		40.6	
Approach LOS						E	

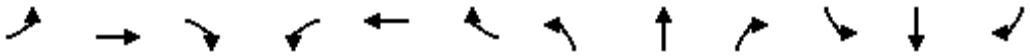
Intersection Summary				
Average Delay	12.9			
Intersection Capacity Utilization	59.7%	ICU Level of Service		B
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	549	0	537	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	610	0	597	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	305	305	597
Volume Left (vph)	305	305	597
Volume Right (vph)	0	0	0
Hadj (s)	0.58	0.58	0.29
Departure Headway (s)	7.0	7.0	5.8
Degree Utilization, x	0.59	0.59	0.95
Capacity (veh/h)	499	499	618
Control Delay (s)	18.2	18.2	49.1
Approach Delay (s)	18.2		49.1
Approach LOS	C		E

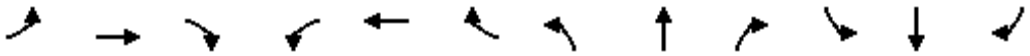
Intersection Summary			
Delay	33.5		
HCM Level of Service	D		
Intersection Capacity Utilization	54.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	373	46	130	332	0	0	0	0	72	15	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)		3.0		4.0	4.0						5.0	
Lane Util. Factor		0.95		1.00	0.95						0.95	
Frt		0.98		1.00	1.00						0.95	
Flt Protected		1.00		0.95	1.00						0.97	
Satd. Flow (prot)		3097		1574	3149						3014	
Flt Permitted		1.00		0.43	1.00						0.97	
Satd. Flow (perm)		3097		706	3149						3014	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	414	51	144	369	0	0	0	0	80	17	47
RTOR Reduction (vph)	0	11	0	0	0	0	0	0	0	0	32	0
Lane Group Flow (vph)	0	454	0	144	369	0	0	0	0	0	112	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type				pm+pt						Split		
Protected Phases		4		3	8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		36.0		49.0	49.0						27.0	
Effective Green, g (s)		36.0		49.0	49.0						27.0	
Actuated g/C Ratio		0.42		0.58	0.58						0.32	
Clearance Time (s)		3.0		4.0	4.0						5.0	
Lane Grp Cap (vph)		1312		509	1815						957	
v/s Ratio Prot		c0.15		c0.03	0.12						c0.04	
v/s Ratio Perm				0.13								
v/c Ratio		0.35		0.28	0.20						0.12	
Uniform Delay, d1		16.5		11.9	8.6						20.6	
Progression Factor		1.00		0.28	0.23						1.00	
Incremental Delay, d2		0.7		1.3	0.2						0.2	
Delay (s)		17.3		4.6	2.2						20.8	
Level of Service		B		A	A						C	
Approach Delay (s)		17.3			2.9			0.0			20.8	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	34.9%	ICU Level of Service	A
Analysis Period (min)	15		

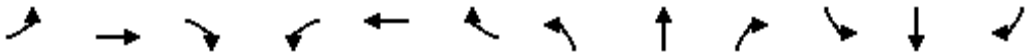
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	68	377	0	0	413	76	49	65	59	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	11	11	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0			3.0			5.0				
Lane Util. Factor	1.00	0.95			0.95			0.91				
Frt	1.00	1.00			0.98			0.95				
Flt Protected	0.95	1.00			1.00			0.99				
Satd. Flow (prot)	1629	3257			3076			4377				
Flt Permitted	0.37	1.00			1.00			0.99				
Satd. Flow (perm)	640	3257			3076			4377				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	76	419	0	0	459	84	54	72	66	0	0	0
RTOR Reduction (vph)	0	0	0	0	18	0	0	45	0	0	0	0
Lane Group Flow (vph)	76	419	0	0	525	0	0	147	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	pm+pt						Split					
Protected Phases	7	4			8		2	2				
Permitted Phases	4											
Actuated Green, G (s)	48.0	48.0			35.0			27.0				
Effective Green, g (s)	48.0	48.0			35.0			27.0				
Actuated g/C Ratio	0.56	0.56			0.41			0.32				
Clearance Time (s)	5.0	5.0			3.0			5.0				
Lane Grp Cap (vph)	478	1839			1267			1390				
v/s Ratio Prot	0.02	c0.13			c0.17			c0.03				
v/s Ratio Perm	0.07											
v/c Ratio	0.16	0.23			0.41			0.11				
Uniform Delay, d1	12.3	9.2			17.7			20.5				
Progression Factor	0.31	0.30			1.00			1.00				
Incremental Delay, d2	0.7	0.3			1.0			0.2				
Delay (s)	4.5	3.1			18.7			20.6				
Level of Service	A	A			B			C				
Approach Delay (s)		3.3			18.7			20.6			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM Average Control Delay	12.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	34.9%	ICU Level of Service	A
Analysis Period (min)	15		

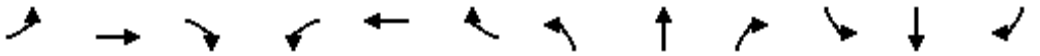
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	357	39	40	256	33	118	85	86	65	91	126
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	12	15	12	12	15	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		0.99			0.98			0.96			0.94	
Flt Protected		1.00			0.99			0.98			0.99	
Satd. Flow (prot)		2986			2976			1773			1752	
Flt Permitted		0.89			0.85			0.77			0.86	
Satd. Flow (perm)		2673			2560			1387			1526	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	43	397	43	44	284	37	131	94	96	72	101	140
RTOR Reduction (vph)	0	11	0	0	13	0	0	24	0	0	45	0
Lane Group Flow (vph)	0	472	0	0	352	0	0	297	0	0	268	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		23.0			23.0			32.0			32.0	
Effective Green, g (s)		23.0			23.0			32.0			32.0	
Actuated g/C Ratio		0.35			0.35			0.49			0.49	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		946			906			683			751	
v/s Ratio Prot												
v/s Ratio Perm		c0.18			0.14			c0.21			0.18	
v/c Ratio		0.50			0.39			0.44			0.36	
Uniform Delay, d1		16.5			15.7			10.7			10.2	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.9			1.3			2.0			1.3	
Delay (s)		18.4			17.0			12.7			11.5	
Level of Service		B			B			B			B	
Approach Delay (s)		18.4			17.0			12.7			11.5	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	15.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	65.0%	ICU Level of Service	C
Analysis Period (min)	15		

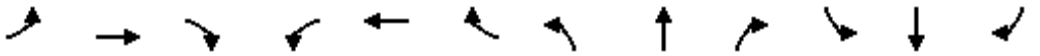
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	169	295	39	59	200	75	71	1001	104	126	428	80
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	12	10	16	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.96
Flpb, ped/bikes	0.99	1.00		1.00	1.00		0.99	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1551	3023		1593	3505		1486	3040	1347	1494	3011	1271
Flt Permitted	0.55	1.00		0.49	1.00		0.43	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	891	3023		819	3505		675	3040	1347	197	3011	1271
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	178	311	41	62	211	79	75	1054	109	133	451	84
RTOR Reduction (vph)	0	12	0	0	45	0	0	0	65	0	0	51
Lane Group Flow (vph)	178	340	0	62	245	0	75	1054	44	133	451	33
Confl. Peds. (#/hr)	31		7	7		31	37		12	12		37
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	2%	4%	0%	0%	6%	2%	3%	5%	0%	3%	6%	4%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	32.0	27.0		32.0	27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)	30.0	28.0		30.0	28.0		36.0	33.0	33.0	36.0	33.0	33.0
Actuated g/C Ratio	0.35	0.33		0.35	0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	346	996		325	1155		324	1180	523	144	1169	493
v/s Ratio Prot	c0.02	0.11		0.01	0.07		0.01	c0.35		c0.04	0.15	
v/s Ratio Perm	c0.16			0.06			0.09		0.03	0.35		0.03
v/c Ratio	0.51	0.34		0.19	0.21		0.23	0.89	0.08	0.92	0.39	0.07
Uniform Delay, d1	20.9	21.5		18.6	20.5		15.0	24.3	16.4	21.1	18.7	16.3
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	2.17	0.62	0.80
Incremental Delay, d2	5.4	0.9		1.3	0.4		1.7	10.5	0.3	54.0	0.9	0.2
Delay (s)	26.3	22.5		19.9	21.0		16.6	34.8	16.8	99.7	12.6	13.3
Level of Service	C	C		B	C		B	C	B	F	B	B
Approach Delay (s)		23.8			20.8			32.1			30.0	
Approach LOS		C			C			C			C	

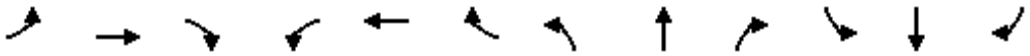
Intersection Summary			
HCM Average Control Delay	28.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	38	434	18	25	261	21	35	113	68	71	57	41
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	16	12	12	16	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00	0.99		1.00	0.98
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected		1.00	1.00		1.00	1.00		0.99	1.00		0.97	1.00
Satd. Flow (prot)		1935	1382		1947	1331		1970	1452		1933	1430
Flt Permitted		0.96	1.00		0.95	1.00		0.92	1.00		0.80	1.00
Satd. Flow (perm)		1860	1382		1848	1331		1839	1452		1581	1430
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	40	457	19	26	275	22	37	119	72	75	60	43
RTOR Reduction (vph)	0	0	10	0	0	12	0	0	42	0	0	25
Lane Group Flow (vph)	0	497	9	0	301	10	0	156	30	0	135	18
Confl. Peds. (#/hr)	5		21	21		5	9		1	1		9
Heavy Vehicles (%)	5%	5%	6%	7%	4%	12%	6%	1%	4%	0%	6%	5%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Effective Green, g (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Actuated g/C Ratio		0.46	0.46		0.46	0.46		0.42	0.42		0.42	0.42
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		858	638		853	614		764	603		657	594
v/s Ratio Prot												
v/s Ratio Perm		c0.27	0.01		0.16	0.01		0.08	0.02		c0.09	0.01
v/c Ratio		0.58	0.01		0.35	0.02		0.20	0.05		0.21	0.03
Uniform Delay, d1		12.9	9.5		11.3	9.5		12.1	11.3		12.1	11.2
Progression Factor		1.00	1.00		0.38	0.16		1.18	1.66		0.99	0.83
Incremental Delay, d2		2.8	0.0		1.1	0.0		0.6	0.2		0.7	0.1
Delay (s)		15.7	9.5		5.4	1.6		14.9	18.9		12.7	9.4
Level of Service		B	A		A	A		B	B		B	A
Approach Delay (s)		15.5			5.1			16.2			11.9	
Approach LOS		B			A			B			B	

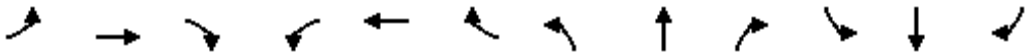
Intersection Summary			
HCM Average Control Delay	12.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	66	514	10	17	268	43	13	247	35	81	70	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00		1.00	0.98		1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1520	3031		1520	2977		1520	2983		1520	2904	
Flt Permitted	0.95	1.00		0.43	1.00		0.68	1.00		0.54	1.00	
Satd. Flow (perm)	1520	3031		692	2977		1091	2983		871	2904	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	73	571	11	19	298	48	14	274	39	90	78	33
RTOR Reduction (vph)	0	2	0	0	20	0	0	17	0	0	19	0
Lane Group Flow (vph)	73	580	0	19	326	0	14	296	0	90	92	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Prot			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Effective Green, g (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.11	0.49		0.34	0.34		0.42	0.42		0.42	0.42	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	164	1492		234	1008		453	1239		362	1206	
v/s Ratio Prot	c0.05	c0.19			0.11			0.10			0.03	
v/s Ratio Perm				0.03			0.01			c0.10		
v/c Ratio	0.45	0.39		0.08	0.32		0.03	0.24		0.25	0.08	
Uniform Delay, d1	27.2	10.4		14.6	16.0		11.3	12.3		12.4	11.5	
Progression Factor	1.07	0.60		0.91	0.93		0.54	0.57		1.11	1.08	
Incremental Delay, d2	7.8	0.7		0.7	0.8		0.1	0.4		1.6	0.1	
Delay (s)	36.9	6.9		14.0	15.6		6.2	7.4		15.4	12.5	
Level of Service	D	A		B	B		A	A		B	B	
Approach Delay (s)		10.3			15.5			7.4			13.8	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM Average Control Delay	11.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	45.1%	ICU Level of Service	A
Analysis Period (min)	15		

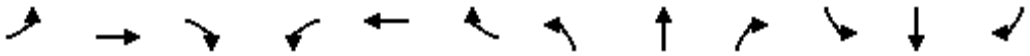
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	37	253	348	242	216	43	109	310	56	25	192	25
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.91		1.00	0.97			0.98			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1520	2776		1520	2964			3163			3190	
Flt Permitted	0.58	1.00		0.95	1.00			0.81			0.88	
Satd. Flow (perm)	921	2776		1520	2964			2578			2834	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	41	281	387	269	240	48	121	344	62	28	213	28
RTOR Reduction (vph)	0	268	0	0	25	0	0	16	0	0	14	0
Lane Group Flow (vph)	41	400	0	269	263	0	0	511	0	0	255	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Prot			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4						2			6		
Actuated Green, G (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Effective Green, g (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Actuated g/C Ratio	0.31	0.31		0.09	0.45			0.38			0.38	
Clearance Time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	283	854		140	1322			992			1090	
v/s Ratio Prot		c0.14		c0.18	0.09							
v/s Ratio Perm	0.04							c0.20			0.09	
v/c Ratio	0.14	0.47		1.92	0.20			0.52			0.23	
Uniform Delay, d1	16.3	18.2		29.5	10.9			15.3			13.5	
Progression Factor	0.63	0.27		1.32	1.10			1.09			0.56	
Incremental Delay, d2	1.0	1.8		433.0	0.2			1.4			0.5	
Delay (s)	11.3	6.7		472.0	12.3			18.2			8.1	
Level of Service	B	A		F	B			B			A	
Approach Delay (s)		6.9			234.3			18.2			8.1	
Approach LOS		A			F			B			A	

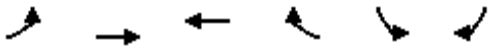
Intersection Summary			
HCM Average Control Delay	71.4	HCM Level of Service	E
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	16	298	14	70	466	70	34	94	162	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	14	12	10	15	10
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			0.95				
Frt		0.99			0.98			0.92				
Flt Protected		1.00			0.99			0.99				
Satd. Flow (prot)		1587			1566			3164				
Flt Permitted		0.97			0.92			0.99				
Satd. Flow (perm)		1535			1451			3164				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	18	331	16	78	518	78	38	104	180	0	0	0
RTOR Reduction (vph)	0	2	0	0	6	0	0	138	0	0	0	0
Lane Group Flow (vph)	0	363	0	0	668	0	0	184	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		41.9			41.9			15.1				
Effective Green, g (s)		41.9			41.9			15.1				
Actuated g/C Ratio		0.64			0.64			0.23				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		3.0			3.0			8.0				
Lane Grp Cap (vph)		989			935			735				
v/s Ratio Prot												
v/s Ratio Perm		0.24			c0.46			0.06				
v/c Ratio		0.37			0.71			0.25				
Uniform Delay, d1		5.4			7.6			20.3				
Progression Factor		1.89			1.00			1.00				
Incremental Delay, d2		0.9			4.6			0.8				
Delay (s)		11.0			12.3			21.1				
Level of Service		B			B			C				
Approach Delay (s)		11.0			12.3			21.1			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM Average Control Delay	14.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	72.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	94	366	477	44	66	126
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	99	385	502	46	69	133
Pedestrians		3	5		21	
Lane Width (ft)		16.0	16.0		10.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1319	491			
pX, platoon unblocked	0.85				0.85	0.85
vC, conflicting volume	569				1134	549
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	401				1068	377
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	89				62	76
cM capacity (veh/h)	922				182	557

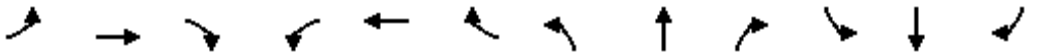
Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	484	548	69	133
Volume Left	99	0	69	0
Volume Right	0	46	0	133
cSH	922	1700	182	557
Volume to Capacity	0.11	0.32	0.38	0.24
Queue Length 95th (ft)	9	0	42	23
Control Delay (s)	2.9	0.0	36.6	13.5
Lane LOS	A		E	B
Approach Delay (s)	2.9	0.0	21.4	
Approach LOS			C	

Intersection Summary			
Average Delay	4.7		
Intersection Capacity Utilization	70.1%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	477	1	27	691	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0			4.0		
Lane Util. Factor	1.00			1.00		
Frt	1.00			1.00		
Flt Protected	1.00			1.00		
Satd. Flow (prot)	1714			1711		
Flt Permitted	1.00			0.97		
Satd. Flow (perm)	1714			1661		
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	530	1	30	768	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	531	0	0	798	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type			Perm			
Protected Phases	1 2 4			4	3	
Permitted Phases			4			
Actuated Green, G (s)	63.0			31.0		
Effective Green, g (s)	59.0			31.0		
Actuated g/C Ratio	0.69			0.36		
Clearance Time (s)				4.0		
Lane Grp Cap (vph)	1190			606		
v/s Ratio Prot	c0.31					
v/s Ratio Perm				c0.48		
v/c Ratio	0.45			1.32		
Uniform Delay, d1	5.8			27.0		
Progression Factor	0.07			1.00		
Incremental Delay, d2	0.1			154.0		
Delay (s)	0.5			181.0		
Level of Service	A			F		
Approach Delay (s)	0.5			181.0	0.0	
Approach LOS	A			F	A	

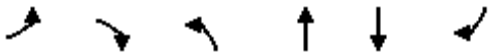
Intersection Summary			
HCM Average Control Delay	108.9	HCM Level of Service	F
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	64.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	186	195	25	569	0	0	0	0	3	0	271
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	207	217	28	632	0	0	0	0	3	0	301
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	632			207			1003	1003	212	791	894	632
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	632			207			1003	1003	212	791	894	632
tC, single (s)	4.1			5.5			7.5	6.5	6.9	7.5	6.5	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.9			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			100	100	100	99	100	28
cM capacity (veh/h)	960			983			55	237	800	278	274	418

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	138	286	660	3	301
Volume Left	0	0	28	3	0
Volume Right	0	217	0	0	301
cSH	1700	1700	983	278	418
Volume to Capacity	0.08	0.17	0.03	0.01	0.72
Queue Length 95th (ft)	0	0	2	1	140
Control Delay (s)	0.0	0.0	0.7	18.1	32.8
Lane LOS			A	C	D
Approach Delay (s)	0.0		0.7	32.7	
Approach LOS				D	

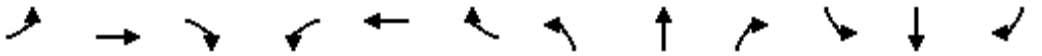
Intersection Summary			
Average Delay	7.5		
Intersection Capacity Utilization	58.4%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	189	0	594	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	210	0	660	0	0	0

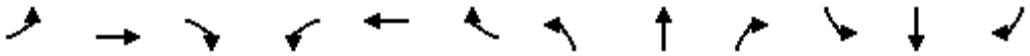
Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	105	105	660
Volume Left (vph)	105	105	660
Volume Right (vph)	0	0	0
Hadj (s)	0.58	0.58	0.29
Departure Headway (s)	6.8	6.8	4.9
Degree Utilization, x	0.20	0.20	0.89
Capacity (veh/h)	511	512	734
Control Delay (s)	10.3	10.3	33.9
Approach Delay (s)	10.3		33.9
Approach LOS	B		D

Intersection Summary			
Delay	28.2		
HCM Level of Service	D		
Intersection Capacity Utilization	47.1%	ICU Level of Service	A
Analysis Period (min)	15		



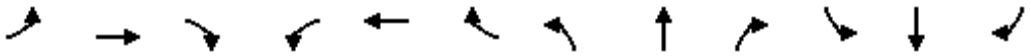
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	471	210	159	474	0	0	0	0	132	117	300
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	13	12	12	12	12	10	10	11
Total Lost time (s)		6.0	6.0		6.0					6.0	6.0	6.0
Lane Util. Factor		0.95	1.00		0.95					0.86	0.81	0.86
Frpb, ped/bikes		1.00	0.98		1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	0.93	0.85
Flt Protected		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (prot)		2978	1202		3372					1346	3693	1122
Flt Permitted		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (perm)		2978	1202		3372					1346	3693	1122
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	496	221	167	499	0	0	0	0	139	123	316
RTOR Reduction (vph)	0	0	149	0	0	0	0	0	0	0	98	94
Lane Group Flow (vph)	0	496	72	0	666	0	0	0	0	76	246	64
Confl. Peds. (#/hr)	5		3	3		5						
Heavy Vehicles (%)	0%	11%	9%	2%	4%	0%	0%	0%	0%	2%	2%	2%
Parking (#/hr)			0									0
Turn Type			Perm	Split						Split		custom
Protected Phases		2		10 12 14	10 12 14					4	4	
Permitted Phases			2									4 2
Actuated Green, G (s)		39.1	39.1		72.6					20.2	20.2	65.3
Effective Green, g (s)		39.1	39.1		72.6					20.2	20.2	65.3
Actuated g/C Ratio		0.24	0.24		0.45					0.13	0.13	0.41
Clearance Time (s)		6.0	6.0							6.0	6.0	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		728	294		1530					170	466	458
v/s Ratio Prot		c0.17			c0.20					0.06	c0.07	
v/s Ratio Perm			0.06									0.06
v/c Ratio		0.68	0.25		0.44					0.45	0.53	0.14
Uniform Delay, d1		54.8	48.6		29.7					64.7	65.4	29.7
Progression Factor		1.00	1.00		0.02					1.00	1.00	1.00
Incremental Delay, d2		5.1	2.0		0.1					1.9	1.1	0.1
Delay (s)		59.9	50.6		0.7					66.6	66.5	29.9
Level of Service		E	D		A					E	E	C
Approach Delay (s)		57.0			0.7			0.0			56.5	
Approach LOS		E			A			A			E	

Intersection Summary			
HCM Average Control Delay	37.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	30.1
Intersection Capacity Utilization	53.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



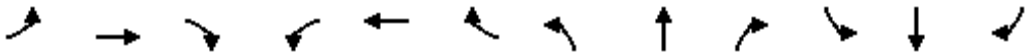
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	212	391	0	0	395	93	238	150	144	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	13	12	12	11	12	13	13	14	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0				
Lane Util. Factor	1.00	0.95			0.95	1.00	0.91	0.91				
Frt	1.00	1.00			1.00	0.85	1.00	0.94				
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (prot)	1574	3366			3149	1457	1531	3001				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (perm)	1574	3366			3149	1457	1531	3001				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	236	434	0	0	439	103	264	167	160	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	82	0	63	0	0	0	0
Lane Group Flow (vph)	236	434	0	0	439	21	201	327	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Split					Perm	Split					
Protected Phases	2 4 8	2 4 8			10		12	12				
Permitted Phases						10						
Actuated Green, G (s)	79.4	79.4			32.7	32.7	21.0	21.0				
Effective Green, g (s)	79.4	79.4			32.7	32.7	21.0	21.0				
Actuated g/C Ratio	0.50	0.50			0.20	0.20	0.13	0.13				
Clearance Time (s)					6.0	6.0	6.0	6.0				
Vehicle Extension (s)					3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	781	1670			644	298	201	394				
v/s Ratio Prot	c0.15	0.13			c0.14		c0.13	0.11				
v/s Ratio Perm						0.01						
v/c Ratio	0.30	0.26			0.68	0.07	1.00	0.83				
Uniform Delay, d1	23.9	23.3			58.8	51.4	69.5	67.8				
Progression Factor	0.07	0.07			1.00	1.00	1.00	1.00				
Incremental Delay, d2	0.2	0.1			3.0	0.1	63.5	13.8				
Delay (s)	1.8	1.8			61.8	51.5	133.0	81.6				
Level of Service	A	A			E	D	F	F				
Approach Delay (s)		1.8			59.9			99.1			0.0	
Approach LOS		A			E			F			A	

Intersection Summary			
HCM Average Control Delay	51.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	28.9
Intersection Capacity Utilization	50.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	220	325	75	44	154	54	88	824	96	93	448	104
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	14	12	10	10	12	9	10	12
Total Lost time (s)	4.0	4.0	5.0	4.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.99	1.00	1.00	1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1538	1556	1328	1595	1713		1525	2965		1509	2870	
Flt Permitted	0.49	1.00	1.00	0.42	1.00		0.34	1.00		0.13	1.00	
Satd. Flow (perm)	791	1556	1328	706	1713		539	2965		214	2870	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	232	342	79	46	162	57	93	867	101	98	472	109
RTOR Reduction (vph)	0	0	52	0	14	0	0	10	0	0	22	0
Lane Group Flow (vph)	232	342	27	46	205	0	93	958	0	98	559	0
Confl. Peds. (#/hr)	33		3	3		33	42		8	8		42
Confl. Bikes (#/hr)							1					1
Heavy Vehicles (%)	3%	8%	6%	0%	7%	5%	4%	5%	11%	2%	6%	9%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	38.2	31.2	31.2	32.4	28.3		39.6	34.1		39.6	34.1	
Effective Green, g (s)	36.2	32.2	31.2	30.4	28.3		37.6	34.1		37.6	34.1	
Actuated g/C Ratio	0.40	0.36	0.35	0.34	0.31		0.42	0.38		0.42	0.38	
Clearance Time (s)	3.0	5.0	5.0	3.0	5.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	368	557	461	269	539		275	1125		154	1089	
v/s Ratio Prot	c0.04	c0.22		0.01	0.12		0.02	c0.32		c0.03	0.19	
v/s Ratio Perm	0.21		0.02	0.05			0.12			0.23		
v/c Ratio	0.63	0.61	0.06	0.17	0.38		0.34	0.85		0.64	0.51	
Uniform Delay, d1	21.3	23.7	19.6	20.5	24.0		16.6	25.6		18.6	21.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.5	5.0	0.2	0.3	2.0		0.7	8.2		8.3	1.7	
Delay (s)	24.8	28.7	19.8	20.8	26.0		17.3	33.8		26.9	23.2	
Level of Service	C	C	B	C	C		B	C		C	C	
Approach Delay (s)		26.3			25.1			32.3			23.8	
Approach LOS		C			C			C			C	

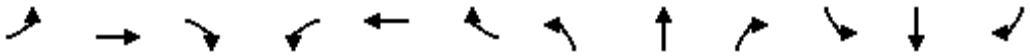
Intersection Summary			
HCM Average Control Delay	27.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	89.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	73.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	44	389	16	18	212	32	35	80	67	62	44	39
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	10	10	10	12	15	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Frpb, ped/bikes		1.00	0.97		1.00	0.97		0.99			0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.95			0.96	
Flt Protected		0.99	1.00		1.00	1.00		0.99			0.98	
Satd. Flow (prot)		1909	1482		1599	1198		1841			1814	
Flt Permitted		0.95	1.00		0.96	1.00		0.94			0.84	
Satd. Flow (perm)		1831	1482		1543	1198		1741			1549	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	46	409	17	19	223	34	37	84	71	65	46	41
RTOR Reduction (vph)	0	0	8	0	0	17	0	33	0	0	20	0
Lane Group Flow (vph)	0	455	9	0	242	17	0	159	0	0	132	0
Confl. Peds. (#/hr)	6		11	11		6	4		8	8		4
Confl. Bikes (#/hr)	1		1	1		1			1	1		
Heavy Vehicles (%)	0%	7%	0%	0%	5%	16%	0%	0%	0%	10%	0%	3%
Turn Type	Perm		Perm	Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Effective Green, g (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Actuated g/C Ratio		0.49	0.49		0.49	0.49		0.42			0.42	
Clearance Time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		901	730		760	590		723			643	
v/s Ratio Prot												
v/s Ratio Perm		c0.25	0.01		0.16	0.01		c0.09			0.08	
v/c Ratio		0.50	0.01		0.32	0.03		0.22			0.20	
Uniform Delay, d1		11.1	8.4		9.9	8.5		12.2			12.1	
Progression Factor		1.00	1.00		2.04	3.33		1.00			1.42	
Incremental Delay, d2		2.0	0.0		1.0	0.1		0.7			0.7	
Delay (s)		13.2	8.5		21.3	28.4		12.9			17.9	
Level of Service		B	A		C	C		B			B	
Approach Delay (s)		13.0			22.2			12.9			17.9	
Approach LOS		B			C			B			B	

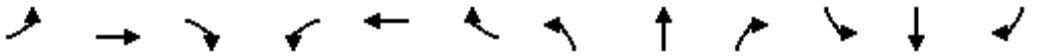
Intersection Summary			
HCM Average Control Delay	16.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	64.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	75	430	24	19	189	8	41	228	73	18	53	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.98		1.00	0.96		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.96	
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		0.99	
Satd. Flow (prot)		1658	1392		1584	1497		1755	1390		1656	
Flt Permitted		0.91	1.00		0.82	1.00		0.95	1.00		0.93	
Satd. Flow (perm)		1527	1392		1304	1497		1677	1390		1559	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	79	453	25	20	199	8	43	240	77	19	56	32
RTOR Reduction (vph)	0	0	10	0	0	5	0	0	39	0	16	0
Lane Group Flow (vph)	0	532	15	0	219	3	0	283	38	0	91	0
Confl. Peds. (#/hr)	11		17	17		11	4		17	17		4
Confl. Bikes (#/hr)	1		1	1		1	1					1
Heavy Vehicles (%)	0%	9%	5%	33%	11%	0%	6%	1%	6%	0%	0%	8%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Effective Green, g (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Actuated g/C Ratio		0.35	0.35		0.35	0.35		0.49	0.49		0.49	
Clearance Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Grp Cap (vph)		540	493		461	530		826	684		768	
v/s Ratio Prot												
v/s Ratio Perm		c0.35	0.01		0.17	0.00		c0.17	0.03		0.06	
v/c Ratio		0.99	0.03		0.48	0.01		0.34	0.06		0.12	
Uniform Delay, d1		20.8	13.7		16.3	13.6		10.1	8.6		8.9	
Progression Factor		1.60	1.95		0.93	0.91		0.34	0.33		1.15	
Incremental Delay, d2		33.7	0.1		3.4	0.0		0.8	0.1		0.3	
Delay (s)		67.0	26.8		18.6	12.3		4.2	2.9		10.5	
Level of Service		E	C		B	B		A	A		B	
Approach Delay (s)		65.2			18.4			3.9			10.5	
Approach LOS		E			B			A			B	

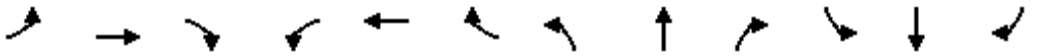
Intersection Summary			
HCM Average Control Delay	34.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	76.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	444	21	31	9	18	15	26	352	19	8	229	169
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.97		0.98			1.00			1.00	0.95
Flpb, ped/bikes		0.98	1.00		1.00			1.00			1.00	1.00
Frt		1.00	0.85		0.95			0.99			1.00	0.85
Flt Protected		0.95	1.00		0.99			1.00			1.00	1.00
Satd. Flow (prot)		1754	1390		1758			1979			1873	1328
Flt Permitted		0.73	1.00		0.90			0.97			0.99	1.00
Satd. Flow (perm)		1338	1390		1608			1932			1852	1328
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	493	23	34	10	20	17	29	391	21	9	254	188
RTOR Reduction (vph)	0	0	15	0	13	0	0	3	0	0	0	95
Lane Group Flow (vph)	0	516	19	0	34	0	0	438	0	0	263	93
Confl. Peds. (#/hr)	49		22	22		49	34		17	17		34
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	9%	0%	7%	0%	0%	0%	0%	2%	0%	0%	9%	9%
Turn Type	pm+pt		Perm	Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		27.0	27.0		17.0			32.0			32.0	32.0
Effective Green, g (s)		27.0	27.0		17.0			32.0			32.0	32.0
Actuated g/C Ratio		0.42	0.42		0.26			0.49			0.49	0.49
Clearance Time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		607	577		421			951			912	654
v/s Ratio Prot		c0.10										
v/s Ratio Perm		0.25	0.01		0.02			c0.23			0.14	0.07
v/c Ratio		0.85	0.03		0.08			0.46			0.29	0.14
Uniform Delay, d1		17.2	11.3		18.1			10.8			9.8	9.0
Progression Factor		1.05	1.65		1.00			0.57			0.83	1.12
Incremental Delay, d2		7.9	0.1		0.4			1.5			0.3	0.2
Delay (s)		26.0	18.6		18.5			7.7			8.4	10.3
Level of Service		C	B		B			A			A	B
Approach Delay (s)		25.5			18.5			7.7			9.2	
Approach LOS		C			B			A			A	

Intersection Summary			
HCM Average Control Delay	15.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	79.5%	ICU Level of Service	D
Analysis Period (min)	15		

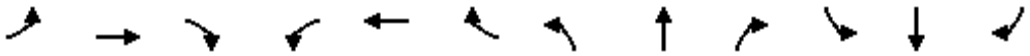
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	889	222	268	1124	0	0	0	0	275	201	376
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	11	8	8	8	11	12	14
Total Lost time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Lane Util. Factor		0.91		1.00	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00		1.00	1.00					1.00	0.99	0.99
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.97		1.00	1.00					1.00	0.94	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.99	1.00
Satd. Flow (prot)		4313		1589	3226					1419	2711	1355
Flt Permitted		1.00		0.16	1.00					0.95	0.99	1.00
Satd. Flow (perm)		4313		272	3226					1419	2711	1355
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	936	234	282	1183	0	0	0	0	289	212	396
RTOR Reduction (vph)	0	35	0	0	0	0	0	0	0	0	62	62
Lane Group Flow (vph)	0	1135	0	282	1183	0	0	0	0	234	391	148
Confl. Peds. (#/hr)	6		4	4		6	2					2
Heavy Vehicles (%)	0%	11%	7%	4%	6%	0%	0%	0%	0%	6%	4%	8%
Turn Type				pm+pt						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Actuated Green, G (s)		49.5		69.3	69.3					23.7	23.7	23.7
Effective Green, g (s)		49.5		69.3	69.3					23.7	23.7	23.7
Actuated g/C Ratio		0.47		0.66	0.66					0.23	0.23	0.23
Clearance Time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Vehicle Extension (s)		7.0		3.5	7.0					3.5	3.5	3.5
Lane Grp Cap (vph)		2033		371	2129					320	612	306
v/s Ratio Prot		0.26		c0.11	0.37							
v/s Ratio Perm				c0.39						c0.16	0.14	0.11
v/c Ratio		0.56		0.76	0.56					0.73	0.64	0.48
Uniform Delay, d1		19.9		12.6	9.6					37.7	36.8	35.3
Progression Factor		1.00		1.13	1.61					1.00	1.00	1.00
Incremental Delay, d2		1.1		5.3	0.6					8.6	2.3	1.4
Delay (s)		21.0		19.5	16.0					46.3	39.1	36.8
Level of Service		C		B	B					D	D	D
Approach Delay (s)		21.0			16.7			0.0			40.4	
Approach LOS		C			B			A			D	

Intersection Summary			
HCM Average Control Delay	24.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	101.7%	ICU Level of Service	G
Analysis Period (min)	15		

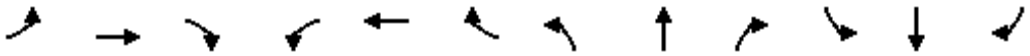
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	311	853	0	0	843	234	549	365	422	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	11	12	12	12	12	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0		6.0				
Lane Util. Factor	0.97	0.95			0.95	1.00		0.91				
Frpb, ped/bikes	1.00	1.00			1.00	0.99		1.00				
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00				
Frt	1.00	1.00			1.00	0.85		0.95				
Flt Protected	0.95	1.00			1.00	1.00		0.98				
Satd. Flow (prot)	2915	3138			3119	1449		4409				
Flt Permitted	0.19	1.00			1.00	1.00		0.98				
Satd. Flow (perm)	580	3138			3119	1449		4409				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	327	898	0	0	887	246	578	384	444	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	106	0	78	0	0	0	0
Lane Group Flow (vph)	327	898	0	0	887	140	0	1328	0	0	0	0
Confl. Peds. (#/hr)	4					4						
Heavy Vehicles (%)	10%	9%	0%	0%	6%	4%	4%	3%	5%	0%	0%	0%
Turn Type	pm+pt					Perm	Perm					
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8					
Actuated Green, G (s)	62.5	62.5			45.1	45.1		30.5				
Effective Green, g (s)	62.5	62.5			45.1	45.1		30.5				
Actuated g/C Ratio	0.60	0.60			0.43	0.43		0.29				
Clearance Time (s)	6.0	6.0			6.0	6.0		6.0				
Vehicle Extension (s)	3.5	7.0			7.0	7.0		5.0				
Lane Grp Cap (vph)	599	1868			1340	622		1281				
v/s Ratio Prot	0.06	c0.29			c0.28							
v/s Ratio Perm	0.27					0.10		0.30				
v/c Ratio	0.55	0.48			0.66	0.22		1.04				
Uniform Delay, d1	12.8	12.0			23.9	18.9		37.2				
Progression Factor	0.68	0.82			0.97	1.49		1.00				
Incremental Delay, d2	0.9	0.7			1.6	0.5		35.1				
Delay (s)	9.6	10.6			24.8	28.7		72.4				
Level of Service	A	B			C	C		E				
Approach Delay (s)		10.4			25.7			72.4			0.0	
Approach LOS		B			C			E			A	

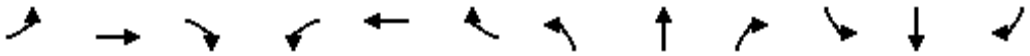
Intersection Summary			
HCM Average Control Delay	38.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	101.7%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	105	581	226	78	784	44	226	178	40	49	111	91
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	11	12	12	10	10	13	10	10	10
Total Lost time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.97		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1565	3061	1291	1602	3232		1446	3007		1544	2782	
Flt Permitted	0.14	1.00	1.00	0.42	1.00		0.53	1.00		0.61	1.00	
Satd. Flow (perm)	224	3061	1291	709	3232		811	3007		990	2782	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	111	612	238	82	825	46	238	187	42	52	117	96
RTOR Reduction (vph)	0	0	97	0	4	0	0	21	0	0	80	0
Lane Group Flow (vph)	111	612	141	82	867	0	238	208	0	52	133	0
Confl. Peds. (#/hr)	3		12	12		3	9		6	6		9
Heavy Vehicles (%)	2%	8%	5%	3%	5%	3%	10%	3%	2%	3%	7%	4%
Parking (#/hr)			0									
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	62.6	52.6	62.0	40.4	33.9		29.7	20.3		24.1	17.5	
Effective Green, g (s)	62.6	52.6	62.0	40.4	33.9		29.7	20.3		24.1	17.5	
Actuated g/C Ratio	0.60	0.50	0.59	0.38	0.32		0.28	0.19		0.23	0.17	
Clearance Time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0		3.0	7.0		3.0	7.0	
Lane Grp Cap (vph)	455	1533	762	328	1043		286	581		262	464	
v/s Ratio Prot	c0.06	c0.20	0.02	0.02	c0.27		c0.07	0.07		0.01	0.05	
v/s Ratio Perm	0.09		0.09	0.08			c0.16			0.03		
v/c Ratio	0.24	0.40	0.18	0.25	0.83		0.83	0.36		0.20	0.29	
Uniform Delay, d1	12.1	16.3	9.9	20.9	32.9		33.9	36.7		32.3	38.3	
Progression Factor	0.91	1.01	2.01	1.00	1.00		0.94	0.88		1.00	1.00	
Incremental Delay, d2	1.0	0.6	0.1	0.4	7.7		17.7	1.3		0.4	1.2	
Delay (s)	11.9	17.1	19.9	21.3	40.6		49.5	33.8		32.6	39.5	
Level of Service	B	B	B	C	D		D	C		C	D	
Approach Delay (s)		17.2			39.0			41.8			38.2	
Approach LOS		B			D			D			D	

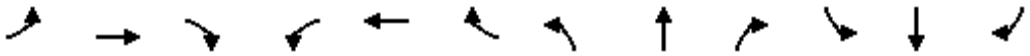
Intersection Summary			
HCM Average Control Delay	31.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	22.5
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	62	228	286	59	190	102	329	382	75	91	258	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	12	11	12	12	11	13	12	10	11	12
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.92		1.00	0.95		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1635	2871		1463	3032		1589	3245		1549	3135	
Flt Permitted	0.54	1.00		0.32	1.00		0.46	1.00		0.48	1.00	
Satd. Flow (perm)	924	2871		490	3032		772	3245		778	3135	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	65	240	301	62	200	107	346	402	79	96	272	57
RTOR Reduction (vph)	0	206	0	0	64	0	0	15	0	0	17	0
Lane Group Flow (vph)	65	335	0	62	243	0	346	466	0	96	312	0
Confl. Peds. (#/hr)	20					20	1		2	2		1
Heavy Vehicles (%)	4%	5%	6%	13%	6%	5%	4%	6%	5%	3%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	35.7	28.7		35.9	28.8		53.2	41.9		38.6	31.3	
Effective Green, g (s)	35.7	28.7		35.9	28.8		53.2	41.9		38.6	31.3	
Actuated g/C Ratio	0.34	0.27		0.34	0.27		0.51	0.40		0.37	0.30	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.5	7.0		3.5	7.0		3.5	7.0		3.5	7.0	
Lane Grp Cap (vph)	362	785		233	832		530	1295		340	935	
v/s Ratio Prot	0.01	c0.12		c0.02	0.08		c0.11	0.14		0.02	0.10	
v/s Ratio Perm	0.05			0.07			c0.22			0.08		
v/c Ratio	0.18	0.43		0.27	0.29		0.65	0.36		0.28	0.33	
Uniform Delay, d1	23.8	31.4		24.1	30.1		16.6	22.1		22.4	28.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.02	0.90	
Incremental Delay, d2	0.3	1.7		0.7	0.9		3.0	0.8		0.5	0.9	
Delay (s)	24.1	33.1		24.8	30.9		19.6	22.9		23.5	26.8	
Level of Service	C	C		C	C		B	C		C	C	
Approach Delay (s)		32.1			29.9			21.5			26.1	
Approach LOS		C			C			C			C	

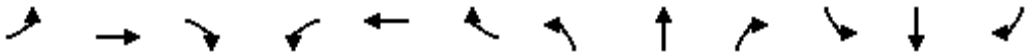
Intersection Summary			
HCM Average Control Delay	26.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	69.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	169	546	81	6	445	125	68	602	7	144	326	105
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	9	11	12	9	9	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.97		1.00	1.00		1.00	0.96	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		2912			2885		1436	3186		1451	2788	
Flt Permitted		0.57			0.94		0.41	1.00		0.28	1.00	
Satd. Flow (perm)		1680			2727		624	3186		421	2788	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	188	607	90	7	494	139	76	669	8	160	362	117
RTOR Reduction (vph)	0	13	0	0	39	0	0	1	0	0	48	0
Lane Group Flow (vph)	0	872	0	0	601	0	76	676	0	160	431	0
Confl. Peds. (#/hr)	9		11	11		9	11		14	14		11
Heavy Vehicles (%)	3%	6%	18%	50%	6%	6%	7%	3%	50%	6%	7%	2%
Turn Type	pm+pt			Perm			pm+pt			pm+pt		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			19.0		26.0	22.0		26.0	22.0	
Effective Green, g (s)		27.0			19.0		26.0	22.0		26.0	22.0	
Actuated g/C Ratio		0.42			0.29		0.40	0.34		0.40	0.34	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		774			797		300	1078		232	944	
v/s Ratio Prot		c0.07					0.02	0.21		c0.04	0.15	
v/s Ratio Perm		c0.40			0.22		0.09			c0.23		
v/c Ratio		1.13			0.75		0.25	0.63		0.69	0.46	
Uniform Delay, d1		19.0			20.9		12.4	18.1		14.6	16.8	
Progression Factor		1.00			1.54		0.94	0.72		1.00	1.00	
Incremental Delay, d2		72.9			0.6		1.8	2.5		15.5	1.6	
Delay (s)		91.9			32.7		13.5	15.5		30.1	18.4	
Level of Service		F			C		B	B		C	B	
Approach Delay (s)		91.9			32.7			15.3			21.3	
Approach LOS		F			C			B			C	

Intersection Summary			
HCM Average Control Delay	43.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	52	225	48	73	159	13	38	661	93	10	378	45
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.99		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1666	1898		1615	1943		1658	3202		1138	3197	
Flt Permitted	0.65	1.00		0.52	1.00		0.50	1.00		0.30	1.00	
Satd. Flow (perm)	1132	1898		891	1943		870	3202		359	3197	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	54	232	49	75	164	13	39	681	96	10	390	46
RTOR Reduction (vph)	0	12	0	0	4	0	0	17	0	0	14	0
Lane Group Flow (vph)	54	269	0	75	173	0	39	760	0	10	422	0
Confl. Peds. (#/hr)	10		16	16		10	4		6	6		4
Confl. Bikes (#/hr)			4	4								
Heavy Vehicles (%)	2%	4%	5%	5%	4%	0%	3%	4%	8%	50%	5%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.48	0.48		0.48	0.48	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	418	701		329	717		415	1527		171	1525	
v/s Ratio Prot		c0.14			0.09			c0.24			0.13	
v/s Ratio Perm	0.05			0.08			0.04			0.03		
v/c Ratio	0.13	0.38		0.23	0.24		0.09	0.50		0.06	0.28	
Uniform Delay, d1	13.6	15.1		14.1	14.2		9.3	11.7		9.1	10.2	
Progression Factor	1.00	1.00		1.73	1.77		1.00	1.00		0.48	0.48	
Incremental Delay, d2	0.6	1.6		0.7	0.3		0.4	1.2		0.5	0.4	
Delay (s)	14.2	16.7		25.1	25.4		9.8	12.8		4.9	5.3	
Level of Service	B	B		C	C		A	B		A	A	
Approach Delay (s)		16.3			25.3			12.7			5.3	
Approach LOS		B			C			B			A	

Intersection Summary			
HCM Average Control Delay	13.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	62.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR	SBR2
Lane Configurations												
Volume (vph)	631	194	621	17	3	14	3	47	22	0	2	4
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	12	12	16	12	12	16	12	12
Total Lost time (s)	5.0		5.0				4.0			4.0		
Lane Util. Factor	0.95		0.95				1.00			1.00		
Frpb, ped/bikes	1.00		1.00				1.00			0.99		
Flpb, ped/bikes	1.00		1.00				1.00			1.00		
Frt	1.00		1.00				0.91			0.97		
Flt Protected	1.00		0.99				0.99			0.96		
Satd. Flow (prot)	2956		2955				1732			1897		
Flt Permitted	1.00		0.57				0.94			0.81		
Satd. Flow (perm)	2956		1698				1646			1603		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	664	204	654	18	3	15	3	49	23	0	2	4
RTOR Reduction (vph)	0	0	2	0	0	0	38	0	0	3	0	0
Lane Group Flow (vph)	664	0	874	0	0	0	32	0	0	26	0	0
Confl. Peds. (#/hr)		7		6		3					3	
Confl. Bikes (#/hr)		1										
Heavy Vehicles (%)	8%	8%	6%	0%	0%	8%	0%	5%	0%	0%	0%	0%
Turn Type		custom				Perm			Perm			
Protected Phases	8	7	4				2			6		
Permitted Phases		4 7				2			6			
Actuated Green, G (s)	18.0		27.0				14.0			14.0		
Effective Green, g (s)	18.0		27.0				14.0			14.0		
Actuated g/C Ratio	0.28		0.42				0.22			0.22		
Clearance Time (s)	5.0		5.0				4.0			4.0		
Lane Grp Cap (vph)	819		821				355			345		
v/s Ratio Prot	0.22		c0.10									
v/s Ratio Perm			c0.34				c0.02			0.02		
v/c Ratio	0.81		1.06				0.09			0.07		
Uniform Delay, d1	21.9		19.0				20.4			20.3		
Progression Factor	1.28		0.75				1.00			1.00		
Incremental Delay, d2	0.8		48.8				0.5			0.4		
Delay (s)	28.9		63.1				20.9			20.8		
Level of Service	C		E				C			C		
Approach Delay (s)	28.9		63.1				20.9			20.8		
Approach LOS	C		E				C			C		

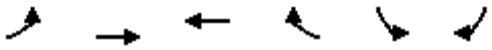
Intersection Summary			
HCM Average Control Delay	99.0	HCM Level of Service	F
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	94.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



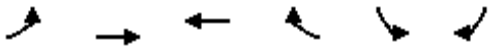
Movement	NEL	NER
Lane Configurations		
Volume (vph)	1	344
Ideal Flow (vphpl)	1800	1800
Lane Width	12	12
Total Lost time (s)	5.0	
Lane Util. Factor	1.00	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Frt	0.87	
Flt Protected	1.00	
Satd. Flow (prot)	1429	
Flt Permitted	1.00	
Satd. Flow (perm)	1429	
Peak-hour factor, PHF	0.95	0.95
Adj. Flow (vph)	1	362
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	363	0
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Heavy Vehicles (%)	0%	9%
Turn Type		
Protected Phases	3	
Permitted Phases		
Actuated Green, G (s)	10.0	
Effective Green, g (s)	10.0	
Actuated g/C Ratio	0.15	
Clearance Time (s)	5.0	
Lane Grp Cap (vph)	220	
v/s Ratio Prot	c0.25	
v/s Ratio Perm		
v/c Ratio	1.65	
Uniform Delay, d1	27.5	
Progression Factor	0.89	
Incremental Delay, d2	310.9	
Delay (s)	335.3	
Level of Service	F	
Approach Delay (s)	335.3	
Approach LOS	F	

Intersection Summary



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	194	917	678	81	101	156
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frt		1.00	0.98		1.00	0.85
Flt Protected		0.99	1.00		0.95	1.00
Satd. Flow (prot)		3229	3205		1629	1457
Flt Permitted		0.63	1.00		0.95	1.00
Satd. Flow (perm)		2062	3205		1629	1457
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	216	1019	753	90	112	173
RTOR Reduction (vph)	0	0	14	0	0	128
Lane Group Flow (vph)	0	1235	829	0	112	45
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		40.0	40.0		17.0	17.0
Effective Green, g (s)		40.0	40.0		17.0	17.0
Actuated g/C Ratio		0.62	0.62		0.26	0.26
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1269	1972		426	381
v/s Ratio Prot			0.26		c0.07	
v/s Ratio Perm		c0.60				0.03
v/c Ratio		0.97	0.42		0.26	0.12
Uniform Delay, d1		12.0	6.5		19.0	18.3
Progression Factor		1.43	1.29		0.93	0.91
Incremental Delay, d2		10.2	0.6		1.5	0.6
Delay (s)		27.3	8.9		19.1	17.3
Level of Service		C	A		B	B
Approach Delay (s)		27.3	8.9		18.0	
Approach LOS		C	A		B	

Intersection Summary			
HCM Average Control Delay	19.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	71.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	53	938	697	217	174	56
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	12	10	11	12	10	10
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frpb, ped/bikes		1.00	0.99		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.96		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2928	2912		1464	1373
Flt Permitted		0.86	1.00		0.95	1.00
Satd. Flow (perm)		2514	2912		1464	1373
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	56	987	734	228	183	59
RTOR Reduction (vph)	0	0	45	0	0	42
Lane Group Flow (vph)	0	1043	917	0	183	17
Confl. Peds. (#/hr)	1			1		
Confl. Bikes (#/hr)	1			1		
Heavy Vehicles (%)	4%	9%	8%	12%	9%	4%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		38.0	38.0		19.0	19.0
Effective Green, g (s)		38.0	38.0		19.0	19.0
Actuated g/C Ratio		0.58	0.58		0.29	0.29
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1470	1702		428	401
v/s Ratio Prot			0.31		c0.12	
v/s Ratio Perm		c0.41				0.01
v/c Ratio		0.71	0.54		0.43	0.04
Uniform Delay, d1		9.6	8.2		18.6	16.5
Progression Factor		0.87	0.61		1.01	1.47
Incremental Delay, d2		1.2	0.7		3.0	0.2
Delay (s)		9.6	5.7		21.9	24.5
Level of Service		A	A		C	C
Approach Delay (s)		9.6	5.7		22.5	
Approach LOS		A	A		C	

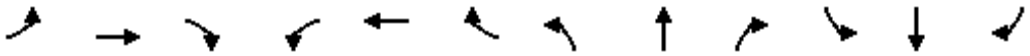
Intersection Summary			
HCM Average Control Delay	9.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	76.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



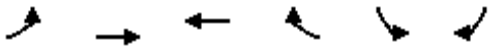
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	964	160	167	672	423	323
Ideal Flow (vphpl)	2300	1800	1800	2300	1800	1800
Lane Width	15	12	14	16	15	12
Total Lost time (s)	5.0		5.0	5.0	5.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	0.99	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.98		1.00	1.00	0.94	
Flt Protected	1.00		0.95	1.00	0.97	
Satd. Flow (prot)	2239		1770	2436	1763	
Flt Permitted	1.00		0.13	1.00	0.97	
Satd. Flow (perm)	2239		240	2436	1763	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	984	163	170	686	432	330
RTOR Reduction (vph)	9	0	0	0	42	0
Lane Group Flow (vph)	1138	0	170	686	720	0
Confl. Peds. (#/hr)		4	4			8
Heavy Vehicles (%)	11%	7%	3%	7%	2%	2%
Turn Type			Perm			
Protected Phases	4			8	2	
Permitted Phases			8			
Actuated Green, G (s)	31.0		31.0	31.0	24.0	
Effective Green, g (s)	31.0		31.0	31.0	24.0	
Actuated g/C Ratio	0.48		0.48	0.48	0.37	
Clearance Time (s)	5.0		5.0	5.0	5.0	
Lane Grp Cap (vph)	1068		114	1162	651	
v/s Ratio Prot	0.51			0.28	c0.41	
v/s Ratio Perm			c0.71			
v/c Ratio	1.07		1.49	0.59	1.11	
Uniform Delay, d1	17.0		17.0	12.4	20.5	
Progression Factor	1.48		1.00	1.00	1.00	
Incremental Delay, d2	43.2		261.6	2.2	67.8	
Delay (s)	68.4		278.6	14.6	88.3	
Level of Service	E		F	B	F	
Approach Delay (s)	68.4			67.0	88.3	
Approach LOS	E			E	F	

Intersection Summary			
HCM Average Control Delay	73.4	HCM Level of Service	E
HCM Volume to Capacity ratio	1.32		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	118.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	725	89	258	1167	9	72	0	187	1	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	15	13	11	11	12	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0	4.0	3.0	3.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00		0.95	
Satd. Flow (prot)	1881	3213	1422	1589	3138	1366		1642	1443		969	
Flt Permitted	0.21	1.00	1.00	0.27	1.00	1.00		0.76	1.00		0.70	
Satd. Flow (perm)	422	3213	1422	448	3138	1366		1309	1443		719	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	806	99	287	1297	10	80	0	208	1	0	0
RTOR Reduction (vph)	0	0	46	0	0	2	0	0	182	0	0	0
Lane Group Flow (vph)	1	806	53	287	1297	8	0	80	26	0	1	0
Heavy Vehicles (%)	0%	10%	4%	4%	9%	12%	18%	0%	6%	100%	0%	0%
Turn Type	Perm		Perm	custom		custom	Perm		Perm	Perm		
Protected Phases		4		3	3 8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)	45.6	45.6	45.6	66.4	66.4	66.4		10.6	10.6		10.6	
Effective Green, g (s)	45.6	45.6	45.6	66.4	66.4	66.4		10.6	10.6		10.6	
Actuated g/C Ratio	0.54	0.54	0.54	0.78	0.78	0.78		0.12	0.12		0.12	
Clearance Time (s)	4.0	4.0	4.0	3.0		4.0		4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0		3.0	
Lane Grp Cap (vph)	226	1724	763	589	2451	1067		163	180		90	
v/s Ratio Prot		0.25		0.10	c0.41							
v/s Ratio Perm	0.00		0.04	0.28		0.01		c0.06	0.02		0.00	
v/c Ratio	0.00	0.47	0.07	0.49	0.53	0.01		0.49	0.14		0.01	
Uniform Delay, d1	9.2	12.2	9.5	3.9	3.5	2.0		34.7	33.2		32.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	0.0	0.9	0.2	0.6	0.2	0.0		2.3	0.4		0.0	
Delay (s)	9.2	13.1	9.7	4.6	3.7	2.1		37.0	33.5		32.7	
Level of Service	A	B	A	A	A	A		D	C		C	
Approach Delay (s)		12.7			3.8			34.5			32.7	
Approach LOS		B			A			C			C	

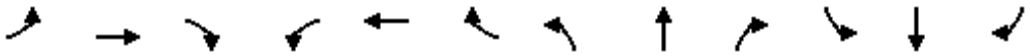
Intersection Summary			
HCM Average Control Delay	9.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	52.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	13	820	856	45	24	11
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	12	10	10
Total Lost time (s)		5.0	5.0		3.0	
Lane Util. Factor		0.95	0.95		1.00	
Frt		1.00	0.99		0.96	
Flt Protected		1.00	1.00		0.97	
Satd. Flow (prot)		3038	3017		1482	
Flt Permitted		0.93	1.00		0.97	
Satd. Flow (perm)		2834	3017		1482	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	14	911	951	50	27	12
RTOR Reduction (vph)	0	0	4	0	11	0
Lane Group Flow (vph)	0	925	997	0	28	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type	Perm					
Protected Phases		4	8 2 11		5	
Permitted Phases	4					
Actuated Green, G (s)		33.0	64.0		7.0	
Effective Green, g (s)		33.0	64.0		7.0	
Actuated g/C Ratio		0.37	0.71		0.08	
Clearance Time (s)		5.0			3.0	
Lane Grp Cap (vph)		1039	2145		115	
v/s Ratio Prot			c0.33		c0.02	
v/s Ratio Perm		c0.33				
v/c Ratio		0.89	0.46		0.24	
Uniform Delay, d1		26.8	5.6		39.0	
Progression Factor		1.00	0.00		1.00	
Incremental Delay, d2		11.4	0.2		4.9	
Delay (s)		38.2	0.2		44.0	
Level of Service		D	A		D	
Approach Delay (s)		38.2	0.2		44.0	
Approach LOS		D	A		D	

Intersection Summary			
HCM Average Control Delay	19.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	44.5%	ICU Level of Service	A
Analysis Period (min)	15		

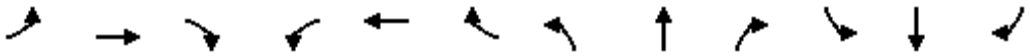
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	88	435	1	27	584	80	0	0	1	45	3	128
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12	12	11	12	11
Total Lost time (s)		4.0			4.0			3.0			3.0	3.0
Lane Util. Factor		1.00			0.95			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			0.92			1.00	0.96
Flpb, ped/bikes		1.00			1.00			1.00			0.98	1.00
Frt		1.00			0.98			0.86			1.00	0.85
Flt Protected		0.99			1.00			1.00			0.95	1.00
Satd. Flow (prot)		1727			3232			1432			1610	1282
Flt Permitted		0.77			0.93			1.00			0.93	1.00
Satd. Flow (perm)		1333			3022			1432			1569	1282
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	98	483	1	30	649	89	0	0	1	50	3	142
RTOR Reduction (vph)	0	0	0	0	12	0	0	1	0	0	0	95
Lane Group Flow (vph)	0	582	0	0	756	0	0	0	0	0	53	47
Confl. Peds. (#/hr)	33		13	13		33	29		13	13		29
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	4%	3%	0%	0%	4%	0%	0%	0%	0%	5%	0%	11%
Turn Type	Perm			Prot			Perm			pm+pt		Perm
Protected Phases		4		3	3 4			1		2	1 2	
Permitted Phases	4				3		1	1		1 2		1 2
Actuated Green, G (s)		31.0			45.0			9.0			25.0	28.0
Effective Green, g (s)		31.0			45.0			9.0			25.0	28.0
Actuated g/C Ratio		0.36			0.53			0.11			0.29	0.33
Clearance Time (s)		4.0						3.0				
Lane Grp Cap (vph)		486			1634			152			469	422
v/s Ratio Prot					c0.08			0.00			0.02	
v/s Ratio Perm		c0.44			0.17						0.01	c0.04
v/c Ratio		1.20			0.46			0.00			0.11	0.11
Uniform Delay, d1		27.0			12.5			34.0			21.9	19.8
Progression Factor		1.00			1.88			1.00			1.00	1.00
Incremental Delay, d2		107.5			0.1			0.0			0.5	0.5
Delay (s)		134.5			23.5			34.0			22.4	20.4
Level of Service		F			C			C			C	C
Approach Delay (s)		134.5			23.5			34.0			20.9	
Approach LOS		F			C			C			C	

Intersection Summary			
HCM Average Control Delay	64.9	HCM Level of Service	E
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	73.6%	ICU Level of Service	D
Analysis Period (min)	15		

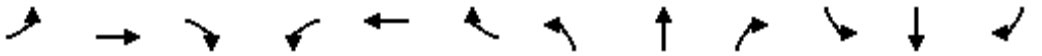
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	598	28	35	1014	58	36	29	48	23	24	87
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	16	10	10	16	8	15	8	8	14	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			0.98	
Flpb, ped/bikes	0.98	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.99			0.94			0.91	
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.99	
Satd. Flow (prot)	1557	3022		1587	3021			1808			1703	
Flt Permitted	0.17	1.00		0.36	1.00			0.89			0.95	
Satd. Flow (perm)	277	3022		604	3021			1636			1627	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	41	629	29	37	1067	61	38	31	51	24	25	92
RTOR Reduction (vph)	0	5	0	0	6	0	0	33	0	0	21	0
Lane Group Flow (vph)	41	653	0	37	1122	0	0	87	0	0	120	0
Confl. Peds. (#/hr)	145		16	16		145	17		19	19		17
Confl. Bikes (#/hr)	5					5			2	2		
Heavy Vehicles (%)	0%	5%	0%	0%	4%	2%	0%	0%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			22.0			22.0	
Effective Green, g (s)	34.0	34.0		34.0	34.0			23.0			23.0	
Actuated g/C Ratio	0.52	0.52		0.52	0.52			0.35			0.35	
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0			5.0	
Lane Grp Cap (vph)	145	1581		316	1580			579			576	
v/s Ratio Prot		0.22			c0.37							
v/s Ratio Perm	0.15			0.06				0.05			c0.07	
v/c Ratio	0.28	0.41		0.12	0.71			0.15			0.21	
Uniform Delay, d1	8.7	9.4		7.9	11.8			14.3			14.6	
Progression Factor	1.00	1.00		0.69	1.41			1.00			1.00	
Incremental Delay, d2	4.8	0.8		0.7	2.4			0.5			0.8	
Delay (s)	13.5	10.2		6.1	19.1			14.9			15.5	
Level of Service	B	B		A	B			B			B	
Approach Delay (s)		10.4			18.7			14.9			15.5	
Approach LOS		B			B			B			B	

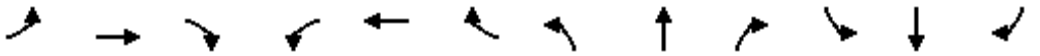
Intersection Summary			
HCM Average Control Delay	15.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	789	5	32	637	56	0	0	0	586	89	379
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00				0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.67				1.00	1.00	0.98
Flpb, ped/bikes	0.93	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	793	3379		1710	3226	514				3285	1731	1481
Flt Permitted	0.40	1.00		0.14	1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	331	3379		248	3226	514				3285	1731	1481
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	26	831	5	34	671	59	0	0	0	617	94	399
RTOR Reduction (vph)	0	0	0	0	0	26	0	0	0	0	0	166
Lane Group Flow (vph)	26	836	0	34	671	33	0	0	0	617	94	233
Confl. Peds. (#/hr)	350		4	4		350	8		6	6		8
Confl. Bikes (#/hr)	7		1	1		7						
Heavy Vehicles (%)	100%	1%	20%	0%	6%	100%	0%	0%	0%	1%	4%	1%
Turn Type	pm+pt			pm+pt		Perm				Split		Perm
Protected Phases	7	4		3	8					6	6	
Permitted Phases	4			8		8						6
Actuated Green, G (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Effective Green, g (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Actuated g/C Ratio	0.33	0.33		0.56	0.56	0.56				0.23	0.23	0.23
Clearance Time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Grp Cap (vph)	159	1118		634	1812	289				758	399	342
v/s Ratio Prot	0.02	c0.25		0.02	c0.21					c0.19	0.05	
v/s Ratio Perm	0.04			0.01		0.06						0.16
v/c Ratio	0.16	0.75		0.05	0.37	0.11				0.81	0.24	0.68
Uniform Delay, d1	31.6	38.7		15.2	15.8	13.4				47.4	40.7	45.6
Progression Factor	0.85	0.86		0.32	0.75	1.68				1.00	1.00	1.00
Incremental Delay, d2	2.1	4.4		0.1	0.4	0.5				9.3	1.4	10.5
Delay (s)	28.9	37.5		5.0	12.1	22.9				56.7	42.1	56.1
Level of Service	C	D		A	B	C				E	D	E
Approach Delay (s)		37.3			12.6			0.0			55.2	
Approach LOS		D			B			A			E	

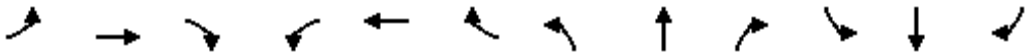
Intersection Summary			
HCM Average Control Delay	37.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	53.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	340	815	220	54	593	287	102	251	55	54	0	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.67		1.00	0.91	1.00		0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.97		1.00	1.00	0.85		1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (prot)	3285	3262		1710	3138	1018		3301	1363	855		738
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (perm)	3285	3262		1710	3138	1018		3301	1363	855		738
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	358	858	232	57	624	302	107	264	58	57	0	32
RTOR Reduction (vph)	0	19	0	0	0	228	0	0	41	0	0	30
Lane Group Flow (vph)	358	1071	0	57	624	74	0	371	17	57	0	2
Confl. Peds. (#/hr)	327		13	13		327	6		60	60		6
Confl. Bikes (#/hr)	6					6						
Heavy Vehicles (%)	1%	1%	0%	0%	9%	1%	0%	3%	2%	100%	0%	100%
Turn Type	Prot			Prot		Perm	Split		Perm	Prot		custom
Protected Phases	7	4		3	8		2	2		6		
Permitted Phases						8			2			6
Actuated Green, G (s)	41.0	65.0		8.0	32.0	32.0		29.0	29.0	10.0		10.0
Effective Green, g (s)	41.0	65.0		8.0	32.0	32.0		29.0	29.0	10.0		10.0
Actuated g/C Ratio	0.32	0.50		0.06	0.25	0.25		0.22	0.22	0.08		0.08
Clearance Time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	1036	1631		105	772	251		736	304	66		57
v/s Ratio Prot	0.11	c0.33		0.03	c0.20			c0.11		c0.07		
v/s Ratio Perm						0.07			0.01			0.00
v/c Ratio	0.35	0.66		0.54	0.81	0.30		0.50	0.06	0.86		0.04
Uniform Delay, d1	34.2	24.2		59.2	46.1	39.8		44.2	39.7	59.3		55.6
Progression Factor	0.94	0.18		1.00	1.00	1.00		0.95	0.99	1.00		1.00
Incremental Delay, d2	0.6	1.3		18.7	8.9	3.0		2.5	0.3	65.1		0.3
Delay (s)	32.7	5.7		77.9	55.0	42.8		44.3	39.7	124.4		55.9
Level of Service	C	A		E	E	D		D	D	F		E
Approach Delay (s)		12.4			52.6			43.7			99.8	
Approach LOS		B			D			D			F	

Intersection Summary			
HCM Average Control Delay	33.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	68.3%	ICU Level of Service	C
Analysis Period (min)	15		

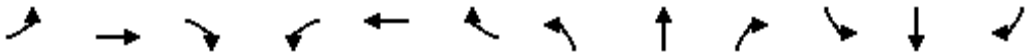
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	893	181	105	839	0	89	0	103	9	18	7
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	11	11	8	12	12	12	14	15	12
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes		0.99		1.00	1.00		1.00		0.98	1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00		0.97		1.00	0.99	1.00	
Frt		0.97		1.00	1.00		1.00		0.85	1.00	0.96	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		2987		1649	3149		1388		1451	1803	1870	
Flt Permitted		1.00		0.17	1.00		0.74		1.00	0.95	1.00	
Satd. Flow (perm)		2987		291	3149		1079		1451	1803	1870	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	992	201	117	932	0	99	0	114	10	20	8
RTOR Reduction (vph)	0	17	0	0	0	0	0	0	77	0	5	0
Lane Group Flow (vph)	0	1176	0	117	932	0	99	0	37	10	23	0
Confl. Peds. (#/hr)	67		19	19		67	38		12	12		38
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	2%	11%	0%	5%	0%	19%	0%	3%	0%	0%	0%
Turn Type				Perm			custom		custom	Perm		
Protected Phases		4			8						6	
Permitted Phases				8			2		2	6		
Actuated Green, G (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Effective Green, g (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Actuated g/C Ratio		0.60		0.60	0.60		0.32		0.32	0.32	0.32	
Clearance Time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)		1792		175	1889		345		464	577	598	
v/s Ratio Prot		0.39			0.30						0.01	
v/s Ratio Perm				c0.40			c0.09		0.03	0.01		
v/c Ratio		0.66		0.67	0.49		0.29		0.08	0.02	0.04	
Uniform Delay, d1		13.2		13.4	11.4		25.5		23.7	23.2	23.4	
Progression Factor		1.00		1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		1.9		18.5	0.9		2.1		0.3	0.1	0.1	
Delay (s)		15.1		31.8	12.3		27.5		24.1	23.3	23.5	
Level of Service		B		C	B		C		C	C	C	
Approach Delay (s)		15.1			14.5			25.7			23.5	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	15.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		

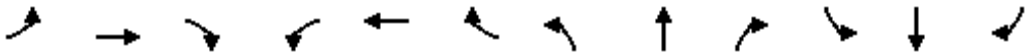
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	300	0	1230	211	670	0	0	789	490
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	12	10	10	12	12	11	12
Total Lost time (s)				4.0		5.0	3.0	4.0			4.0	
Lane Util. Factor				0.95		1.00	1.00	0.91			0.91	
Frpb, ped/bikes				1.00		1.00	1.00	1.00			0.98	
Flpb, ped/bikes				1.00		1.00	1.00	1.00			1.00	
Frt				1.00		0.85	1.00	1.00			0.94	
Flt Protected				0.95		1.00	0.95	1.00			1.00	
Satd. Flow (prot)				1540		1530	1535	4327			4270	
Flt Permitted				0.95		1.00	0.95	1.00			1.00	
Satd. Flow (perm)				1540		1530	1535	4327			4270	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	306	0	1255	215	684	0	0	805	500
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	306	0	1255	215	684	0	0	1305	0
Confl. Peds. (#/hr)	2					2	18		3	3		18
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%	4%	6%	0%	0%	4%	1%
Turn Type				Split		Prot	Prot					
Protected Phases				8	8	8	5	2			6	
Permitted Phases												
Actuated Green, G (s)				30.0		30.0	32.0	66.0			31.0	
Effective Green, g (s)				31.0		30.0	32.0	66.0			31.0	
Actuated g/C Ratio				0.30		0.29	0.30	0.63			0.30	
Clearance Time (s)				5.0		5.0	3.0	4.0			4.0	
Lane Grp Cap (vph)				455		437	468	2720			1261	
v/s Ratio Prot				0.20		c0.82	c0.14	0.16			c0.31	
v/s Ratio Perm												
v/c Ratio				0.67		2.87	0.46	0.25			1.16dr	
Uniform Delay, d1				32.5		37.5	29.5	8.6			37.0	
Progression Factor				1.00		1.00	0.64	2.09			1.00	
Incremental Delay, d2				7.7		848.6	2.7	0.2			34.8	
Delay (s)				40.3		886.1	21.5	18.2			71.8	
Level of Service				D		F	C	B			E	
Approach Delay (s)		0.0			720.3			19.0			71.8	
Approach LOS		A			F			B			E	

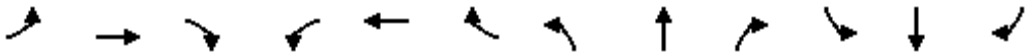
Intersection Summary			
HCM Average Control Delay	328.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.43		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	101.8%	ICU Level of Service	G
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	322	770	145	0	0	0	0	559	408	359	730	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	13	12	12	12	12	12	10	10	8	12	12	12
Total Lost time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Util. Factor	0.91	0.91						0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00						1.00	1.00	1.00	1.00	
Flpb, ped/bikes	0.99	1.00						1.00	1.00	1.00	1.00	
Frt	1.00	0.98						1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1509	3157						4368	2244	1598	4680	
Flt Permitted	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1509	3157						4368	2244	1598	4680	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	332	794	149	0	0	0	0	576	421	370	753	0
RTOR Reduction (vph)	0	14	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	299	962	0	0	0	0	0	576	421	370	753	0
Confl. Peds. (#/hr)	6		1	1		6	6					6
Heavy Vehicles (%)	6%	1%	0%	0%	0%	0%	0%	5%	4%	7%	5%	0%
Turn Type	Perm								Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Actuated Green, G (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Effective Green, g (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Actuated g/C Ratio	0.32	0.32						0.27	0.27	0.30	0.59	
Clearance Time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Grp Cap (vph)	489	1022						1165	598	472	2763	
v/s Ratio Prot								0.13		c0.23	0.16	
v/s Ratio Perm	0.20	0.30							c0.19			
v/c Ratio	0.61	0.94						0.49	0.70	0.78	0.27	
Uniform Delay, d1	29.9	34.5						32.5	34.8	33.9	10.5	
Progression Factor	1.00	1.00						1.14	1.14	0.86	0.22	
Incremental Delay, d2	5.6	17.2						1.3	6.1	4.9	0.1	
Delay (s)	35.5	51.7						38.4	45.6	34.1	2.4	
Level of Service	D	D						D	D	C	A	
Approach Delay (s)		47.9			0.0			41.4			12.9	
Approach LOS		D			A			D			B	

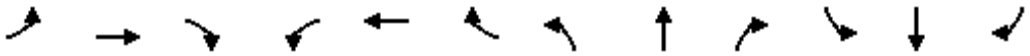
Intersection Summary			
HCM Average Control Delay	34.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	101.8%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	290	25	24	11	158	0	0	147	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	14	12	12	16	12
Total Lost time (s)				4.0	4.0		4.0	4.0			-3.0	
Lane Util. Factor				1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes				1.00	0.99		1.00	1.00			1.00	
Flpb, ped/bikes				1.00	1.00		1.00	1.00			1.00	
Frt				1.00	0.93		1.00	1.00			1.00	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1688	3132		1710	1846			1955	
Flt Permitted				0.95	1.00		0.54	1.00			1.00	
Satd. Flow (perm)				1688	3132		979	1846			1955	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	322	28	27	12	176	0	0	163	6
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	322	37	0	12	176	0	0	168	0
Confl. Peds. (#/hr)	2		2	2		2			6	6		
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	0%	4%	0%	0%	4%	0%
Turn Type				Perm			pm+pt					
Protected Phases					8		7	2			6	
Permitted Phases				8			2					
Actuated Green, G (s)				27.0	27.0		50.0	50.0			40.0	
Effective Green, g (s)				27.0	27.0		50.0	50.0			46.0	
Actuated g/C Ratio				0.32	0.32		0.59	0.59			0.54	
Clearance Time (s)				4.0	4.0		4.0	4.0			3.0	
Lane Grp Cap (vph)				536	995		636	1086			1058	
v/s Ratio Prot					0.01		0.00	c0.10			0.09	
v/s Ratio Perm				c0.19			0.01					
v/c Ratio				0.60	0.04		0.02	0.16			0.16	
Uniform Delay, d1				24.5	20.0		10.5	8.0			9.8	
Progression Factor				1.00	1.00		1.04	1.18			1.00	
Incremental Delay, d2				4.9	0.1		0.1	0.3			0.3	
Delay (s)				29.4	20.1		11.0	9.7			10.1	
Level of Service				C	C		B	A			B	
Approach Delay (s)		0.0			28.0			9.8			10.1	
Approach LOS		A			C			A			B	

Intersection Summary			
HCM Average Control Delay	19.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	37.0%	ICU Level of Service	A
Analysis Period (min)	15		

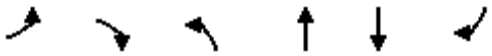
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	12	11	23	5	0	14	0	143	41	46	391	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	16	15	12	8	12	8	12	12	12	10	13	12
Total Lost time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.97			0.98			0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00			1.00		1.00	1.00	
Frt	1.00	0.90			0.90			0.97		1.00	1.00	
Flt Protected	0.95	1.00			0.99			1.00		0.95	1.00	
Satd. Flow (prot)	1935	1735			1565			1720		1590	1860	
Flt Permitted	0.74	1.00			0.97			1.00		0.60	1.00	
Satd. Flow (perm)	1516	1735			1531			1720		1004	1860	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	13	12	24	5	0	15	0	151	43	48	412	0
RTOR Reduction (vph)	0	16	0	0	10	0	0	12	0	0	0	0
Lane Group Flow (vph)	13	20	0	0	10	0	0	182	0	48	412	0
Confl. Peds. (#/hr)	1		11	11		1	1		10	10		1
Confl. Bikes (#/hr)			2	2			1		2	2		1
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Turn Type	Perm			Perm						pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Effective Green, g (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Actuated g/C Ratio	0.32	0.32			0.32			0.47		0.59	0.59	
Clearance Time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Grp Cap (vph)	482	551			486			809		639	1094	
v/s Ratio Prot		c0.01						0.11		0.01	c0.22	
v/s Ratio Perm	0.01				0.01					0.04		
v/c Ratio	0.03	0.04			0.02			0.22		0.08	0.38	
Uniform Delay, d1	20.0	20.0			19.9			13.3		8.6	9.3	
Progression Factor	1.00	1.00			1.00			1.00		0.97	0.86	
Incremental Delay, d2	0.1	0.1			0.1			0.6		0.2	0.9	
Delay (s)	20.1	20.1			20.0			14.0		8.5	8.9	
Level of Service	C	C			B			B		A	A	
Approach Delay (s)		20.1			20.0			14.0			8.8	
Approach LOS		C			B			B			A	

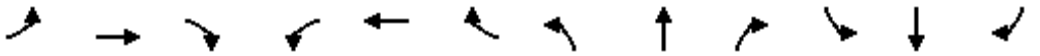
Intersection Summary			
HCM Average Control Delay	11.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	41.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



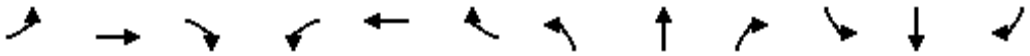
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	48	43	16	193	288	28
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	14	12	13	12	10	12
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.94		1.00	1.00	0.99	
Flt Protected	0.97		0.95	1.00	1.00	
Satd. Flow (prot)	1751		1765	1782	1657	
Flt Permitted	0.97		0.50	1.00	1.00	
Satd. Flow (perm)	1751		937	1782	1657	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	53	48	18	214	320	31
RTOR Reduction (vph)	32	0	0	0	5	0
Lane Group Flow (vph)	69	0	18	214	346	0
Confl. Peds. (#/hr)			2			2
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.0		36.0	36.0	36.0	
Effective Green, g (s)	21.0		36.0	36.0	36.0	
Actuated g/C Ratio	0.32		0.55	0.55	0.55	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	566		519	987	918	
v/s Ratio Prot	c0.04			0.12	c0.21	
v/s Ratio Perm			0.02			
v/c Ratio	0.12		0.03	0.22	0.38	
Uniform Delay, d1	15.5		6.6	7.4	8.2	
Progression Factor	1.00		0.56	0.66	1.40	
Incremental Delay, d2	0.4		0.1	0.5	1.0	
Delay (s)	15.9		3.8	5.4	12.4	
Level of Service	B		A	A	B	
Approach Delay (s)	15.9			5.2	12.4	
Approach LOS	B			A	B	

Intersection Summary			
HCM Average Control Delay	10.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	30.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



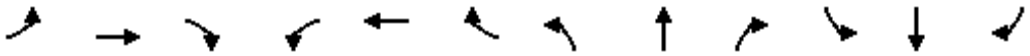
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	31	268	9	258	161	4	0	301	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	14	16	12	12	15	12	12	13	10
Total Lost time (s)					4.0		4.0	4.0			3.0	3.0
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Frt					1.00		1.00	1.00			1.00	0.85
Flt Protected					1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3772		1693	1677			1738	1428
Flt Permitted					1.00		0.45	1.00			1.00	1.00
Satd. Flow (perm)					3772		809	1677			1738	1428
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	34	298	10	287	179	4	0	334	19
RTOR Reduction (vph)	0	0	0	0	3	0	0	1	0	0	0	11
Lane Group Flow (vph)	0	0	0	0	339	0	287	182	0	0	334	8
Confl. Peds. (#/hr)	1					1			5	5		
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	1%	18%	0%	0%	7%	0%
Turn Type				Split			pm+pt					Perm
Protected Phases				8	8		7	2			6	
Permitted Phases							2					6
Actuated Green, G (s)					26.0		51.0	51.0			38.0	38.0
Effective Green, g (s)					26.0		51.0	51.0			38.0	38.0
Actuated g/C Ratio					0.31		0.60	0.60			0.45	0.45
Clearance Time (s)					4.0		4.0	4.0			3.0	3.0
Lane Grp Cap (vph)					1154		589	1006			777	638
v/s Ratio Prot					c0.09		c0.06	0.11			0.19	
v/s Ratio Perm							c0.23					0.01
v/c Ratio					0.29		0.49	0.18			0.43	0.01
Uniform Delay, d1					22.5		14.4	7.6			16.1	13.1
Progression Factor					1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2					0.6		2.9	0.4			1.7	0.0
Delay (s)					23.1		17.2	8.0			17.8	13.1
Level of Service					C		B	A			B	B
Approach Delay (s)		0.0			23.1			13.7			17.6	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM Average Control Delay	17.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	96	94	38	133	217	30	59	704	44
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	15	12	12	12	12	12	13	12
Total Lost time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.98		1.00	0.98		1.00	0.99	
Flt Protected					0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1896		1710	3290		1707	3467	
Flt Permitted					0.98		0.25	1.00		0.58	1.00	
Satd. Flow (perm)					1896		446	3290		1048	3467	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	107	104	42	148	241	33	66	782	49
RTOR Reduction (vph)	0	0	0	0	10	0	0	14	0	0	6	0
Lane Group Flow (vph)	0	0	0	0	243	0	148	260	0	66	825	0
Confl. Peds. (#/hr)							5		5	5		5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	1%	0%
Turn Type				Split			pm+pt			pm+pt		
Protected Phases				8	8		5	2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)					23.0		41.0	34.0		41.0	34.0	
Effective Green, g (s)					23.0		41.0	34.0		41.0	34.0	
Actuated g/C Ratio					0.31		0.55	0.45		0.55	0.45	
Clearance Time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Grp Cap (vph)					581		362	1491		634	1572	
v/s Ratio Prot					c0.13		c0.04	0.08		0.01	c0.24	
v/s Ratio Perm							0.19			0.05		
v/c Ratio					0.42		0.41	0.17		0.10	0.52	
Uniform Delay, d1					20.7		16.4	12.2		8.2	14.7	
Progression Factor					1.00		0.83	0.82		1.00	1.00	
Incremental Delay, d2					2.2		3.4	0.3		0.3	1.3	
Delay (s)					22.9		17.0	10.3		8.6	16.0	
Level of Service					C		B	B		A	B	
Approach Delay (s)		0.0			22.9			12.6			15.4	
Approach LOS		A			C			B			B	

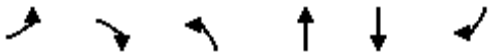
Intersection Summary			
HCM Average Control Delay	15.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	53.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	32	49	13	9	63	63	7	285	24	159	591	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	16	12	12	10	11	12	12	11	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.94		1.00	0.99		1.00	0.99	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1964			1655		1595	3174		1704	3231	
Flt Permitted		0.89			0.99		0.36	1.00		0.56	1.00	
Satd. Flow (perm)		1775			1637		598	3174		996	3231	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	34	52	14	9	66	66	7	300	25	167	622	53
RTOR Reduction (vph)	0	8	0	0	42	0	0	8	0	0	8	0
Lane Group Flow (vph)	0	92	0	0	99	0	7	317	0	167	667	0
Confl. Peds. (#/hr)	2					2	1		6	6		1
Confl. Bikes (#/hr)			1	1			3					3
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	0%	3%	0%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Effective Green, g (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Actuated g/C Ratio		0.33			0.33		0.56	0.56		0.56	0.56	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		592			546		335	1777		558	1809	
v/s Ratio Prot								0.10			c0.21	
v/s Ratio Perm		0.05			c0.06		0.01			0.17		
v/c Ratio		0.16			0.18		0.02	0.18		0.30	0.37	
Uniform Delay, d1		17.6			17.7		7.3	8.1		8.7	9.1	
Progression Factor		1.00			1.00		1.00	1.00		0.27	0.25	
Incremental Delay, d2		0.6			0.7		0.1	0.2		1.2	0.5	
Delay (s)		18.1			18.5		7.5	8.3		3.6	2.8	
Level of Service		B			B		A	A		A	A	
Approach Delay (s)		18.1			18.5			8.3			3.0	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	6.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	48.4%	ICU Level of Service	A
Analysis Period (min)	15		

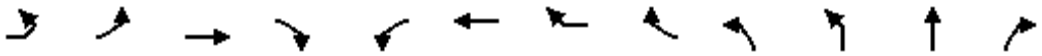
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	37	192	67	261	589	81
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	41	213	74	290	654	90

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	254	171	193	436	308
Volume Left (vph)	41	74	0	0	0
Volume Right (vph)	213	0	0	0	90
Hadj (s)	-0.42	0.27	0.05	0.05	-0.15
Departure Headway (s)	5.8	6.6	6.3	5.9	5.7
Degree Utilization, x	0.41	0.31	0.34	0.71	0.49
Capacity (veh/h)	589	528	546	601	620
Control Delay (s)	12.7	11.3	11.4	21.0	12.8
Approach Delay (s)	12.7	11.3		17.6	
Approach LOS	B	B		C	

Intersection Summary			
Delay	15.0		
HCM Level of Service	C		
Intersection Capacity Utilization	54.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	32	35	373	18	20	393	70	78	55	68	354	32
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	0.95	
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.93			1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Frt		1.00	1.00	0.85	1.00	1.00	0.85			1.00	0.99	
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	
Satd. Flow (prot)		1612	1731	1530	1710	1731	1421			1710	3251	
Flt Permitted		0.14	1.00	1.00	0.52	1.00	1.00			0.14	1.00	
Satd. Flow (perm)		238	1731	1530	936	1731	1421			257	3251	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	36	39	414	20	22	437	78	87	61	76	393	36
RTOR Reduction (vph)	0	0	0	12	0	0	38	0	0	0	7	0
Lane Group Flow (vph)	0	75	414	8	22	437	127	0	0	137	422	0
Confl. Peds. (#/hr)		25					25					3
Heavy Vehicles (%)	6%	6%	4%	0%	0%	4%	0%	0%	0%	0%	4%	0%
Turn Type	Perm	pm+pt		Perm	Perm		Perm		Perm	Perm		
Protected Phases		7	4			8					2	
Permitted Phases	4	4		4	8		8		2	2		
Actuated Green, G (s)		44.0	44.0	44.0	25.0	25.0	25.0			28.0	28.0	
Effective Green, g (s)		44.0	44.0	44.0	25.0	25.0	25.0			28.0	28.0	
Actuated g/C Ratio		0.42	0.42	0.42	0.24	0.24	0.24			0.27	0.27	
Clearance Time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Grp Cap (vph)		303	725	641	223	412	338			69	867	
v/s Ratio Prot		0.04	c0.24			c0.25					0.13	
v/s Ratio Perm		0.07		0.01	0.02		0.09			c0.53		
v/c Ratio		0.25	0.57	0.01	0.10	1.06	0.38			1.99	0.49	
Uniform Delay, d1		21.6	23.3	17.8	31.2	40.0	33.5			38.5	32.4	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Incremental Delay, d2		1.9	3.3	0.0	0.9	61.3	3.2			491.0	2.0	
Delay (s)		23.5	26.5	17.9	32.1	101.3	36.6			529.5	34.4	
Level of Service		C	C	B	C	F	D			F	C	
Approach Delay (s)			25.8			81.8					154.2	
Approach LOS			C			F					F	

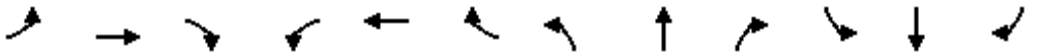
Intersection Summary			
HCM Average Control Delay	146.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.43		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	103.0%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations								
Volume (vph)	107	571	82	103	4	113	607	197
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5				4.5	4.5	
Lane Util. Factor	1.00	0.95				1.00	0.88	
Frpb, ped/bikes	1.00	1.00				1.00	1.00	
Flpb, ped/bikes	1.00	1.00				1.00	1.00	
Frt	1.00	0.96				1.00	0.85	
Flt Protected	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1705	3246				1710	2633	
Flt Permitted	0.37	1.00				0.95	1.00	
Satd. Flow (perm)	670	3246				1710	2633	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	119	634	91	114	4	126	674	219
RTOR Reduction (vph)	0	12	0	0	0	0	26	0
Lane Group Flow (vph)	119	827	0	0	0	130	867	0
Confl. Peds. (#/hr)	3							
Heavy Vehicles (%)	0%	2%	0%	0%	0%	0%	3%	0%
Turn Type	Perm				Split		Perm	
Protected Phases		6			9	9		
Permitted Phases	6						9	
Actuated Green, G (s)	27.5	27.5				20.5	20.5	
Effective Green, g (s)	27.5	27.5				20.5	20.5	
Actuated g/C Ratio	0.26	0.26				0.20	0.20	
Clearance Time (s)	4.5	4.5				4.5	4.5	
Lane Grp Cap (vph)	175	850				334	514	
v/s Ratio Prot		0.25				0.08		
v/s Ratio Perm	0.18						c0.33	
v/c Ratio	0.68	0.97				0.39	1.69	
Uniform Delay, d1	34.8	38.4				36.8	42.2	
Progression Factor	1.00	1.00				1.00	1.00	
Incremental Delay, d2	19.3	25.0				3.4	317.6	
Delay (s)	54.1	63.4				40.2	359.9	
Level of Service	D	E				D	F	
Approach Delay (s)		62.2				319.3		
Approach LOS		E				F		

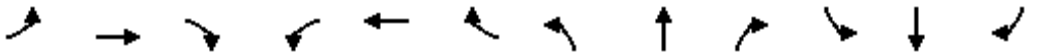
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	65	596	0	0	469	56	85	52	19	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	11	11	16	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.99			0.98				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		1681			1952			1841				
Flt Permitted		0.91			1.00			0.97				
Satd. Flow (perm)		1530			1952			1841				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	72	662	0	0	521	62	94	58	21	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	734	0	0	583	0	0	173	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		40.0			40.0			17.0				
Effective Green, g (s)		40.0			40.0			17.0				
Actuated g/C Ratio		0.62			0.62			0.26				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		942			1201			481				
v/s Ratio Prot					0.30							
v/s Ratio Perm		c0.48						0.09				
v/c Ratio		0.78			0.49			0.36				
Uniform Delay, d1		9.2			6.9			19.6				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		6.3			1.4			2.1				
Delay (s)		15.6			8.3			21.7				
Level of Service		B			A			C				
Approach Delay (s)		15.6			8.3			21.7			0.0	
Approach LOS		B			A			C			A	

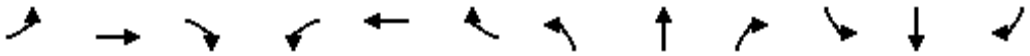
Intersection Summary			
HCM Average Control Delay	13.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	85.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	71	334	152	129	331	135	105	639	86	140	759	94
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	9	9	10	9
Total Lost time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.96	1.00	1.00	0.95	1.00	1.00	0.94
Flpb, ped/bikes		1.00	1.00		0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1982	1434		1945	1444	1546	3040	1296	1506	3069	1252
Flt Permitted		0.36	1.00		0.70	1.00	0.23	1.00	1.00	0.29	1.00	1.00
Satd. Flow (perm)		714	1434		1380	1444	373	3040	1296	455	3069	1252
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	75	352	160	136	348	142	111	673	91	147	799	99
RTOR Reduction (vph)	0	0	94	0	0	101	0	0	54	0	0	49
Lane Group Flow (vph)	0	427	66	0	484	41	111	673	37	147	799	50
Confl. Peds. (#/hr)	24		45	45		24	36		24	24		36
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	2%	2%	2%	2%	3%	2%	3%	5%	1%	2%	4%	3%
Turn Type	pm+pt		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		43.0	43.0		30.0	30.0	50.6	42.3	42.3	51.4	42.7	42.7
Effective Green, g (s)		43.0	43.0		30.0	30.0	50.6	42.3	42.3	51.4	42.7	42.7
Actuated g/C Ratio		0.41	0.41		0.29	0.29	0.48	0.40	0.40	0.49	0.41	0.41
Clearance Time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		413	587		394	413	272	1225	522	310	1248	509
v/s Ratio Prot		c0.10					0.03	0.22		c0.04	c0.26	
v/s Ratio Perm		0.32	0.05		c0.35	0.03	0.16		0.03	0.19		0.04
v/c Ratio		1.03	0.11		1.23	0.10	0.41	0.55	0.07	0.47	0.64	0.10
Uniform Delay, d1		31.0	19.2		37.5	27.6	16.4	24.0	19.3	16.0	25.0	19.2
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.74	1.54	2.62
Incremental Delay, d2		53.3	0.4		123.3	0.5	1.0	1.8	0.3	1.1	2.4	0.4
Delay (s)		84.3	19.6		160.8	28.0	17.4	25.8	19.5	29.0	41.0	50.9
Level of Service		F	B		F	C	B	C	B	C	D	D
Approach Delay (s)		66.7			130.7			24.1			40.3	
Approach LOS		E			F			C			D	

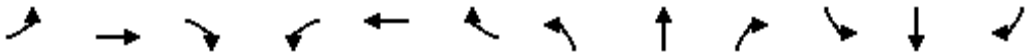
Intersection Summary			
HCM Average Control Delay	58.8	HCM Level of Service	E
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	90.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	85	412	85	105	490	94	51	61	72	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		0.98			0.98			0.95				
Flt Protected		0.99			0.99			0.99				
Satd. Flow (prot)		1644			1646			1796				
Flt Permitted		0.83			0.84			0.99				
Satd. Flow (perm)		1375			1390			1796				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	94	458	94	117	544	104	57	68	80	0	0	0
RTOR Reduction (vph)	0	10	0	0	9	0	0	35	0	0	0	0
Lane Group Flow (vph)	0	636	0	0	756	0	0	170	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		40.0			40.0			17.0				
Effective Green, g (s)		40.0			40.0			17.0				
Actuated g/C Ratio		0.62			0.62			0.26				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		846			855			470				
v/s Ratio Prot												
v/s Ratio Perm		0.46			c0.54			0.09				
v/c Ratio		0.75			0.88			0.36				
Uniform Delay, d1		9.0			10.5			19.6				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		6.1			12.9			2.1				
Delay (s)		15.1			23.5			21.7				
Level of Service		B			C			C				
Approach Delay (s)		15.1			23.5			21.7			0.0	
Approach LOS		B			C			C			A	

Intersection Summary			
HCM Average Control Delay	19.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	71.1%	ICU Level of Service	C
Analysis Period (min)	15		

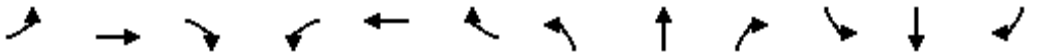
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	21	455	73	84	568	45	37	76	74	56	238	47
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	11	12	12	15	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.96		1.00	0.96		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		0.99	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.98	
Flt Protected		1.00	1.00		0.99	1.00		0.98	1.00		0.99	
Satd. Flow (prot)		1687	1382		1712	1417		1686	1455		1886	
Flt Permitted		0.96	1.00		0.88	1.00		0.83	1.00		0.93	
Satd. Flow (perm)		1630	1382		1519	1417		1430	1455		1775	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	22	479	77	88	598	47	39	80	78	59	251	49
RTOR Reduction (vph)	0	0	33	0	0	13	0	0	53	0	7	0
Lane Group Flow (vph)	0	501	44	0	686	34	0	119	25	0	352	0
Confl. Peds. (#/hr)	25		19	19		25	36		30	30		36
Confl. Bikes (#/hr)	1		2	2		1	3					3
Heavy Vehicles (%)	0%	3%	3%	0%	1%	0%	0%	1%	1%	0%	1%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Effective Green, g (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.32	0.32		0.32	
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Grp Cap (vph)		935	792		871	812		458	466		568	
v/s Ratio Prot												
v/s Ratio Perm		0.31	0.03		c0.45	0.02		0.08	0.02		c0.20	
v/c Ratio		0.54	0.06		0.79	0.04		0.26	0.05		0.62	
Uniform Delay, d1		9.9	7.1		12.4	7.0		18.9	17.6		21.6	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		2.2	0.1		7.1	0.1		1.4	0.2		5.0	
Delay (s)		12.1	7.2		19.6	7.1		20.3	17.9		26.6	
Level of Service		B	A		B	A		C	B		C	
Approach Delay (s)		11.4			18.8			19.3			26.6	
Approach LOS		B			B			B			C	

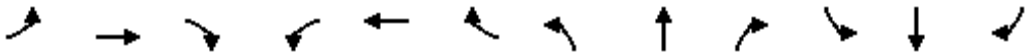
Intersection Summary			
HCM Average Control Delay	18.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	99.6%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	57	463	30	53	598	58	44	165	57	124	210	32
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	11	16	8	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	0.98	1.00		1.00	1.00		0.99	1.00	1.00	0.99	1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1537	3068		1652	3732		1585	1663	1370	1568	1680	1397
Flt Permitted	0.31	1.00		0.41	1.00		0.57	1.00	1.00	0.63	1.00	1.00
Satd. Flow (perm)	505	3068		716	3732		953	1663	1370	1043	1680	1397
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	63	514	33	59	664	64	49	183	63	138	233	36
RTOR Reduction (vph)	0	7	0	0	11	0	0	0	38	0	0	22
Lane Group Flow (vph)	63	540	0	59	717	0	49	183	25	138	233	14
Confl. Peds. (#/hr)	51		3	3		51	13		13	13		13
Heavy Vehicles (%)	2%	3%	3%	0%	2%	0%	0%	1%	2%	1%	0%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Effective Green, g (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	241	1463		341	1780		381	665	548	417	672	559
v/s Ratio Prot		0.18			c0.19			0.11			c0.14	
v/s Ratio Perm	0.12			0.08			0.05		0.02	0.13		0.01
v/c Ratio	0.26	0.37		0.17	0.40		0.13	0.28	0.05	0.33	0.35	0.03
Uniform Delay, d1	10.2	10.8		9.7	11.0		12.3	13.1	11.9	13.5	13.6	11.8
Progression Factor	1.00	1.00		1.00	1.00		0.82	0.89	0.71	0.58	0.59	0.26
Incremental Delay, d2	2.6	0.7		1.1	0.7		0.7	1.0	0.2	2.0	1.4	0.1
Delay (s)	12.8	11.5		10.8	11.7		10.9	12.7	8.6	9.9	9.3	3.1
Level of Service	B	B		B	B		B	B	A	A	A	A
Approach Delay (s)		11.6			11.6			11.5			9.0	
Approach LOS		B			B			B			A	

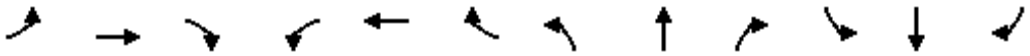
Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	73	389	71	73	387	77	55	197	64	135	272	162
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	11	10	11	11	10	11	11	10	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	0.97	1.00		0.95	1.00		0.99	1.00		0.96	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.96		1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1329	3142		1515	3108		1583	2928		1453	2920	
Flt Permitted	0.44	1.00		0.44	1.00		0.44	1.00		0.58	1.00	
Satd. Flow (perm)	617	3142		708	3108		741	2928		892	2920	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	77	409	75	77	407	81	58	207	67	142	286	171
RTOR Reduction (vph)	0	0	0	0	0	0	0	39	0	0	100	0
Lane Group Flow (vph)	77	484	0	77	488	0	58	235	0	142	357	0
Confl. Peds. (#/hr)	112		99	99		112	23		53	53		23
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	16%	1%	0%	0%	1%	9%	0%	8%	2%	5%	5%	7%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.41	0.41		0.41	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	296	1508		340	1492		306	1210		369	1207	
v/s Ratio Prot		0.15			c0.16			0.08			0.12	
v/s Ratio Perm	0.12			0.11			0.08			c0.16		
v/c Ratio	0.26	0.32		0.23	0.33		0.19	0.19		0.38	0.30	
Uniform Delay, d1	11.6	12.0		11.4	12.0		14.0	14.0		15.3	14.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.1	0.6		1.5	0.6		1.4	0.4		3.0	0.6	
Delay (s)	13.7	12.5		12.9	12.6		15.4	14.4		18.4	15.3	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		12.7			12.7			14.6			16.0	
Approach LOS		B			B			B			B	

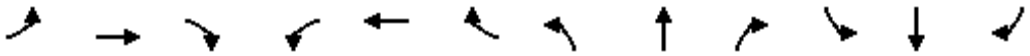
Intersection Summary			
HCM Average Control Delay	14.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	108	453	62	32	523	48	86	203	60	76	473	111
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	8	16	12	9	10	10	9	10	10
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1595	1653		1371	1973		1534	2998		1535	3011	
Flt Permitted	0.24	1.00		0.30	1.00		0.28	1.00		0.58	1.00	
Satd. Flow (perm)	402	1653		427	1973		450	2998		939	3011	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	114	477	65	34	551	51	91	214	63	80	498	117
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	114	542	0	34	602	0	91	277	0	80	615	0
Confl. Peds. (#/hr)	21		95	95		21	36		8	8		36
Confl. Bikes (#/hr)	2		3	3		2	2					2
Heavy Vehicles (%)	0%	2%	0%	7%	2%	0%	0%	3%	0%	0%	2%	1%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	43.9	39.3		40.7	37.7		26.7	21.8		26.7	21.8	
Effective Green, g (s)	43.9	37.3		40.7	35.7		26.7	19.8		26.7	19.8	
Actuated g/C Ratio	0.52	0.44		0.48	0.42		0.31	0.23		0.31	0.23	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	272	725		238	829		204	698		329	701	
v/s Ratio Prot	c0.02	c0.33		0.01	0.31		c0.03	0.09		0.01	c0.20	
v/s Ratio Perm	0.19			0.06			0.11			0.06		
v/c Ratio	0.42	0.75		0.14	0.73		0.45	0.40		0.24	0.88	
Uniform Delay, d1	24.1	19.9		20.7	20.6		29.2	27.6		21.9	31.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.0	6.9		0.3	5.5		1.6	1.7		0.4	14.5	
Delay (s)	25.2	26.8		21.0	26.1		30.8	29.2		22.2	46.0	
Level of Service	C	C		C	C		C	C		C	D	
Approach Delay (s)		26.6			25.8			29.6			43.2	
Approach LOS		C			C			C			D	

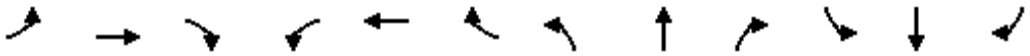
Intersection Summary			
HCM Average Control Delay	31.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	80.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	85	389	65	117	509	118	67	158	58	127	367	83
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	11	11	11	11	12	12	10	10	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		0.99	1.00	
Frt		0.98			0.98		1.00	0.96		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3680			3131		1652	3237		1549	3026	
Flt Permitted		0.68			0.72		0.42	1.00		0.60	1.00	
Satd. Flow (perm)		2535			2275		736	3237		983	3026	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	94	432	72	130	566	131	74	176	64	141	408	92
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	598	0	0	827	0	74	240	0	141	500	0
Confl. Peds. (#/hr)	23		30	30		23	1		20	20		1
Confl. Bikes (#/hr)	3					3						
Heavy Vehicles (%)	0%	3%	0%	2%	2%	0%	0%	1%	0%	2%	2%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.0			33.0		32.0	32.0		32.0	32.0	
Effective Green, g (s)		34.0			34.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio		0.45			0.45		0.44	0.44		0.44	0.44	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		1149			1031		324	1424		433	1331	
v/s Ratio Prot								0.07			c0.17	
v/s Ratio Perm		0.24			c0.36		0.10			0.14		
v/c Ratio		0.52			0.80		0.23	0.17		0.33	0.38	
Uniform Delay, d1		14.7			17.6		13.1	12.7		13.7	14.1	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.7			6.6		1.6	0.3		2.0	0.8	
Delay (s)		16.4			24.2		14.7	13.0		15.7	14.9	
Level of Service		B			C		B	B		B	B	
Approach Delay (s)		16.4			24.2			13.4			15.1	
Approach LOS		B			C			B			B	

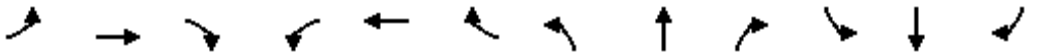
Intersection Summary			
HCM Average Control Delay	18.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	98	875	6	20	584	249	1	1	9	213	1	80
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	12	12	12	12	12	13	13	13
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	1.00		1.00	1.00	0.85		0.89			0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00		1.00			0.97	
Satd. Flow (prot)	1605	3206		1660	3320	1485		1545			3176	
Flt Permitted	0.38	1.00		0.25	1.00	1.00		0.98			0.77	
Satd. Flow (perm)	648	3206		433	3320	1485		1519			2533	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	109	972	7	22	649	277	1	1	10	237	1	89
RTOR Reduction (vph)	0	0	0	0	0	103	0	7	0	0	52	0
Lane Group Flow (vph)	109	979	0	22	649	174	0	5	0	0	275	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	46.1	46.1		46.1	46.1	46.1		19.5			19.5	
Effective Green, g (s)	46.1	46.1		46.1	46.1	46.1		19.5			19.5	
Actuated g/C Ratio	0.63	0.63		0.63	0.63	0.63		0.26			0.26	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		8.0			8.0	
Lane Grp Cap (vph)	406	2008		271	2080	930		402			671	
v/s Ratio Prot		c0.31			0.20							
v/s Ratio Perm	0.17			0.05		0.12		0.00			c0.11	
v/c Ratio	0.27	0.49		0.08	0.31	0.19		0.01			0.41	
Uniform Delay, d1	6.2	7.4		5.4	6.4	5.8		19.9			22.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	1.6	0.8		0.6	0.4	0.4		0.0			1.7	
Delay (s)	7.8	8.2		6.0	6.8	6.3		20.0			24.0	
Level of Service	A	A		A	A	A		B			C	
Approach Delay (s)		8.2			6.6			20.0			24.0	
Approach LOS		A			A			B			C	

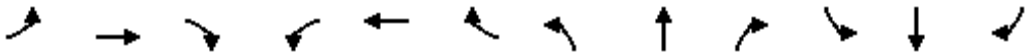
Intersection Summary			
HCM Average Control Delay	9.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	73.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	131	228	125	94	163	57	148	907	90	129	825	100
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	9	12	10	10	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.95		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1560	1504		1563	1584		1493	3069	1337	1523	3099	1318
Flt Permitted	0.45	1.00		0.20	1.00		0.20	1.00	1.00	0.16	1.00	1.00
Satd. Flow (perm)	740	1504		337	1584		317	3069	1337	263	3099	1318
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	138	240	132	99	172	60	156	955	95	136	868	105
RTOR Reduction (vph)	0	23	0	0	15	0	0	0	40	0	0	49
Lane Group Flow (vph)	138	349	0	99	217	0	156	955	55	136	868	56
Confl. Peds. (#/hr)	10		13	13		10	18		7	7		18
Confl. Bikes (#/hr)	2					2	2		1	1		2
Heavy Vehicles (%)	2%	1%	1%	2%	1%	2%	3%	4%	0%	1%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	28.0	21.0		28.0	21.0		42.0	35.0	35.0	42.0	35.0	35.0
Effective Green, g (s)	26.0	22.0		26.0	22.0		40.0	35.0	35.0	40.0	35.0	35.0
Actuated g/C Ratio	0.31	0.26		0.31	0.26		0.47	0.41	0.41	0.47	0.41	0.41
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	284	389		190	410		232	1264	551	213	1276	543
v/s Ratio Prot	0.03	c0.23		c0.04	0.14		c0.05	c0.31		0.05	0.28	
v/s Ratio Perm	0.11			0.12			0.27		0.04	0.26		0.04
v/c Ratio	0.49	0.90		0.52	0.53		0.67	0.76	0.10	0.64	0.68	0.10
Uniform Delay, d1	22.7	30.4		22.9	27.1		14.7	21.3	15.3	15.0	20.4	15.4
Progression Factor	1.00	1.00		1.00	1.00		0.67	0.82	0.55	1.00	1.00	1.00
Incremental Delay, d2	5.8	25.9		9.9	4.8		13.2	3.8	0.3	13.8	2.9	0.4
Delay (s)	28.5	56.3		32.7	31.9		23.0	21.2	8.7	28.8	23.4	15.7
Level of Service	C	E		C	C		C	C	A	C	C	B
Approach Delay (s)		48.8			32.1			20.5			23.3	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM Average Control Delay	27.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	74.0%	ICU Level of Service	D
Analysis Period (min)	15		

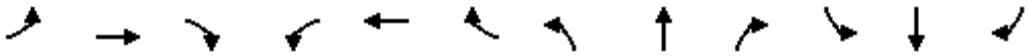
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	22	181	38	20	173	22	43	149	40	45	255	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	14	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.99			1.00			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.99			0.98			0.98	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1835			1848			1937			1975	
Flt Permitted		0.97			0.96			0.90			0.94	
Satd. Flow (perm)		1781			1790			1755			1869	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	23	187	39	21	178	23	44	154	41	46	263	52
RTOR Reduction (vph)	0	11	0	0	6	0	0	11	0	0	9	0
Lane Group Flow (vph)	0	238	0	0	216	0	0	228	0	0	352	0
Confl. Peds. (#/hr)	18		34	34		18	16		19	19		16
Confl. Bikes (#/hr)			6	6			1		4	4		1
Heavy Vehicles (%)	0%	1%	0%	5%	1%	0%	0%	2%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.42			0.42			0.46			0.46	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		740			744			810			863	
v/s Ratio Prot												
v/s Ratio Perm		c0.13			0.12			0.13			c0.19	
v/c Ratio		0.32			0.29			0.28			0.41	
Uniform Delay, d1		12.8			12.6			10.8			11.6	
Progression Factor		1.00			0.74			1.28			1.00	
Incremental Delay, d2		1.2			1.0			0.8			1.4	
Delay (s)		14.0			10.3			14.6			13.0	
Level of Service		B			B			B			B	
Approach Delay (s)		14.0			10.3			14.6			13.0	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	49.8%	ICU Level of Service	A
Analysis Period (min)	15		

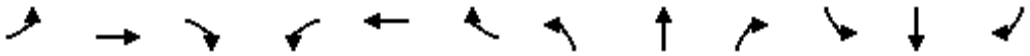
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	193	39	25	180	20	53	200	31	47	214	39
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.97	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.99		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1496	3057		1577	3116		1518	3119		1550	3076	
Flt Permitted	0.61	1.00		0.59	1.00		0.58	1.00		0.59	1.00	
Satd. Flow (perm)	965	3057		984	3116		926	3119		968	3076	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	214	43	28	200	22	59	222	34	52	238	43
RTOR Reduction (vph)	0	26	0	0	13	0	0	14	0	0	18	0
Lane Group Flow (vph)	27	231	0	28	209	0	59	242	0	52	263	0
Confl. Peds. (#/hr)	20		17	17		20	2					2
Confl. Bikes (#/hr)	32		36	36		32	22		25	25		22
Heavy Vehicles (%)	4%	1%	0%	0%	0%	0%	5%	0%	0%	3%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0		39.0	39.0		39.0	39.0	
Effective Green, g (s)	19.0	19.0		19.0	19.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.58	0.58		0.58	0.58	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	282	894		288	911		541	1823		566	1798	
v/s Ratio Prot		c0.08			0.07			0.08			c0.09	
v/s Ratio Perm	0.03			0.03			0.06			0.05		
v/c Ratio	0.10	0.26		0.10	0.23		0.11	0.13		0.09	0.15	
Uniform Delay, d1	16.7	17.6		16.8	17.4		6.0	6.1		5.9	6.1	
Progression Factor	0.93	0.96		0.75	0.75		1.40	1.44		0.39	0.34	
Incremental Delay, d2	0.6	0.7		0.7	0.6		0.4	0.1		0.3	0.2	
Delay (s)	16.3	17.6		13.2	13.6		8.8	8.9		2.7	2.3	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		17.5			13.5			8.9			2.3	
Approach LOS		B			B			A			A	

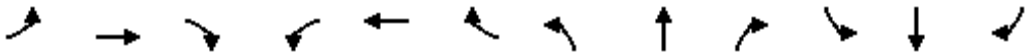
Intersection Summary			
HCM Average Control Delay	10.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.18		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



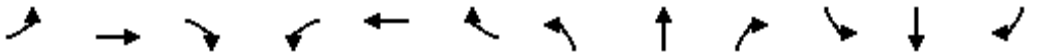
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	67	168	42	25	159	38	27	262	16	42	337	33
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	9	9	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.97		1.00	0.97			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1555	3056		1525	2937			1923			1939	
Flt Permitted	0.61	1.00		0.61	1.00			0.94			0.94	
Satd. Flow (perm)	1007	3056		973	2937			1825			1832	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	74	187	47	28	177	42	30	291	18	47	374	37
RTOR Reduction (vph)	0	28	0	0	25	0	0	3	0	0	5	0
Lane Group Flow (vph)	74	206	0	28	194	0	0	336	0	0	453	0
Confl. Peds. (#/hr)	11		17	17		11	26		7	7		26
Heavy Vehicles (%)	2%	1%	0%	0%	1%	3%	4%	5%	0%	0%	4%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Effective Green, g (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40			0.48			0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	403	1222		389	1175			870			874	
v/s Ratio Prot		0.07			0.07							
v/s Ratio Perm	c0.07			0.03				0.18			c0.25	
v/c Ratio	0.18	0.17		0.07	0.16			0.39			0.52	
Uniform Delay, d1	12.6	12.5		12.0	12.5			10.9			11.8	
Progression Factor	1.04	0.98		0.78	0.76			1.08			1.00	
Incremental Delay, d2	1.0	0.3		0.3	0.3			1.2			2.2	
Delay (s)	14.1	12.6		9.7	9.8			12.9			14.0	
Level of Service	B	B		A	A			B			B	
Approach Delay (s)		13.0			9.8			12.9			14.0	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	12.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



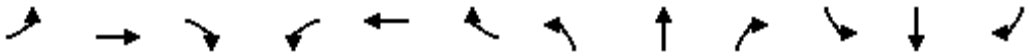
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	47	111	30	20	161	27	45	235	11	33	364	57
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	16	12	10	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.97		1.00	0.98			0.99			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			1.00	
Satd. Flow (prot)	1652	1966		1584	1975			1981			1979	
Flt Permitted	0.57	1.00		0.65	1.00			0.89			0.96	
Satd. Flow (perm)	986	1966		1082	1975			1774			1911	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	52	123	33	22	179	30	50	261	12	37	404	63
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	52	156	0	22	209	0	0	323	0	0	504	0
Confl. Peds. (#/hr)	1		10	10		1	2		5	5		2
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	2%	0%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Effective Green, g (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Actuated g/C Ratio	0.31	0.31		0.31	0.31			0.57			0.57	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	303	605		333	608			1010			1088	
v/s Ratio Prot		0.08			c0.11							
v/s Ratio Perm	0.05			0.02				0.18			c0.26	
v/c Ratio	0.17	0.26		0.07	0.34			0.32			0.46	
Uniform Delay, d1	16.4	16.9		15.9	17.4			7.4			8.2	
Progression Factor	0.84	0.81		0.93	0.93			0.99			1.00	
Incremental Delay, d2	1.2	1.0		0.4	1.5			0.8			1.4	
Delay (s)	15.0	14.8		15.1	17.8			8.1			9.6	
Level of Service	B	B		B	B			A			A	
Approach Delay (s)		14.8			17.5			8.1			9.6	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



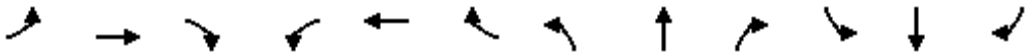
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	54	13	97	2	5	10	62	235	5	5	466	76
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	10	11	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98		1.00	0.98		1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.87		1.00	0.90		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1695	1727		1702	1808		1594	1647	1428	1653	2000	1496
Flt Permitted	0.75	1.00		0.68	1.00		0.39	1.00	1.00	0.59	1.00	1.00
Satd. Flow (perm)	1332	1727		1216	1808		660	1647	1428	1030	2000	1496
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	60	14	108	2	6	11	69	261	6	6	518	84
RTOR Reduction (vph)	0	78	0	0	8	0	0	0	2	0	0	28
Lane Group Flow (vph)	60	44	0	2	9	0	69	261	4	6	518	56
Confl. Peds. (#/hr)	5		5	5		5	3					3
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	0%	2%	0%	0%	2%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	17.0	17.0		17.0	17.0		39.0	39.0	39.0	39.0	39.0	39.0
Effective Green, g (s)	18.0	18.0		18.0	18.0		39.0	39.0	39.0	39.0	39.0	39.0
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.60	0.60	0.60	0.60	0.60	0.60
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	369	478		337	501		396	988	857	618	1200	898
v/s Ratio Prot		0.03			0.01			0.16			c0.26	
v/s Ratio Perm	c0.05			0.00			0.10		0.00	0.01		0.04
v/c Ratio	0.16	0.09		0.01	0.02		0.17	0.26	0.00	0.01	0.43	0.06
Uniform Delay, d1	17.8	17.4		17.0	17.1		5.8	6.2	5.2	5.2	7.0	5.4
Progression Factor	1.38	2.73		1.00	1.00		0.82	0.77	0.97	1.00	1.00	1.00
Incremental Delay, d2	0.9	0.4		0.0	0.1		0.7	0.5	0.0	0.0	1.1	0.1
Delay (s)	25.5	47.9		17.1	17.1		5.5	5.3	5.0	5.3	8.2	5.5
Level of Service	C	D		B	B		A	A	A	A	A	A
Approach Delay (s)		40.5			17.1			5.3			7.8	
Approach LOS		D			B			A			A	

Intersection Summary			
HCM Average Control Delay	12.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	253	163	170	204	0	0	0	0	110	470	377
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)		4.0		3.0	3.0					5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	
Frpb, ped/bikes		0.99		1.00	1.00					1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Frt		0.94		1.00	1.00					1.00	0.93	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		2905		1693	3288					1503	3021	
Flt Permitted		1.00		0.41	1.00					0.95	1.00	
Satd. Flow (perm)		2905		722	3288					1503	3021	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	266	172	179	215	0	0	0	0	116	495	397
RTOR Reduction (vph)	0	103	0	0	0	0	0	0	0	0	141	0
Lane Group Flow (vph)	0	335	0	179	215	0	0	0	0	116	751	0
Confl. Peds. (#/hr)	18		3	3		18	1					1
Heavy Vehicles (%)	0%	4%	1%	1%	4%	0%	0%	0%	0%	10%	2%	1%
Turn Type				D.P+P						Split		
Protected Phases		8		7	7 8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		33.0		53.0	56.0					37.0	37.0	
Effective Green, g (s)		33.0		53.0	56.0					37.0	37.0	
Actuated g/C Ratio		0.32		0.52	0.55					0.36	0.36	
Clearance Time (s)		4.0		3.0						5.0	5.0	
Lane Grp Cap (vph)		940		566	1805					545	1096	
v/s Ratio Prot		c0.12		c0.06	0.07					0.08	c0.25	
v/s Ratio Perm				0.10								
v/c Ratio		0.36		0.32	0.12					0.21	0.68	
Uniform Delay, d1		26.4		13.4	11.1					22.4	27.6	
Progression Factor		1.00		2.18	2.12					1.00	1.00	
Incremental Delay, d2		1.1		1.3	0.1					0.9	3.5	
Delay (s)		27.4		30.5	23.6					23.3	31.0	
Level of Service		C		C	C					C	C	
Approach Delay (s)		27.4			26.7			0.0			30.2	
Approach LOS		C			C			A			C	

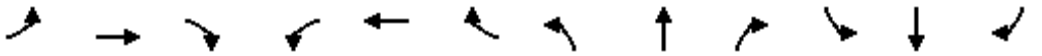
Intersection Summary			
HCM Average Control Delay	28.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	102.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	141	222	0	0	297	113	77	539	231	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	9	12	13	12	13	12	12	12
Total Lost time (s)	4.0	4.0			4.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.96		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1674	3196			2847		1767	1782	1560			
Flt Permitted	0.37	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	645	3196			2847		1767	1782	1560			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	148	234	0	0	313	119	81	567	243	0	0	0
RTOR Reduction (vph)	0	0	0	0	39	0	0	0	167	0	0	0
Lane Group Flow (vph)	148	234	0	0	393	0	81	567	76	0	0	0
Confl. Peds. (#/hr)	9		13	13		9			1	1		
Confl. Bikes (#/hr)	3					3						
Heavy Vehicles (%)	2%	7%	0%	0%	3%	1%	0%	1%	0%	0%	0%	0%
Turn Type	pm+pt						custom		Perm			
Protected Phases	4	1 4			1		2	2				
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	59.0	63.0			26.0		30.0	30.0	30.0			
Effective Green, g (s)	59.0	63.0			26.0		30.0	30.0	30.0			
Actuated g/C Ratio	0.58	0.62			0.25		0.29	0.29	0.29			
Clearance Time (s)	4.0				4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	706	1974			726		520	524	459			
v/s Ratio Prot	c0.07	0.07			c0.14		0.05	c0.32				
v/s Ratio Perm	0.05								0.05			
v/c Ratio	0.21	0.12			0.54		0.16	1.08	0.17			
Uniform Delay, d1	10.2	8.0			32.8		26.6	36.0	26.7			
Progression Factor	0.42	0.43			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.6	0.1			2.9		0.6	63.3	0.8			
Delay (s)	4.9	3.6			35.7		27.3	99.3	27.5			
Level of Service	A	A			D		C	F	C			
Approach Delay (s)		4.1			35.7			73.2			0.0	
Approach LOS		A			D			E			A	

Intersection Summary			
HCM Average Control Delay	48.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	102.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	62.4%	ICU Level of Service	B
Analysis Period (min)	15		

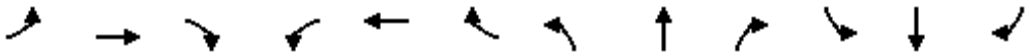
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	512	479	81	534	0	0	0	0	11	434	277
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	11	12	12	12	12	10	10	12
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	1.00
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.93		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3098		1710	3306					1596	3192	1530
Flt Permitted		1.00		0.11	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3098		200	3306					1596	3192	1530
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	533	499	84	556	0	0	0	0	11	452	289
RTOR Reduction (vph)	0	170	0	0	0	0	0	0	0	0	0	191
Lane Group Flow (vph)	0	862	0	84	556	0	0	0	0	11	452	98
Confl. Peds. (#/hr)	8		8	8		8	3					3
Confl. Bikes (#/hr)	9					9			61	61		
Heavy Vehicles (%)	0%	1%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type				pm+pt						Split		Prot
Protected Phases		8		7	7 8					6	6	6
Permitted Phases				7 8								
Actuated Green, G (s)		36.0		54.0	58.0					34.0	34.0	34.0
Effective Green, g (s)		36.0		54.0	58.0					34.0	34.0	34.0
Actuated g/C Ratio		0.36		0.54	0.58					0.34	0.34	0.34
Clearance Time (s)		4.0		4.0						4.0	4.0	4.0
Lane Grp Cap (vph)		1115		380	1917					543	1085	520
v/s Ratio Prot		c0.28		0.04	c0.17					0.01	c0.14	0.06
v/s Ratio Perm				0.08								
v/c Ratio		0.77		0.22	0.29					0.02	0.42	0.19
Uniform Delay, d1		28.4		14.4	10.6					21.9	25.4	23.3
Progression Factor		1.00		1.01	1.19					1.00	1.00	1.00
Incremental Delay, d2		5.2		0.9	0.3					0.1	1.2	0.8
Delay (s)		33.6		15.5	12.9					22.0	26.6	24.1
Level of Service		C		B	B					C	C	C
Approach Delay (s)		33.6			13.2			0.0			25.5	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM Average Control Delay	25.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	91.9%	ICU Level of Service	F
Analysis Period (min)	15		

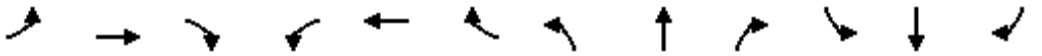
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	417	106	0	0	150	6	465	480	58	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	10	12	11	11	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	0.91	0.91			0.95		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.99		1.00	1.00	0.85			
Flt Protected	0.95	0.97			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1469	3110			3170		1555	1653	1530			
Flt Permitted	0.64	0.71			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	992	2291			3170		1555	1653	1530			
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	430	109	0	0	155	6	479	495	60	0	0	0
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	38	0	0	0
Lane Group Flow (vph)	215	324	0	0	158	0	479	495	22	0	0	0
Confl. Peds. (#/hr)	13		6	6		13			8	8		
Confl. Bikes (#/hr)	1					1			2	2		
Heavy Vehicles (%)	2%	1%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%
Turn Type	pm+pt						custom		custom			
Protected Phases	4	1 4			1		2	2	2			
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Effective Green, g (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Actuated g/C Ratio	0.51	0.51			0.15		0.37	0.37	0.37			
Clearance Time (s)	4.0				4.0		4.0	4.0	4.0			
Lane Grp Cap (vph)	678	1463			476		575	612	566			
v/s Ratio Prot	c0.11	0.08			c0.05		c0.31	0.30	0.01			
v/s Ratio Perm	0.05	0.03										
v/c Ratio	0.32	0.22			0.33		0.83	0.81	0.04			
Uniform Delay, d1	14.1	13.5			38.0		28.7	28.3	20.1			
Progression Factor	0.24	0.25			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.7	0.2			1.9		13.3	11.0	0.1			
Delay (s)	4.2	3.6			39.9		42.0	39.3	20.3			
Level of Service	A	A			D		D	D	C			
Approach Delay (s)		3.8			39.9			39.5			0.0	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM Average Control Delay	28.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	91.9%	ICU Level of Service	F
Analysis Period (min)	15		

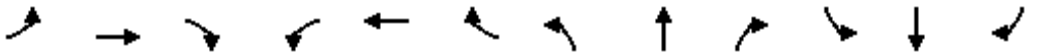
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	78	218	103	121	265	125	84	699	79	103	884	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	9	10	9	9	10	9
Total Lost time (s)		4.0			4.0		4.0	3.5	4.0	4.0	3.5	4.0
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		0.99			0.99		1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.96			0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		2939			2922		1508	3069	1309	1508	3099	1298
Flt Permitted		0.74			0.75		0.16	1.00	1.00	0.25	1.00	1.00
Satd. Flow (perm)		2182			2204		254	3069	1309	401	3099	1298
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	81	227	107	126	276	130	88	728	82	107	921	68
RTOR Reduction (vph)	0	41	0	0	37	0	0	0	50	0	0	33
Lane Group Flow (vph)	0	374	0	0	495	0	88	728	32	107	921	35
Confl. Peds. (#/hr)	35		30	30		35	34		8	8		34
Confl. Bikes (#/hr)	1					1	1					1
Heavy Vehicles (%)	1%	4%	0%	1%	3%	3%	2%	4%	2%	2%	3%	2%
Turn Type	pm+pt			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		35.0			27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)		36.0			28.0		36.0	33.5	33.0	36.0	33.5	33.0
Actuated g/C Ratio		0.42			0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)		5.0			5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)		978			726		167	1210	508	222	1221	504
v/s Ratio Prot		c0.03					c0.02	0.24		0.02	c0.30	
v/s Ratio Perm		0.14			c0.22		0.20		0.02	0.18		0.03
v/c Ratio		0.38			0.68		0.53	0.60	0.06	0.48	0.75	0.07
Uniform Delay, d1		16.9			24.6		16.7	20.5	16.3	16.0	22.2	16.3
Progression Factor		1.00			1.00		1.32	0.69	0.61	1.11	1.16	1.74
Incremental Delay, d2		1.1			5.1		10.4	2.0	0.2	5.3	3.1	0.2
Delay (s)		18.0			29.8		32.4	16.2	10.1	23.0	29.0	28.6
Level of Service		B			C		C	B	B	C	C	C
Approach Delay (s)		18.0			29.8			17.2			28.4	
Approach LOS		B			C			B			C	

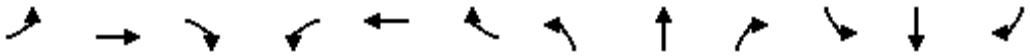
Intersection Summary			
HCM Average Control Delay	23.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	73.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	76	318	0	0	389	103	53	44	37	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.97			0.96				
Flt Protected		0.99			1.00			0.98				
Satd. Flow (prot)		1731			1698			1650				
Flt Permitted		0.83			1.00			0.98				
Satd. Flow (perm)		1458			1698			1650				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	84	353	0	0	432	114	59	49	41	0	0	0
RTOR Reduction (vph)	0	0	0	0	15	0	0	21	0	0	0	0
Lane Group Flow (vph)	0	437	0	0	531	0	0	128	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		38.0			38.0			19.0				
Effective Green, g (s)		38.0			38.0			19.0				
Actuated g/C Ratio		0.58			0.58			0.29				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		852			993			482				
v/s Ratio Prot					c0.31							
v/s Ratio Perm		0.30						0.08				
v/c Ratio		0.51			0.54			0.27				
Uniform Delay, d1		8.0			8.2			17.6				
Progression Factor		1.00			0.99			1.00				
Incremental Delay, d2		2.2			1.6			1.3				
Delay (s)		10.2			9.7			19.0				
Level of Service		B			A			B				
Approach Delay (s)		10.2			9.7			19.0			0.0	
Approach LOS		B			A			B			A	

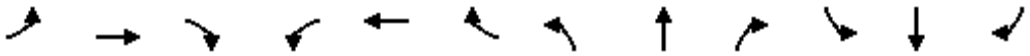
Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	19	306	27	53	416	70	28	118	42	57	150	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	10	12	12	10	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			0.98	
Flpb, ped/bikes		1.00			1.00			0.99			1.00	
Frt		0.99			0.98			0.97			0.97	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1957			1933			2959			2985	
Flt Permitted		0.96			0.93			0.89			0.85	
Satd. Flow (perm)		1887			1810			2658			2572	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	21	340	30	59	462	78	31	131	47	63	167	47
RTOR Reduction (vph)	0	5	0	0	8	0	0	27	0	0	26	0
Lane Group Flow (vph)	0	386	0	0	591	0	0	182	0	0	251	0
Confl. Peds. (#/hr)	32		25	25		32	59		24	24		59
Confl. Bikes (#/hr)	3		2	2		3	4		2	2		4
Heavy Vehicles (%)	0%	3%	0%	3%	3%	0%	0%	0%	7%	4%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0			27.0			27.0	
Effective Green, g (s)		30.0			30.0			27.0			27.0	
Actuated g/C Ratio		0.46			0.46			0.42			0.42	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		871			835			1104			1068	
v/s Ratio Prot												
v/s Ratio Perm		0.20			c0.33			0.07			c0.10	
v/c Ratio		0.44			0.71			0.16			0.23	
Uniform Delay, d1		11.8			14.0			11.9			12.3	
Progression Factor		0.57			0.37			1.27			0.46	
Incremental Delay, d2		1.4			4.1			0.3			0.5	
Delay (s)		8.2			9.3			15.4			6.1	
Level of Service		A			A			B			A	
Approach Delay (s)		8.2			9.3			15.4			6.1	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM Average Control Delay	9.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	83.9%	ICU Level of Service	E
Analysis Period (min)	15		

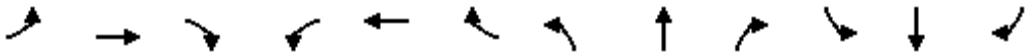
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	41	279	39	85	551	100	43	219	99	86	227	62
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	9	10	10	9	10	10	12	10	10	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00		0.99	1.00		0.99	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.95		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1512	3039		1570	3078		1587	2961		1585	3075	
Flt Permitted	0.25	1.00		0.52	1.00		0.56	1.00		0.54	1.00	
Satd. Flow (perm)	395	3039		854	3078		931	2961		902	3075	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	46	310	43	94	612	111	48	243	110	96	252	69
RTOR Reduction (vph)	0	17	0	0	22	0	0	51	0	0	32	0
Lane Group Flow (vph)	46	336	0	94	701	0	48	302	0	96	289	0
Confl. Peds. (#/hr)	20		31	31		20	16		20	20		16
Confl. Bikes (#/hr)							1		3	3		1
Heavy Vehicles (%)	5%	3%	0%	0%	1%	0%	0%	2%	2%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	134	1029		289	1042		501	1594		486	1656	
v/s Ratio Prot		0.11			c0.23			0.10			0.09	
v/s Ratio Perm	0.12			0.11			0.05			c0.11		
v/c Ratio	0.34	0.33		0.33	0.67		0.10	0.19		0.20	0.17	
Uniform Delay, d1	16.1	16.0		16.0	18.4		7.3	7.7		7.7	7.6	
Progression Factor	0.82	0.76		1.11	1.12		1.11	1.25		1.08	1.08	
Incremental Delay, d2	6.4	0.8		2.9	3.4		0.4	0.3		0.9	0.2	
Delay (s)	19.6	13.0		20.6	23.9		8.5	9.9		9.3	8.5	
Level of Service	B	B		C	C		A	A		A	A	
Approach Delay (s)		13.8			23.5			9.7			8.6	
Approach LOS		B			C			A			A	

Intersection Summary			
HCM Average Control Delay	15.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.8%	ICU Level of Service	A
Analysis Period (min)	15		

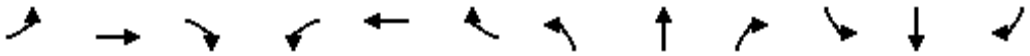
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	55	287	96	107	401	50	165	250	131	46	295	64
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	9	10	9	9	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99			0.99			0.98	
Flpb, ped/bikes	0.98	1.00		0.99	1.00			0.98			1.00	
Frt	1.00	0.96		1.00	0.98			0.96			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1508	2988		1430	3720			3405			3530	
Flt Permitted	0.46	1.00		0.51	1.00			0.69			0.85	
Satd. Flow (perm)	726	2988		761	3720			2401			3027	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	58	302	101	113	422	53	174	263	138	48	311	67
RTOR Reduction (vph)	0	50	0	0	15	0	0	46	0	0	23	0
Lane Group Flow (vph)	58	353	0	113	460	0	0	529	0	0	403	0
Confl. Peds. (#/hr)	38		17	17		38	125		53	53		125
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	3%	0%	7%	2%	0%	0%	6%	10%	2%	5%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Effective Green, g (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48			0.40			0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	346	1425		363	1774			960			1211	
v/s Ratio Prot		0.12			0.12							
v/s Ratio Perm	0.08			c0.15				c0.22			0.13	
v/c Ratio	0.17	0.25		0.31	0.26			0.55			0.33	
Uniform Delay, d1	9.7	10.1		10.4	10.1			15.0			13.5	
Progression Factor	1.54	1.77		1.09	1.07			1.07			0.76	
Incremental Delay, d2	1.0	0.4		2.0	0.3			1.4			0.7	
Delay (s)	15.9	18.3		13.3	11.2			17.5			10.9	
Level of Service	B	B		B	B			B			B	
Approach Delay (s)		18.0			11.6			17.5			10.9	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	14.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	64.0%	ICU Level of Service	C
Analysis Period (min)	15		

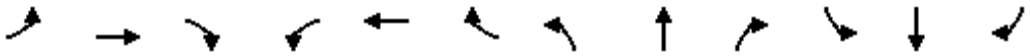
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	86	311	86	92	297	92	119	82	47	47	82	119
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	16	12	12	16	12
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		0.95			1.00			1.00	
Frt		1.00	0.85		0.97			0.97			0.94	
Flt Protected		0.99	1.00		0.99			0.98			0.99	
Satd. Flow (prot)		1671	1436		3088			1885			1835	
Flt Permitted		0.80	1.00		0.78			0.68			0.90	
Satd. Flow (perm)		1346	1436		2425			1305			1674	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	96	346	96	102	330	102	132	91	52	52	91	132
RTOR Reduction (vph)	0	0	46	0	31	0	0	13	0	0	51	0
Lane Group Flow (vph)	0	442	50	0	503	0	0	262	0	0	224	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		34.0	34.0		34.0			21.0			21.0	
Effective Green, g (s)		34.0	34.0		34.0			21.0			21.0	
Actuated g/C Ratio		0.52	0.52		0.52			0.32			0.32	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Grp Cap (vph)		704	751		1268			422			541	
v/s Ratio Prot												
v/s Ratio Perm		c0.33	0.03		0.21			c0.20			0.13	
v/c Ratio		0.63	0.07		0.40			0.62			0.41	
Uniform Delay, d1		11.0	7.7		9.3			18.6			17.2	
Progression Factor		1.41	3.20		0.52			1.00			1.00	
Incremental Delay, d2		4.0	0.2		0.9			6.7			2.3	
Delay (s)		19.6	24.7		5.8			25.4			19.5	
Level of Service		B	C		A			C			B	
Approach Delay (s)		20.5			5.8			25.4			19.5	
Approach LOS		C			A			C			B	

Intersection Summary			
HCM Average Control Delay	16.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	80.7%	ICU Level of Service	D
Analysis Period (min)	15		

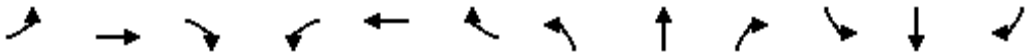
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	291	32	26	328	60	27	133	47	62	146	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	15	8	16	8	8	16	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.98		1.00	0.98			0.97			0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1444	3021		1566	3019			3583			3595	
Flt Permitted	0.48	1.00		0.54	1.00			0.90			0.84	
Satd. Flow (perm)	735	3021		883	3019			3230			3066	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	66	323	36	29	364	67	30	148	52	69	162	72
RTOR Reduction (vph)	0	13	0	0	23	0	0	30	0	0	42	0
Lane Group Flow (vph)	66	346	0	29	408	0	0	200	0	0	261	0
Confl. Peds. (#/hr)	24		47	47		24	9		36	36		9
Confl. Bikes (#/hr)			4	4			1					1
Heavy Vehicles (%)	9%	4%	0%	0%	3%	0%	0%	1%	10%	0%	0%	8%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	30.0	30.0		30.0	30.0			27.0			27.0	
Effective Green, g (s)	30.0	30.0		30.0	30.0			27.0			27.0	
Actuated g/C Ratio	0.46	0.46		0.46	0.46			0.42			0.42	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	339	1394		408	1393			1342			1274	
v/s Ratio Prot		0.11			c0.14							
v/s Ratio Perm	0.09			0.03				0.06			c0.09	
v/c Ratio	0.19	0.25		0.07	0.29			0.15			0.20	
Uniform Delay, d1	10.4	10.6		9.7	10.9			11.8			12.1	
Progression Factor	0.65	0.64		0.86	0.70			0.95			0.41	
Incremental Delay, d2	1.0	0.3		0.1	0.2			0.2			0.3	
Delay (s)	7.7	7.2		8.5	7.8			11.5			5.3	
Level of Service	A	A		A	A			B			A	
Approach Delay (s)		7.3			7.8			11.5			5.3	
Approach LOS		A			A			B			A	

Intersection Summary					
HCM Average Control Delay	7.7	HCM Level of Service	A		
HCM Volume to Capacity ratio	0.25				
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0		
Intersection Capacity Utilization	56.8%	ICU Level of Service	B		
Analysis Period (min)	15				

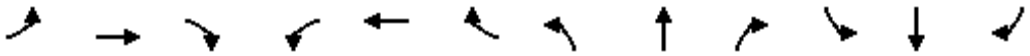
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	47	456	30	86	507	222	25	124	115	340	261	82
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.99			0.96			0.93			0.98	
Flt Protected		1.00			0.99			1.00			0.98	
Satd. Flow (prot)		3278			3168			3089			3181	
Flt Permitted		0.76			0.79			0.90			0.70	
Satd. Flow (perm)		2512			2502			2796			2288	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	52	507	33	96	563	247	28	138	128	378	290	91
RTOR Reduction (vph)	0	7	0	0	60	0	0	69	0	0	16	0
Lane Group Flow (vph)	0	585	0	0	846	0	0	225	0	0	743	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0			30.0			17.0	
Effective Green, g (s)		25.0			25.0			30.0			17.0	
Actuated g/C Ratio		0.38			0.38			0.46			0.26	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		966			962			1336			598	
v/s Ratio Prot								c0.03				
v/s Ratio Perm		0.23			c0.34			0.05			c0.32	
v/c Ratio		0.61			0.88			0.17			1.36dl	
Uniform Delay, d1		16.0			18.6			10.2			24.0	
Progression Factor		1.47			1.00			1.00			0.80	
Incremental Delay, d2		2.8			11.3			0.3			122.2	
Delay (s)		26.4			29.9			10.5			141.4	
Level of Service		C			C			B			F	
Approach Delay (s)		26.4			29.9			10.5			141.4	
Approach LOS		C			C			B			F	

Intersection Summary			
HCM Average Control Delay	60.0	HCM Level of Service	E
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	86.4%	ICU Level of Service	E
Analysis Period (min)	15		

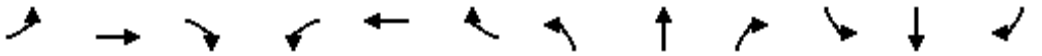
dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	899	138	48	794	0	82	0	36	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	10	10	12	12	12	12	12	12	12
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			1.00				
Frt		0.98			1.00			0.96				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		3037			3090			1619				
Flt Permitted		1.00			0.80			0.79				
Satd. Flow (perm)		3037			2483			1328				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	999	153	53	882	0	91	0	40	0	0	0
RTOR Reduction (vph)	0	17	0	0	0	0	0	17	0	0	0	0
Lane Group Flow (vph)	0	1135	0	0	935	0	0	114	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	custom			Perm			Perm			Perm		
Protected Phases		4 5 6 11			8			2			2	
Permitted Phases	4 6 11			8			2			2		
Actuated Green, G (s)		65.0			33.0			16.0				
Effective Green, g (s)		58.0			33.0			16.0				
Actuated g/C Ratio		0.64			0.37			0.18				
Clearance Time (s)					5.0			5.0				
Lane Grp Cap (vph)		1957			910			236				
v/s Ratio Prot		c0.37										
v/s Ratio Perm					c0.38			c0.09				
v/c Ratio		0.58			1.03			0.48				
Uniform Delay, d1		9.1			28.5			33.3				
Progression Factor		0.16			1.43			1.00				
Incremental Delay, d2		0.3			35.8			6.9				
Delay (s)		1.8			76.7			40.2				
Level of Service		A			E			D				
Approach Delay (s)		1.8			76.7			40.2			0.0	
Approach LOS		A			E			D			A	

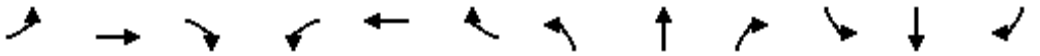
Intersection Summary			
HCM Average Control Delay	35.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	75.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	224	642	24	112	614	185	61	4	107	212	10	213
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	10	12	12	12	12	16	12	12	12	12
Total Lost time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85		0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (prot)	1550	3192		1660	3320	1485		1782		1660	1748	1485
Flt Permitted	0.29	1.00		0.33	1.00	1.00		0.88		0.44	1.00	1.00
Satd. Flow (perm)	471	3192		583	3320	1485		1592		763	1748	1485
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	249	713	27	124	682	206	68	4	119	236	11	237
RTOR Reduction (vph)	0	2	0	0	0	96	0	90	0	0	0	135
Lane Group Flow (vph)	249	738	0	124	682	110	0	101	0	236	11	102
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	54.9	42.5		47.6	38.2	48.2		12.1		25.1	25.1	38.8
Effective Green, g (s)	54.9	42.5		47.6	38.2	48.2		12.1		25.1	25.1	38.8
Actuated g/C Ratio	0.61	0.47		0.53	0.42	0.54		0.13		0.28	0.28	0.43
Clearance Time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Vehicle Extension (s)	4.0	3.0		4.0	3.0	3.0		4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	452	1507		421	1409	795		214		312	487	640
v/s Ratio Prot	c0.08	0.23		0.03	0.21	0.02				c0.08	0.01	0.02
v/s Ratio Perm	c0.25			0.13		0.06		0.06		c0.13		0.04
v/c Ratio	0.55	0.49		0.29	0.48	0.14		0.47		0.76	0.02	0.16
Uniform Delay, d1	9.2	16.3		10.9	18.8	10.5		36.0		28.6	23.5	15.6
Progression Factor	2.63	1.86		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	1.5	1.0		0.5	1.2	0.1		2.2		10.0	0.0	0.2
Delay (s)	25.8	31.3		11.4	20.0	10.6		38.2		38.6	23.6	15.8
Level of Service	C	C		B	B	B		D		D	C	B
Approach Delay (s)		29.9			17.0			38.2			27.1	
Approach LOS		C			B			D			C	

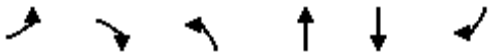
Intersection Summary			
HCM Average Control Delay	25.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	61.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	518	443	2	333	0	0	0	0	19	0	578
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	576	492	2	370	0	0	0	0	21	0	642
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		498										
pX, platoon unblocked												
vC, conflicting volume	370			576			765	950	288	662	950	185
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	370			576			765	950	288	662	950	185
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	94	100	22
cM capacity (veh/h)	1178			987			64	256	706	345	256	823

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	288	288	492	126	247	21	642
Volume Left	0	0	0	2	0	21	0
Volume Right	0	0	492	0	0	0	642
cSH	1700	1700	1700	987	1700	345	823
Volume to Capacity	0.17	0.17	0.29	0.00	0.15	0.06	0.78
Queue Length 95th (ft)	0	0	0	0	0	5	198
Control Delay (s)	0.0	0.0	0.0	0.2	0.0	16.1	23.1
Lane LOS				A		C	C
Approach Delay (s)	0.0			0.1		22.8	
Approach LOS						C	

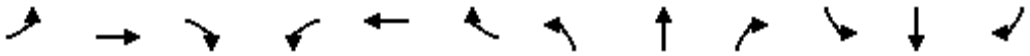
Intersection Summary				
Average Delay	7.2			
Intersection Capacity Utilization	54.2%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	537	0	335	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	597	0	372	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	298	298	372
Volume Left (vph)	298	298	372
Volume Right (vph)	0	0	0
Hadj (s)	0.55	0.55	0.25
Departure Headway (s)	6.2	6.2	5.6
Degree Utilization, x	0.51	0.51	0.58
Capacity (veh/h)	568	570	619
Control Delay (s)	14.3	14.3	16.0
Approach Delay (s)	14.3		16.0
Approach LOS	B		C

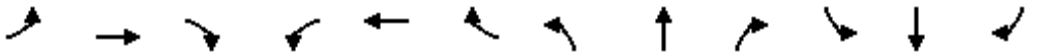
Intersection Summary			
Delay	14.9		
HCM Level of Service	B		
Intersection Capacity Utilization	42.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	483	64	212	535	0	0	0	0	101	21	58
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)		3.0		4.0	4.0						5.0	
Lane Util. Factor		0.95		1.00	0.95						0.95	
Frt		0.98		1.00	1.00						0.95	
Flt Protected		1.00		0.95	1.00						0.97	
Satd. Flow (prot)		3153		1605	3210						3074	
Flt Permitted		1.00		0.34	1.00						0.97	
Satd. Flow (perm)		3153		574	3210						3074	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	537	71	236	594	0	0	0	0	112	23	64
RTOR Reduction (vph)	0	12	0	0	0	0	0	0	0	0	44	0
Lane Group Flow (vph)	0	596	0	236	594	0	0	0	0	0	155	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type				pm+pt						Split		
Protected Phases		4		3	8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		36.0		49.0	49.0						27.0	
Effective Green, g (s)		36.0		49.0	49.0						27.0	
Actuated g/C Ratio		0.42		0.58	0.58						0.32	
Clearance Time (s)		3.0		4.0	4.0						5.0	
Lane Grp Cap (vph)		1335		452	1850						976	
v/s Ratio Prot		0.19		c0.06	0.19						c0.05	
v/s Ratio Perm				c0.24								
v/c Ratio		0.45		0.52	0.32						0.16	
Uniform Delay, d1		17.4		16.7	9.4						20.8	
Progression Factor		1.00		0.36	0.17						1.00	
Incremental Delay, d2		1.1		3.3	0.3						0.3	
Delay (s)		18.5		9.3	1.9						21.2	
Level of Service		B		A	A						C	
Approach Delay (s)		18.5			4.0			0.0			21.2	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	46.2%	ICU Level of Service	A
Analysis Period (min)	15		

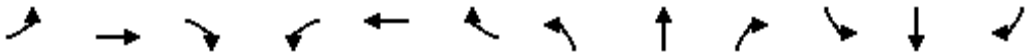
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	95	489	0	0	684	129	63	90	63	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	11	11	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0			3.0			5.0				
Lane Util. Factor	1.00	0.95			0.95			0.91				
Frt	1.00	1.00			0.98			0.96				
Flt Protected	0.95	1.00			1.00			0.99				
Satd. Flow (prot)	1660	3320			3133			4497				
Flt Permitted	0.19	1.00			1.00			0.99				
Satd. Flow (perm)	335	3320			3133			4497				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	106	543	0	0	760	143	70	100	70	0	0	0
RTOR Reduction (vph)	0	0	0	0	18	0	0	48	0	0	0	0
Lane Group Flow (vph)	106	543	0	0	885	0	0	192	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt						Split					
Protected Phases	7	4			8		2	2				
Permitted Phases	4											
Actuated Green, G (s)	48.0	48.0			35.0			27.0				
Effective Green, g (s)	48.0	48.0			35.0			27.0				
Actuated g/C Ratio	0.56	0.56			0.41			0.32				
Clearance Time (s)	5.0	5.0			3.0			5.0				
Lane Grp Cap (vph)	345	1875			1290			1428				
v/s Ratio Prot	0.04	c0.16			c0.28			c0.04				
v/s Ratio Perm	0.14											
v/c Ratio	0.31	0.29			0.69			0.13				
Uniform Delay, d1	19.6	9.6			20.5			20.7				
Progression Factor	0.46	0.31			1.00			1.00				
Incremental Delay, d2	2.1	0.4			3.0			0.2				
Delay (s)	11.1	3.3			23.5			20.9				
Level of Service	B	A			C			C				
Approach Delay (s)		4.6			23.5			20.9			0.0	
Approach LOS		A			C			C			A	

Intersection Summary			
HCM Average Control Delay	16.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.2%	ICU Level of Service	A
Analysis Period (min)	15		

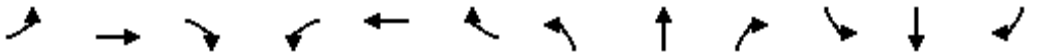
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	114	358	114	119	426	89	129	78	37	32	87	144
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	12	15	12	12	15	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		0.97			0.98			0.98			0.93	
Flt Protected		0.99			0.99			0.97			0.99	
Satd. Flow (prot)		2979			3005			1835			1770	
Flt Permitted		0.62			0.65			0.72			0.94	
Satd. Flow (perm)		1874			1968			1361			1676	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	127	398	127	132	473	99	143	87	41	36	97	160
RTOR Reduction (vph)	0	32	0	0	20	0	0	10	0	0	67	0
Lane Group Flow (vph)	0	620	0	0	684	0	0	261	0	0	226	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		23.0			23.0			32.0			32.0	
Effective Green, g (s)		23.0			23.0			32.0			32.0	
Actuated g/C Ratio		0.35			0.35			0.49			0.49	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		663			696			670			825	
v/s Ratio Prot												
v/s Ratio Perm		0.33			c0.35			c0.19			0.14	
v/c Ratio		0.93			0.98			0.39			0.27	
Uniform Delay, d1		20.3			20.8			10.4			9.7	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		22.2			30.2			1.7			0.8	
Delay (s)		42.4			51.0			12.1			10.5	
Level of Service		D			D			B			B	
Approach Delay (s)		42.4			51.0			12.1			10.5	
Approach LOS		D			D			B			B	

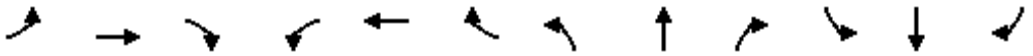
Intersection Summary			
HCM Average Control Delay	36.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	83.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	106	229	88	199	420	125	124	539	77	110	940	146
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	12	10	16	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.96		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1562	2993		1574	3644		1508	3069	1333	1520	3099	1336
Flt Permitted	0.31	1.00		0.50	1.00		0.13	1.00	1.00	0.34	1.00	1.00
Satd. Flow (perm)	510	2993		836	3644		212	3069	1333	545	3099	1336
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	112	241	93	209	442	132	131	567	81	116	989	154
RTOR Reduction (vph)	0	48	0	0	33	0	0	0	51	0	0	98
Lane Group Flow (vph)	112	286	0	209	541	0	131	567	30	116	989	56
Confl. Peds. (#/hr)	19		16	16		19	22		25	25		22
Heavy Vehicles (%)	2%	2%	0%	1%	2%	2%	2%	4%	0%	1%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	32.0	27.0		32.0	27.0		38.0	31.0	31.0	38.0	31.0	31.0
Effective Green, g (s)	30.0	28.0		30.0	28.0		36.0	31.0	31.0	36.0	31.0	31.0
Actuated g/C Ratio	0.35	0.33		0.35	0.33		0.42	0.36	0.36	0.42	0.36	0.36
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	230	986		330	1200		181	1119	486	300	1130	487
v/s Ratio Prot	0.02	0.10		c0.03	0.15		c0.05	0.18		0.03	c0.32	
v/s Ratio Perm	0.15			c0.19			0.26		0.02	0.14		0.04
v/c Ratio	0.49	0.29		0.63	0.45		0.72	0.51	0.06	0.39	0.88	0.12
Uniform Delay, d1	19.9	21.1		22.2	22.4		18.0	21.0	17.5	15.6	25.2	17.9
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.40	1.05	2.37
Incremental Delay, d2	7.2	0.7		8.9	1.2		22.1	1.6	0.2	2.8	7.4	0.4
Delay (s)	27.1	21.9		31.2	23.7		40.1	22.7	17.8	24.6	33.8	42.7
Level of Service	C	C		C	C		D	C	B	C	C	D
Approach Delay (s)		23.2			25.7			25.1			34.1	
Approach LOS		C			C			C			C	

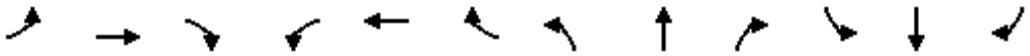
Intersection Summary			
HCM Average Control Delay	28.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	73.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	48	348	30	83	601	84	33	100	53	51	124	64
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	16	12	12	16	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00	0.98		1.00	0.99
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected		0.99	1.00		0.99	1.00		0.99	1.00		0.99	1.00
Satd. Flow (prot)		1965	1466		1990	1480		2015	1506		1995	1511
Flt Permitted		0.60	1.00		0.87	1.00		0.91	1.00		0.89	1.00
Satd. Flow (perm)		1184	1466		1750	1480		1857	1506		1809	1511
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	51	366	32	87	633	88	35	105	56	54	131	67
RTOR Reduction (vph)	0	0	17	0	0	47	0	0	33	0	0	39
Lane Group Flow (vph)	0	417	15	0	720	41	0	140	23	0	185	28
Confl. Peds. (#/hr)	11		20	20		11	1		4	4		1
Confl. Bikes (#/hr)	1		1	1		1			1	1		
Heavy Vehicles (%)	4%	3%	0%	0%	2%	0%	0%	0%	0%	0%	1%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Effective Green, g (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Actuated g/C Ratio		0.46	0.46		0.46	0.46		0.42	0.42		0.42	0.42
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		546	677		808	683		771	626		751	628
v/s Ratio Prot												
v/s Ratio Perm		0.35	0.01		c0.41	0.03		0.08	0.02		c0.10	0.02
v/c Ratio		0.76	0.02		0.89	0.06		0.18	0.04		0.25	0.04
Uniform Delay, d1		14.6	9.5		16.0	9.7		12.0	11.3		12.4	11.3
Progression Factor		1.00	1.00		0.44	0.05		1.09	1.31		1.03	0.89
Incremental Delay, d2		9.8	0.1		12.2	0.1		0.5	0.1		0.7	0.1
Delay (s)		24.3	9.6		19.3	0.7		13.6	14.9		13.5	10.2
Level of Service		C	A		B	A		B	B		B	B
Approach Delay (s)		23.3			17.2			14.0			12.6	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM Average Control Delay	17.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	100.4%	ICU Level of Service	G
Analysis Period (min)	15		

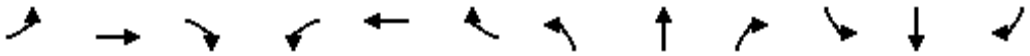
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	75	385	20	51	566	91	10	109	23	125	214	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.98		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1550	3076		1550	3035		1550	3017		1550	2991	
Flt Permitted	0.95	1.00		0.49	1.00		0.55	1.00		0.66	1.00	
Satd. Flow (perm)	1550	3076		802	3035		892	3017		1074	2991	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	83	428	22	57	629	101	11	121	26	139	238	72
RTOR Reduction (vph)	0	6	0	0	20	0	0	15	0	0	42	0
Lane Group Flow (vph)	83	444	0	57	710	0	11	132	0	139	268	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Prot			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Effective Green, g (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.11	0.49		0.34	0.34		0.42	0.42		0.42	0.42	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	167	1514		271	1027		371	1253		446	1242	
v/s Ratio Prot	c0.05	0.14			c0.23			0.04			0.09	
v/s Ratio Perm				0.07			0.01			c0.13		
v/c Ratio	0.50	0.29		0.21	0.69		0.03	0.11		0.31	0.22	
Uniform Delay, d1	27.3	9.8		15.3	18.6		11.2	11.6		12.8	12.2	
Progression Factor	1.16	0.56		0.92	0.96		0.83	0.83		1.11	1.10	
Incremental Delay, d2	8.6	0.4		1.0	2.2		0.1	0.2		1.8	0.4	
Delay (s)	40.4	5.9		15.1	20.1		9.5	9.8		15.9	13.8	
Level of Service	D	A		B	C		A	A		B	B	
Approach Delay (s)		11.3			19.7			9.8			14.4	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM Average Control Delay	15.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	49.1%	ICU Level of Service	A
Analysis Period (min)	15		

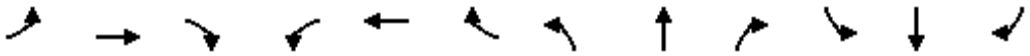
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	64	267	166	247	330	63	412	300	189	55	295	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.94		1.00	0.98			0.97			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.99	
Satd. Flow (prot)	1550	2921		1550	3025			3144			3236	
Flt Permitted	0.50	1.00		0.95	1.00			0.64			0.68	
Satd. Flow (perm)	813	2921		1550	3025			2049			2229	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	71	297	184	274	367	70	458	333	210	61	328	56
RTOR Reduction (vph)	0	127	0	0	24	0	0	37	0	0	17	0
Lane Group Flow (vph)	71	354	0	274	413	0	0	964	0	0	428	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Prot			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4						2			6		
Actuated Green, G (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Effective Green, g (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Actuated g/C Ratio	0.31	0.31		0.09	0.45			0.38			0.38	
Clearance Time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	250	899		143	1350			788			857	
v/s Ratio Prot		c0.12		c0.18	0.14							
v/s Ratio Perm	0.09							c0.47			0.19	
v/c Ratio	0.28	0.39		1.92	0.31			1.34dl			0.50	
Uniform Delay, d1	17.1	17.7		29.5	11.5			20.0			15.2	
Progression Factor	0.81	0.68		1.27	1.18			1.03			0.69	
Incremental Delay, d2	2.8	1.3		423.2	0.2			111.6			2.0	
Delay (s)	16.6	13.3		460.7	13.8			132.3			12.5	
Level of Service	B	B		F	B			F			B	
Approach Delay (s)		13.7			186.1			132.3			12.5	
Approach LOS		B			F			F			B	

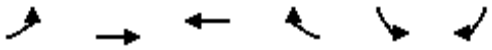
Intersection Summary			
HCM Average Control Delay	102.6	HCM Level of Service	F
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	80.9%	ICU Level of Service	D
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	26	454	16	75	647	75	55	110	165	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	14	12	10	15	10
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			0.95				
Frt		1.00			0.99			0.93				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		1620			1603			3249				
Flt Permitted		0.94			0.91			0.99				
Satd. Flow (perm)		1529			1466			3249				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	29	504	18	83	719	83	61	122	183	0	0	0
RTOR Reduction (vph)	0	1	0	0	5	0	0	139	0	0	0	0
Lane Group Flow (vph)	0	550	0	0	880	0	0	227	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		41.5			41.5			15.5				
Effective Green, g (s)		41.5			41.5			15.5				
Actuated g/C Ratio		0.64			0.64			0.24				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		3.0			3.0			8.0				
Lane Grp Cap (vph)		976			936			775				
v/s Ratio Prot												
v/s Ratio Perm		0.36			c0.60			0.07				
v/c Ratio		0.56			0.94			0.29				
Uniform Delay, d1		6.6			10.6			20.3				
Progression Factor		1.06			1.00			1.00				
Incremental Delay, d2		1.5			18.1			0.9				
Delay (s)		8.5			28.8			21.2				
Level of Service		A			C			C				
Approach Delay (s)		8.5			28.8			21.2			0.0	
Approach LOS		A			C			C			A	

Intersection Summary			
HCM Average Control Delay	21.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	85.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	133	474	615	39	119	174
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	140	499	647	41	125	183
Pedestrians		5	6		17	
Lane Width (ft)		16.0	16.0		10.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		1	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1319	491			
pX, platoon unblocked	0.83				0.83	0.83
vC, conflicting volume	705				1470	690
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	540				1464	521
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	83				0	60
cM capacity (veh/h)	829				97	455

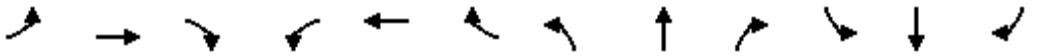
Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	639	688	125	183
Volume Left	140	0	125	0
Volume Right	0	41	0	183
cSH	829	1700	97	455
Volume to Capacity	0.17	0.40	1.30	0.40
Queue Length 95th (ft)	15	0	222	48
Control Delay (s)	4.1	0.0	271.4	18.1
Lane LOS	A		F	C
Approach Delay (s)	4.1	0.0	121.0	
Approach LOS			F	

Intersection Summary			
Average Delay	24.4		
Intersection Capacity Utilization	88.8%	ICU Level of Service	E
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	710	0	1	626	3	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frt	1.00			1.00	0.88	
Flt Protected	1.00			1.00	1.00	
Satd. Flow (prot)	1748			1747	1525	
Flt Permitted	1.00			1.00	1.00	
Satd. Flow (perm)	1748			1747	1525	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	789	0	1	696	3	32
RTOR Reduction (vph)	0	0	0	0	27	0
Lane Group Flow (vph)	789	0	0	697	8	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type			Perm			
Protected Phases	1 2 4			4	3	
Permitted Phases			4			
Actuated Green, G (s)	63.0			31.0	14.0	
Effective Green, g (s)	59.0			31.0	14.0	
Actuated g/C Ratio	0.69			0.36	0.16	
Clearance Time (s)				4.0	4.0	
Lane Grp Cap (vph)	1213			637	251	
v/s Ratio Prot	c0.45				c0.01	
v/s Ratio Perm				0.40		
v/c Ratio	0.65			1.09	0.03	
Uniform Delay, d1	7.2			27.0	29.8	
Progression Factor	0.12			1.00	1.00	
Incremental Delay, d2	0.2			64.1	0.2	
Delay (s)	1.1			91.1	30.1	
Level of Service	A			F	C	
Approach Delay (s)	1.1			91.1	30.1	
Approach LOS	A			F	C	

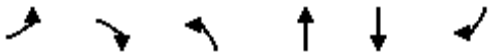
Intersection Summary			
HCM Average Control Delay	43.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	49.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	253	616	32	410	0	0	0	0	17	6	252
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	281	684	36	456	0	0	0	0	19	7	280
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	456			281			1153	1150	483	667	808	456
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	456			281			1153	1150	483	667	808	456
tC, single (s)	4.1			4.2			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			100	100	100	94	98	49
cM capacity (veh/h)	1116			1264			73	194	535	341	308	552

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	187	778	491	26	280
Volume Left	0	0	36	19	0
Volume Right	0	684	0	0	280
cSH	1700	1700	1264	332	552
Volume to Capacity	0.11	0.46	0.03	0.08	0.51
Queue Length 95th (ft)	0	0	2	6	71
Control Delay (s)	0.0	0.0	0.9	16.8	18.1
Lane LOS			A	C	C
Approach Delay (s)	0.0		0.9	17.9	
Approach LOS				C	

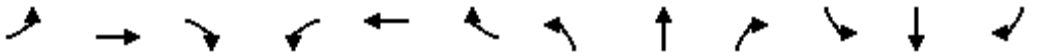
Intersection Summary				
Average Delay	3.4			
Intersection Capacity Utilization	60.6%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	270	0	442	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	300	0	491	0	0	0

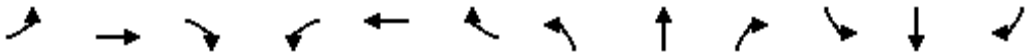
Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	150	150	491
Volume Left (vph)	150	150	491
Volume Right (vph)	0	0	0
Hadj (s)	0.55	0.55	0.25
Departure Headway (s)	6.4	6.4	5.0
Degree Utilization, x	0.27	0.27	0.68
Capacity (veh/h)	536	536	697
Control Delay (s)	10.5	10.5	18.1
Approach Delay (s)	10.5		18.1
Approach LOS	B		C

Intersection Summary			
Delay	15.2		
HCM Level of Service	C		
Intersection Capacity Utilization	40.6%	ICU Level of Service	A
Analysis Period (min)	15		



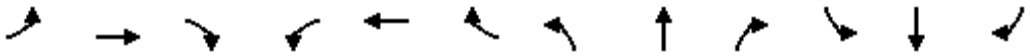
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	501	345	273	661	0	0	0	0	279	269	372
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	13	12	12	12	12	10	10	11
Total Lost time (s)		6.0	6.0		6.0					6.0	6.0	6.0
Lane Util. Factor		0.95	1.00		0.95					0.86	0.81	0.86
Frpb, ped/bikes		1.00	0.98		1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	0.95	0.85
Flt Protected		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (prot)		3179	1232		3425					1359	3806	1133
Flt Permitted		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (perm)		3179	1232		3425					1359	3806	1133
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	527	363	287	696	0	0	0	0	294	283	392
RTOR Reduction (vph)	0	0	230	0	0	0	0	0	0	0	53	113
Lane Group Flow (vph)	0	527	133	0	983	0	0	0	0	162	558	83
Confl. Peds. (#/hr)	4		6	6		4						
Heavy Vehicles (%)	0%	4%	6%	1%	2%	0%	0%	0%	0%	1%	1%	1%
Parking (#/hr)			0									0
Turn Type			Perm	Split						Split		custom
Protected Phases		2		10 12 14	10 12 14					4	4	
Permitted Phases			2									4 2
Actuated Green, G (s)		39.0	39.0		68.1					23.0	23.0	68.0
Effective Green, g (s)		39.0	39.0		68.1					23.0	23.0	68.0
Actuated g/C Ratio		0.24	0.24		0.43					0.14	0.14	0.42
Clearance Time (s)		6.0	6.0							6.0	6.0	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		775	300		1458					195	547	482
v/s Ratio Prot		c0.17			c0.29					0.12	c0.15	
v/s Ratio Perm			0.11									0.07
v/c Ratio		0.68	0.44		0.67					0.83	1.02	0.17
Uniform Delay, d1		54.8	51.3		37.0					66.6	68.5	28.5
Progression Factor		1.00	1.00		0.06					1.00	1.00	1.00
Incremental Delay, d2		4.8	4.7		0.1					24.9	43.6	0.2
Delay (s)		59.6	56.0		2.3					91.5	112.1	28.7
Level of Service		E	E		A					F	F	C
Approach Delay (s)		58.1			2.3			0.0			91.8	
Approach LOS		E			A			A			F	

Intersection Summary			
HCM Average Control Delay	50.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	31.9
Intersection Capacity Utilization	76.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



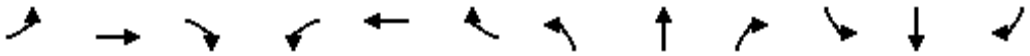
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	292	488	0	0	602	144	332	214	196	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	13	12	12	11	12	13	13	14	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0				
Lane Util. Factor	1.00	0.95			0.95	1.00	0.91	0.91				
Frt	1.00	1.00			1.00	0.85	1.00	0.94				
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (prot)	1605	3431			3210	1485	1561	3064				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (perm)	1605	3431			3210	1485	1561	3064				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	324	542	0	0	669	160	369	238	218	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	82	0	60	0	0	0	0
Lane Group Flow (vph)	324	542	0	0	669	78	280	485	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Split					Perm	Split					
Protected Phases	2 4 8	2 4 8			10		12	12				
Permitted Phases						10						
Actuated Green, G (s)	83.9	83.9			37.1	37.1	12.0	12.0				
Effective Green, g (s)	83.9	83.9			37.1	37.1	12.0	12.0				
Actuated g/C Ratio	0.52	0.52			0.23	0.23	0.08	0.08				
Clearance Time (s)					6.0	6.0	6.0	6.0				
Vehicle Extension (s)					3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	842	1799			744	344	117	230				
v/s Ratio Prot	c0.20	0.16			c0.21		c0.18	0.16				
v/s Ratio Perm						0.05						
v/c Ratio	0.38	0.30			0.90	0.23	2.39	2.11				
Uniform Delay, d1	22.7	21.5			59.6	49.8	74.0	74.0				
Progression Factor	0.06	0.06			1.00	1.00	1.00	1.00				
Incremental Delay, d2	0.2	0.1			13.7	0.3	652.3	513.1				
Delay (s)	1.4	1.3			73.3	50.2	726.3	587.1				
Level of Service	A	A			E	D	F	F				
Approach Delay (s)		1.4			68.8			634.4			0.0	
Approach LOS		A			E			F			A	

Intersection Summary			
HCM Average Control Delay	230.8	HCM Level of Service	F
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	29.0
Intersection Capacity Utilization	65.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	140	273	136	129	270	107	108	522	80	106	803	120
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	14	12	10	10	12	9	10	12
Total Lost time (s)	4.0	4.0	5.0	4.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1576	1600	1372	1594	1766		1578	3009		1537	3001	
Flt Permitted	0.26	1.00	1.00	0.41	1.00		0.13	1.00		0.33	1.00	
Satd. Flow (perm)	438	1600	1372	683	1766		216	3009		527	3001	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	147	287	143	136	284	113	114	549	84	112	845	126
RTOR Reduction (vph)	0	0	100	0	16	0	0	13	0	0	13	0
Lane Group Flow (vph)	147	287	43	136	381	0	114	620	0	112	958	0
Confl. Peds. (#/hr)	28		8	8		28	59		11	11		59
Confl. Bikes (#/hr)	3					3	1		2	2		1
Heavy Vehicles (%)	1%	5%	2%	0%	4%	0%	1%	4%	0%	0%	3%	3%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	34.0	27.0	27.0	34.0	27.0		43.0	36.0		40.2	34.6	
Effective Green, g (s)	32.0	28.0	27.0	32.0	27.0		41.0	36.0		38.2	34.6	
Actuated g/C Ratio	0.35	0.31	0.30	0.35	0.30		0.45	0.40		0.42	0.38	
Clearance Time (s)	3.0	5.0	5.0	3.0	5.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	230	494	409	302	526		188	1196		273	1146	
v/s Ratio Prot	c0.04	0.18		0.03	c0.22		c0.04	0.21		0.02	c0.32	
v/s Ratio Perm	0.18		0.03	0.13			0.23			0.15		
v/c Ratio	0.64	0.58	0.10	0.45	0.72		0.61	0.52		0.41	0.84	
Uniform Delay, d1	22.1	26.4	23.0	21.1	28.5		17.4	20.7		16.7	25.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	5.7	4.9	0.5	1.1	8.4		5.4	1.6		1.0	7.3	
Delay (s)	27.8	31.3	23.5	22.2	36.9		22.8	22.3		17.7	32.7	
Level of Service	C	C	C	C	D		C	C		B	C	
Approach Delay (s)		28.5			33.1			22.4			31.2	
Approach LOS		C			C			C			C	

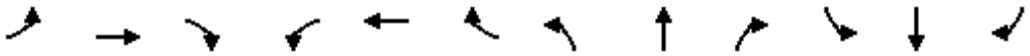
Intersection Summary			
HCM Average Control Delay	28.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	90.6	Sum of lost time (s)	17.0
Intersection Capacity Utilization	79.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	348	61	73	437	82	37	59	34	36	91	70
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	10	10	10	12	15	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.97		0.99			0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.96			0.95	
Flt Protected		0.99	1.00		0.99	1.00		0.99			0.99	
Satd. Flow (prot)		1970	1467		1624	1381		1868			1875	
Flt Permitted		0.93	1.00		0.90	1.00		0.90			0.94	
Satd. Flow (perm)		1833	1467		1470	1381		1700			1781	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	41	366	64	77	460	86	39	62	36	38	96	74
RTOR Reduction (vph)	0	0	32	0	0	36	0	20	0	0	30	0
Lane Group Flow (vph)	0	407	32	0	537	50	0	117	0	0	178	0
Confl. Peds. (#/hr)	12		20	20		12	8		2	2		8
Confl. Bikes (#/hr)	1		2	2		1			1	1		
Heavy Vehicles (%)	3%	3%	0%	0%	3%	0%	0%	0%	0%	0%	1%	3%
Turn Type	Perm		Perm	Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Effective Green, g (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Actuated g/C Ratio		0.49	0.49		0.49	0.49		0.42			0.42	
Clearance Time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		902	722		724	680		706			740	
v/s Ratio Prot												
v/s Ratio Perm		0.22	0.02		c0.37	0.04		0.07			c0.10	
v/c Ratio		0.45	0.04		0.74	0.07		0.17			0.24	
Uniform Delay, d1		10.8	8.6		13.2	8.7		11.9			12.3	
Progression Factor		1.00	1.00		1.90	3.28		1.00			1.46	
Incremental Delay, d2		1.6	0.1		2.5	0.1		0.5			0.7	
Delay (s)		12.4	8.7		27.6	28.6		12.4			18.7	
Level of Service		B	A		C	C		B			B	
Approach Delay (s)		11.9			27.8			12.4			18.7	
Approach LOS		B			C			B			B	

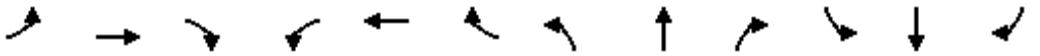
Intersection Summary			
HCM Average Control Delay	19.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	74.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	259	41	71	472	20	36	114	34	17	184	70
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.94		1.00	0.97		1.00	0.97		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.97	
Flt Protected		0.99	1.00		0.99	1.00		0.99	1.00		1.00	
Satd. Flow (prot)		1753	1443		1724	1487		1713	1489		1712	
Flt Permitted		0.47	1.00		0.85	1.00		0.89	1.00		0.98	
Satd. Flow (perm)		829	1443		1470	1487		1541	1489		1685	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	62	273	43	75	497	21	38	120	36	18	194	74
RTOR Reduction (vph)	0	0	28	0	0	8	0	0	18	0	19	0
Lane Group Flow (vph)	0	335	15	0	572	13	0	158	18	0	267	0
Confl. Peds. (#/hr)	19		25	25		19	3		6	6		3
Confl. Bikes (#/hr)	1		2	2		1			1	1		
Heavy Vehicles (%)	0%	2%	0%	0%	4%	0%	0%	5%	0%	0%	0%	2%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Effective Green, g (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Actuated g/C Ratio		0.35	0.35		0.35	0.35		0.49	0.49		0.49	
Clearance Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Grp Cap (vph)		293	511		520	526		759	733		830	
v/s Ratio Prot												
v/s Ratio Perm		c0.40	0.01		0.39	0.01		0.10	0.01		c0.16	
v/c Ratio		1.14	0.03		1.10	0.02		0.21	0.02		0.32	
Uniform Delay, d1		21.0	13.7		21.0	13.7		9.3	8.5		10.0	
Progression Factor		1.73	3.11		0.97	0.87		0.17	0.23		1.09	
Incremental Delay, d2		95.3	0.1		65.2	0.1		0.2	0.0		1.0	
Delay (s)		131.6	42.7		85.6	12.0		1.7	2.0		11.9	
Level of Service		F	D		F	B		A	A		B	
Approach Delay (s)		121.5			83.0			1.7			11.9	
Approach LOS		F			F			A			B	

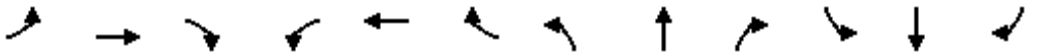
Intersection Summary			
HCM Average Control Delay	68.2	HCM Level of Service	E
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	83.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	229	35	76	8	14	11	38	256	8	31	556	531
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.95		0.98			1.00			1.00	0.94
Flpb, ped/bikes		0.98	1.00		0.99			1.00			1.00	1.00
Frt		1.00	0.85		0.96			1.00			1.00	0.85
Flt Protected		0.96	1.00		0.99			0.99			1.00	1.00
Satd. Flow (prot)		1860	1440		1765			1996			1975	1382
Flt Permitted		0.76	1.00		0.93			0.81			0.97	1.00
Satd. Flow (perm)		1468	1440		1657			1631			1928	1382
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	254	39	84	9	16	12	42	284	9	34	618	590
RTOR Reduction (vph)	0	0	49	0	9	0	0	2	0	0	0	201
Lane Group Flow (vph)	0	293	35	0	28	0	0	333	0	0	652	389
Confl. Peds. (#/hr)	37		53	53		37	39		54	54		39
Confl. Bikes (#/hr)							2					2
Heavy Vehicles (%)	4%	0%	1%	0%	0%	0%	0%	1%	0%	0%	3%	4%
Turn Type	pm+pt		Perm	Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		27.0	27.0		17.0			32.0			32.0	32.0
Effective Green, g (s)		27.0	27.0		17.0			32.0			32.0	32.0
Actuated g/C Ratio		0.42	0.42		0.26			0.49			0.49	0.49
Clearance Time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		658	598		433			803			949	680
v/s Ratio Prot		c0.05										
v/s Ratio Perm		0.13	0.02		0.02			0.20			c0.34	0.28
v/c Ratio		0.45	0.06		0.06			0.42			0.69	0.57
Uniform Delay, d1		13.6	11.4		18.0			10.5			12.7	11.7
Progression Factor		1.15	1.99		1.00			0.51			0.76	0.84
Incremental Delay, d2		1.1	0.1		0.3			1.1			3.2	2.7
Delay (s)		16.8	22.8		18.3			6.4			12.7	12.5
Level of Service		B	C		B			A			B	B
Approach Delay (s)		18.1			18.3			6.4			12.6	
Approach LOS		B			B			A			B	

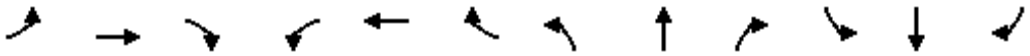
Intersection Summary			
HCM Average Control Delay	12.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	78.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



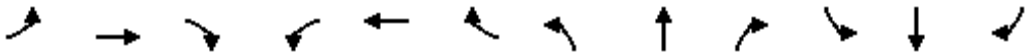
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	894	289	375	1072	0	0	0	0	513	284	334
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	11	8	8	8	11	12	14
Total Lost time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Lane Util. Factor		0.91		1.00	0.95					0.91	0.86	0.91
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.96		1.00	1.00					1.00	0.98	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.98	1.00
Satd. Flow (prot)		4573		1621	3320					1489	2913	1442
Flt Permitted		1.00		0.11	1.00					0.95	0.98	1.00
Satd. Flow (perm)		4573		190	3320					1489	2913	1442
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	941	304	395	1128	0	0	0	0	540	299	352
RTOR Reduction (vph)	0	45	0	0	0	0	0	0	0	0	9	76
Lane Group Flow (vph)	0	1200	0	395	1128	0	0	0	0	308	603	195
Confl. Peds. (#/hr)	15		11	11		15						
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	0%	3%	3%	2%	3%	0%	0%	0%	0%	1%	3%	3%
Turn Type				pm+pt						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Actuated Green, G (s)		43.5		74.9	74.9					28.1	28.1	28.1
Effective Green, g (s)		43.5		74.9	74.9					28.1	28.1	28.1
Actuated g/C Ratio		0.38		0.65	0.65					0.24	0.24	0.24
Clearance Time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Vehicle Extension (s)		7.0		3.5	7.0					3.5	3.5	3.5
Lane Grp Cap (vph)		1730		458	2162					364	712	352
v/s Ratio Prot		0.26		c0.20	0.34							
v/s Ratio Perm				c0.36						0.21	0.21	0.14
v/c Ratio		0.69		0.86	0.52					0.85	0.85	0.55
Uniform Delay, d1		30.1		29.1	10.6					41.4	41.4	38.0
Progression Factor		1.00		0.86	1.69					1.00	1.00	1.00
Incremental Delay, d2		2.3		10.4	0.6					16.7	9.4	2.1
Delay (s)		32.4		35.5	18.5					58.1	50.8	40.0
Level of Service		C		D	B					E	D	D
Approach Delay (s)		32.4			22.9			0.0			50.2	
Approach LOS		C			C			A			D	

Intersection Summary			
HCM Average Control Delay	34.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	105.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	341	1066	0	0	1017	271	430	351	318	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	11	12	12	12	12	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0		6.0				
Lane Util. Factor	0.97	0.95			0.95	1.00		0.91				
Frpb, ped/bikes	1.00	1.00			1.00	0.98		1.00				
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00				
Frt	1.00	1.00			1.00	0.85		0.96				
Flt Protected	0.95	1.00			1.00	1.00		0.98				
Satd. Flow (prot)	3144	3353			3241	1489		4521				
Flt Permitted	0.14	1.00			1.00	1.00		0.98				
Satd. Flow (perm)	460	3353			3241	1489		4521				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	359	1122	0	0	1071	285	453	369	335	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	85	0	62	0	0	0	0
Lane Group Flow (vph)	359	1122	0	0	1071	200	0	1095	0	0	0	0
Confl. Peds. (#/hr)	7		5	5		7						
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	2%	2%	0%	0%	2%	1%	2%	1%	3%	0%	0%	0%
Turn Type	pm+pt					Perm	Perm					
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8					
Actuated Green, G (s)	71.2	71.2			53.0	53.0		31.8				
Effective Green, g (s)	71.2	71.2			53.0	53.0		31.8				
Actuated g/C Ratio	0.62	0.62			0.46	0.46		0.28				
Clearance Time (s)	6.0	6.0			6.0	6.0		6.0				
Vehicle Extension (s)	3.5	7.0			7.0	7.0		5.0				
Lane Grp Cap (vph)	570	2076			1494	686		1250				
v/s Ratio Prot	0.07	c0.33			c0.33							
v/s Ratio Perm	0.32					0.13		0.24				
v/c Ratio	0.63	0.54			0.72	0.29		0.88				
Uniform Delay, d1	15.3	12.5			25.0	19.3		39.7				
Progression Factor	1.32	0.17			0.98	1.25		1.00				
Incremental Delay, d2	1.5	0.7			2.2	0.8		7.7				
Delay (s)	21.6	2.8			26.6	25.0		47.4				
Level of Service	C	A			C	C		D				
Approach Delay (s)		7.4			26.3			47.4			0.0	
Approach LOS		A			C			D			A	

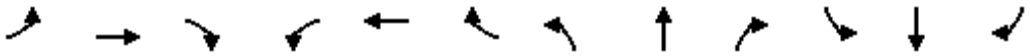
Intersection Summary			
HCM Average Control Delay	25.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	105.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	135	671	408	104	779	67	227	179	66	77	162	121
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	11	12	12	10	10	13	10	10	10
Total Lost time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		0.99	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.96		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1565	3273	1313	1601	3282		1578	3002		1540	2941	
Flt Permitted	0.11	1.00	1.00	0.38	1.00		0.39	1.00		0.59	1.00	
Satd. Flow (perm)	174	3273	1313	646	3282		652	3002		961	2941	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	142	706	429	109	820	71	239	188	69	81	171	127
RTOR Reduction (vph)	0	0	173	0	6	0	0	38	0	0	107	0
Lane Group Flow (vph)	142	706	256	109	885	0	239	219	0	81	191	0
Confl. Peds. (#/hr)	11		23	23		11	8		12	12		8
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	2%	1%	3%	3%	3%	0%	1%	1%	2%	3%	0%	1%
Parking (#/hr)			0									
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	64.9	52.3	68.7	43.4	34.3		38.1	26.6		26.2	18.2	
Effective Green, g (s)	64.9	52.3	68.7	43.4	34.3		38.1	26.6		26.2	18.2	
Actuated g/C Ratio	0.56	0.45	0.60	0.38	0.30		0.33	0.23		0.23	0.16	
Clearance Time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0		3.0	7.0		3.0	7.0	
Lane Grp Cap (vph)	426	1489	784	319	979		348	694		259	465	
v/s Ratio Prot	c0.08	c0.22	0.05	0.03	c0.27		c0.10	0.07		0.02	0.06	
v/s Ratio Perm	0.11		0.15	0.10			c0.13			0.05		
v/c Ratio	0.33	0.47	0.33	0.34	0.90		0.69	0.32		0.31	0.41	
Uniform Delay, d1	15.9	21.8	11.6	23.9	38.8		30.6	36.7		36.2	43.6	
Progression Factor	0.81	0.81	2.26	1.00	1.00		0.98	1.02		1.00	1.00	
Incremental Delay, d2	1.7	0.9	0.2	0.6	13.3		5.3	0.9		0.7	2.1	
Delay (s)	14.5	18.5	26.4	24.6	52.1		35.3	38.2		36.9	45.7	
Level of Service	B	B	C	C	D		D	D		D	D	
Approach Delay (s)		20.7			49.1			36.8			43.8	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM Average Control Delay	35.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	75.6%	ICU Level of Service	D
Analysis Period (min)	15		

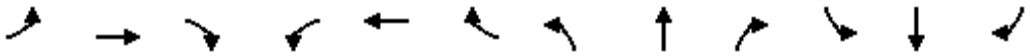
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	46	221	367	86	324	113	362	340	81	206	408	56
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	12	11	12	12	11	13	12	10	11	12
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.91		1.00	0.96		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1706	2910		1653	3235		1620	3405		1580	3183	
Flt Permitted	0.44	1.00		0.24	1.00		0.32	1.00		0.50	1.00	
Satd. Flow (perm)	794	2910		417	3235		544	3405		824	3183	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	48	233	386	91	341	119	381	358	85	217	429	59
RTOR Reduction (vph)	0	242	0	0	28	0	0	18	0	0	9	0
Lane Group Flow (vph)	48	377	0	91	432	0	381	425	0	217	479	0
Confl. Peds. (#/hr)	12		3	3		12	5					5
Heavy Vehicles (%)	0%	2%	2%	0%	1%	1%	2%	1%	0%	1%	2%	0%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	39.6	32.9		46.0	36.1		56.2	44.2		40.1	32.1	
Effective Green, g (s)	39.6	32.9		46.0	36.1		56.2	44.2		40.1	32.1	
Actuated g/C Ratio	0.34	0.29		0.40	0.31		0.49	0.38		0.35	0.28	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.5	7.0		3.5	7.0		3.5	7.0		3.5	7.0	
Lane Grp Cap (vph)	327	833		273	1016		454	1309		340	888	
v/s Ratio Prot	0.01	0.13		c0.03	c0.13		c0.15	0.12		0.04	0.15	
v/s Ratio Perm	0.04			0.10			c0.26			0.18		
v/c Ratio	0.15	0.45		0.33	0.43		0.84	0.32		0.64	0.54	
Uniform Delay, d1	25.5	33.7		23.1	31.2		20.8	24.9		28.8	35.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.98	0.97	
Incremental Delay, d2	0.2	1.8		0.9	1.3		13.1	0.7		3.8	2.2	
Delay (s)	25.7	35.4		23.9	32.5		33.9	25.6		32.1	36.2	
Level of Service	C	D		C	C		C	C		C	D	
Approach Delay (s)		34.7			31.1			29.4			34.9	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	32.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.9%	ICU Level of Service	D
Analysis Period (min)	15		

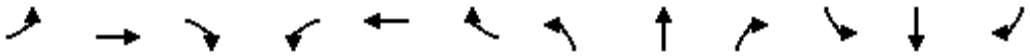
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	105	644	141	10	543	135	104	287	9	215	609	183
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	9	11	12	9	9	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.97		1.00	1.00		1.00	0.97	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3034			3003		1452	3227		1522	2872	
Flt Permitted		0.58			0.94		0.19	1.00		0.54	1.00	
Satd. Flow (perm)		1777			2812		284	3227		873	2872	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	117	716	157	11	603	150	116	319	10	239	677	203
RTOR Reduction (vph)	0	24	0	0	33	0	0	3	0	0	44	0
Lane Group Flow (vph)	0	966	0	0	731	0	116	326	0	239	836	0
Confl. Peds. (#/hr)	4		2	2		4	8		4	4		8
Confl. Bikes (#/hr)							2					2
Heavy Vehicles (%)	1%	2%	2%	0%	2%	6%	6%	2%	0%	1%	3%	3%
Turn Type	pm+pt			Perm			pm+pt			pm+pt		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			17.0		28.0	24.0		28.0	24.0	
Effective Green, g (s)		25.0			17.0		28.0	24.0		28.0	24.0	
Actuated g/C Ratio		0.38			0.26		0.43	0.37		0.43	0.37	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		761			735		194	1192		416	1060	
v/s Ratio Prot		c0.08					c0.04	0.10		0.04	c0.29	
v/s Ratio Perm		c0.41			0.26		0.22			0.21		
v/c Ratio		1.27			0.99		0.60	0.27		0.57	0.79	
Uniform Delay, d1		20.0			24.0		12.5	14.4		13.0	18.2	
Progression Factor		1.00			1.46		1.21	0.58		1.00	1.00	
Incremental Delay, d2		131.5			8.7		12.3	0.5		5.7	6.0	
Delay (s)		151.5			43.8		27.4	8.9		18.6	24.2	
Level of Service		F			D		C	A		B	C	
Approach Delay (s)		151.5			43.8			13.7			23.0	
Approach LOS		F			D			B			C	

Intersection Summary			
HCM Average Control Delay	64.9	HCM Level of Service	E
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	91.1%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	67	229	136	123	292	28	72	462	83	35	698	70
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.94		1.00	0.99		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1708	1899		1600	2011		1676	3218		1435	3274	
Flt Permitted	0.46	1.00		0.41	1.00		0.29	1.00		0.42	1.00	
Satd. Flow (perm)	832	1899		686	2011		516	3218		630	3274	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	69	236	140	127	301	29	74	476	86	36	720	72
RTOR Reduction (vph)	0	33	0	0	5	0	0	22	0	0	12	0
Lane Group Flow (vph)	69	343	0	127	325	0	74	540	0	36	780	0
Confl. Peds. (#/hr)	3		20	20		3	2		3	3		2
Confl. Bikes (#/hr)			1	1			2		2	2		2
Heavy Vehicles (%)	0%	0%	1%	6%	0%	0%	2%	3%	6%	19%	3%	2%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.48	0.48		0.48	0.48	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	307	701		253	743		246	1535		300	1561	
v/s Ratio Prot		0.18			0.16			0.17			c0.24	
v/s Ratio Perm	0.08			c0.19			0.14			0.06		
v/c Ratio	0.22	0.49		0.50	0.44		0.30	0.35		0.12	0.50	
Uniform Delay, d1	14.1	15.8		15.9	15.4		10.4	10.7		9.4	11.7	
Progression Factor	1.00	1.00		1.33	1.33		1.00	1.00		1.18	0.96	
Incremental Delay, d2	1.7	2.4		0.6	0.2		3.1	0.6		0.4	0.5	
Delay (s)	15.8	18.2		21.7	20.7		13.5	11.3		11.5	11.7	
Level of Service	B	B		C	C		B	B		B	B	
Approach Delay (s)		17.8			21.0			11.6			11.7	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM Average Control Delay	14.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	73.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	843	366	786	32	3	10	9	47	12	0	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	10	10	10	12	12	16	12	12	16	12
Total Lost time (s)		5.0		5.0				4.0			4.0	
Lane Util. Factor		0.95		0.95				1.00			1.00	
Frpb, ped/bikes		1.00		1.00				0.99			0.99	
Flpb, ped/bikes		1.00		1.00				1.00			1.00	
Frt		1.00		1.00				0.91			0.95	
Flt Protected		1.00		0.98				0.99			0.97	
Satd. Flow (prot)		3160		3083				1810			1846	
Flt Permitted		0.95		0.57				0.96			0.87	
Satd. Flow (perm)		3008		1778				1749			1649	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	2	887	385	827	34	3	11	9	49	13	0	3
RTOR Reduction (vph)	0	0	0	3	0	0	0	38	0	0	4	0
Lane Group Flow (vph)	0	889	0	1243	0	0	0	34	0	0	17	0
Confl. Peds. (#/hr)	7		4		7		7		2	2		7
Confl. Bikes (#/hr)							2		2	2		2
Heavy Vehicles (%)	0%	1%	2%	1%	6%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Perm		custom				Perm			Perm		
Protected Phases		8	7	4				2			6	
Permitted Phases	8		4 7				2			6		
Actuated Green, G (s)		18.0		27.0				14.0			14.0	
Effective Green, g (s)		18.0		27.0				14.0			14.0	
Actuated g/C Ratio		0.28		0.42				0.22			0.22	
Clearance Time (s)		5.0		5.0				4.0			4.0	
Lane Grp Cap (vph)		833		859				377			355	
v/s Ratio Prot				c0.13								
v/s Ratio Perm		0.30		c0.47				c0.02			0.01	
v/c Ratio		1.07		1.83dl				0.09			0.05	
Uniform Delay, d1		23.5		19.0				20.4			20.2	
Progression Factor		1.41		0.69				1.00			1.00	
Incremental Delay, d2		33.1		206.6				0.5			0.3	
Delay (s)		66.2		219.6				20.9			20.5	
Level of Service		E		F				C			C	
Approach Delay (s)		66.2		219.6				20.9			20.5	
Approach LOS		E		F				C			C	

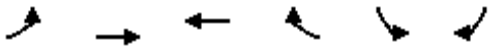
Intersection Summary			
HCM Average Control Delay	150.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	107.3%	ICU Level of Service	G
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group



Movement	SBR2	NEL	NER
Lane Configurations			
Volume (vph)	5	3	276
Ideal Flow (vphpl)	1800	1800	1800
Lane Width	12	12	12
Total Lost time (s)		5.0	
Lane Util. Factor		1.00	
Frpb, ped/bikes		1.00	
Flpb, ped/bikes		1.00	
Frt		0.87	
Flt Protected		1.00	
Satd. Flow (prot)		1559	
Flt Permitted		1.00	
Satd. Flow (perm)		1559	
Peak-hour factor, PHF	0.95	0.95	0.95
Adj. Flow (vph)	5	3	291
RTOR Reduction (vph)	0	0	0
Lane Group Flow (vph)	0	294	0
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Heavy Vehicles (%)	0%	0%	0%
Turn Type			
Protected Phases		3	
Permitted Phases			
Actuated Green, G (s)		10.0	
Effective Green, g (s)		10.0	
Actuated g/C Ratio		0.15	
Clearance Time (s)		5.0	
Lane Grp Cap (vph)		240	
v/s Ratio Prot		c0.19	
v/s Ratio Perm			
v/c Ratio		1.23	
Uniform Delay, d1		27.5	
Progression Factor		0.85	
Incremental Delay, d2		130.3	
Delay (s)		153.7	
Level of Service		F	
Approach Delay (s)		153.7	
Approach LOS		F	

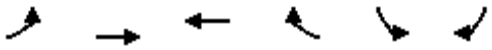
Intersection Summary



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	264	887	958	132	113	234
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frt		1.00	0.98		1.00	0.85
Flt Protected		0.99	1.00		0.95	1.00
Satd. Flow (prot)		3283	3260		1660	1485
Flt Permitted		0.53	1.00		0.95	1.00
Satd. Flow (perm)		1751	3260		1660	1485
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	293	986	1064	147	126	260
RTOR Reduction (vph)	0	0	17	0	0	82
Lane Group Flow (vph)	0	1279	1194	0	126	178
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		40.0	40.0		17.0	17.0
Effective Green, g (s)		40.0	40.0		17.0	17.0
Actuated g/C Ratio		0.62	0.62		0.26	0.26
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1078	2006		434	388
v/s Ratio Prot			0.37		0.08	
v/s Ratio Perm		c0.73				c0.12
v/c Ratio		1.54dl	0.60		0.29	0.46
Uniform Delay, d1		12.5	7.6		19.2	20.1
Progression Factor		1.24	0.69		1.14	1.21
Incremental Delay, d2		84.9	0.9		1.6	3.6
Delay (s)		100.3	6.2		23.4	28.0
Level of Service		F	A		C	C
Approach Delay (s)		100.3	6.2		26.5	
Approach LOS		F	A		C	

Intersection Summary			
HCM Average Control Delay	50.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	83.0%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group



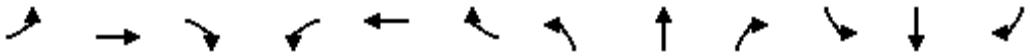
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	81	922	1006	195	287	88
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	12	10	11	12	10	10
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frpb, ped/bikes		1.00	1.00		1.00	0.99
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.98		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3119	3112		1506	1343
Flt Permitted		0.68	1.00		0.95	1.00
Satd. Flow (perm)		2145	3112		1506	1343
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	85	971	1059	205	302	93
RTOR Reduction (vph)	0	0	25	0	0	47
Lane Group Flow (vph)	0	1056	1239	0	302	46
Confl. Peds. (#/hr)	2			2		1
Heavy Vehicles (%)	1%	2%	2%	10%	6%	5%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		34.0	34.0		23.0	23.0
Effective Green, g (s)		34.0	34.0		23.0	23.0
Actuated g/C Ratio		0.52	0.52		0.35	0.35
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1122	1628		533	475
v/s Ratio Prot			0.40		c0.20	
v/s Ratio Perm		c0.49				0.03
v/c Ratio		0.94	0.76		0.57	0.10
Uniform Delay, d1		14.6	12.3		17.0	14.0
Progression Factor		1.12	1.51		1.73	2.83
Incremental Delay, d2		2.1	1.7		3.4	0.3
Delay (s)		18.4	20.2		32.8	40.1
Level of Service		B	C		C	D
Approach Delay (s)		18.4	20.2		34.5	
Approach LOS		B	C		C	

Intersection Summary			
HCM Average Control Delay	21.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	92.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



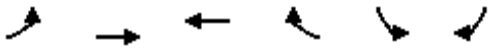
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	808	261	399	1090	205	127
Ideal Flow (vphpl)	2300	1800	1800	2300	1800	1800
Lane Width	15	12	14	16	15	12
Total Lost time (s)	5.0		5.0	5.0	5.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.97		1.00	1.00	0.95	
Flt Protected	1.00		0.95	1.00	0.97	
Satd. Flow (prot)	2399		1788	2506	1737	
Flt Permitted	1.00		0.13	1.00	0.97	
Satd. Flow (perm)	2399		243	2506	1737	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	824	266	407	1112	209	130
RTOR Reduction (vph)	18	0	0	0	35	0
Lane Group Flow (vph)	1072	0	407	1112	304	0
Confl. Peds. (#/hr)						1
Heavy Vehicles (%)	2%	2%	2%	4%	7%	0%
Turn Type			Perm			
Protected Phases	4			8	2	
Permitted Phases			8			
Actuated Green, G (s)	31.0		31.0	31.0	24.0	
Effective Green, g (s)	31.0		31.0	31.0	24.0	
Actuated g/C Ratio	0.48		0.48	0.48	0.37	
Clearance Time (s)	5.0		5.0	5.0	5.0	
Lane Grp Cap (vph)	1144		116	1195	641	
v/s Ratio Prot	0.45			0.44	c0.18	
v/s Ratio Perm			c1.68			
v/c Ratio	0.94		3.51	0.93	0.47	
Uniform Delay, d1	16.1		17.0	16.0	15.7	
Progression Factor	1.43		1.00	1.00	1.00	
Incremental Delay, d2	8.8		1150.2	14.0	2.5	
Delay (s)	31.8		1167.2	29.9	18.2	
Level of Service	C		F	C	B	
Approach Delay (s)	31.8			334.7	18.2	
Approach LOS	C			F	B	

Intersection Summary			
HCM Average Control Delay	186.3	HCM Level of Service	F
HCM Volume to Capacity ratio	2.19		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	104.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	1620	38	112	861	1	62	0	157	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	15	13	11	11	12	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0	4.0	3.0	3.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00			
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1881	3431	1479	1589	3320	1530		1938	1500			
Flt Permitted	0.30	1.00	1.00	0.08	1.00	1.00		0.76	1.00			
Satd. Flow (perm)	592	3431	1479	126	3320	1530		1545	1500			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	1800	42	124	957	1	69	0	174	0	0	0
RTOR Reduction (vph)	0	0	12	0	0	0	0	0	142	0	0	0
Lane Group Flow (vph)	1	1800	30	124	957	1	0	69	32	0	0	0
Heavy Vehicles (%)	0%	3%	0%	4%	3%	0%	0%	0%	2%	0%	0%	0%
Turn Type	Perm		Perm	custom		custom	Perm		Perm	Perm		
Protected Phases		4		3	3 8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)	50.1	50.1	50.1	67.7	67.7	67.7		9.3	9.3			
Effective Green, g (s)	50.1	50.1	50.1	67.7	67.7	67.7		9.3	9.3			
Actuated g/C Ratio	0.59	0.59	0.59	0.80	0.80	0.80		0.11	0.11			
Clearance Time (s)	4.0	4.0	4.0	3.0		4.0		4.0	4.0			
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0			
Lane Grp Cap (vph)	349	2022	872	352	2644	1219		169	164			
v/s Ratio Prot		c0.52		0.06	c0.29							
v/s Ratio Perm	0.00		0.02	0.22		0.00		c0.04	0.02			
v/c Ratio	0.00	0.89	0.03	0.35	0.36	0.00		0.41	0.19			
Uniform Delay, d1	7.2	15.1	7.3	13.6	2.5	1.8		35.3	34.4			
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00			
Incremental Delay, d2	0.0	6.4	0.1	0.6	0.1	0.0		1.6	0.6			
Delay (s)	7.2	21.5	7.4	14.2	2.6	1.8		36.9	35.0			
Level of Service	A	C	A	B	A	A		D	D			
Approach Delay (s)		21.1			3.9			35.5			0.0	
Approach LOS		C			A			D			A	

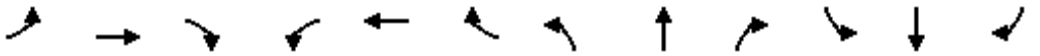
Intersection Summary			
HCM Average Control Delay	16.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	68.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	11	966	846	30	71	14
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10
Total Lost time (s)		5.0	5.0		3.0	
Lane Util. Factor		0.95	0.95		1.00	
Frt		1.00	0.99		0.98	
Flt Protected		1.00	1.00		0.96	
Satd. Flow (prot)		3097	3083		1530	
Flt Permitted		0.94	1.00		0.96	
Satd. Flow (perm)		2912	3083		1530	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	12	1073	940	33	79	16
RTOR Reduction (vph)	0	0	3	0	8	0
Lane Group Flow (vph)	0	1085	970	0	87	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Perm					
Protected Phases		4	8 2 11		5	
Permitted Phases	4					
Actuated Green, G (s)		33.0	64.0		7.0	
Effective Green, g (s)		33.0	64.0		7.0	
Actuated g/C Ratio		0.37	0.71		0.08	
Clearance Time (s)		5.0			3.0	
Lane Grp Cap (vph)		1068	2192		119	
v/s Ratio Prot			c0.31		c0.06	
v/s Ratio Perm		c0.37				
v/c Ratio		1.02	0.44		0.73	
Uniform Delay, d1		28.5	5.5		40.6	
Progression Factor		1.00	0.01		1.00	
Incremental Delay, d2		31.6	0.2		32.1	
Delay (s)		60.1	0.2		72.7	
Level of Service		E	A		E	
Approach Delay (s)		60.1	0.2		72.7	
Approach LOS		E	A		E	

Intersection Summary			
HCM Average Control Delay	33.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	48.9%	ICU Level of Service	A
Analysis Period (min)	15		

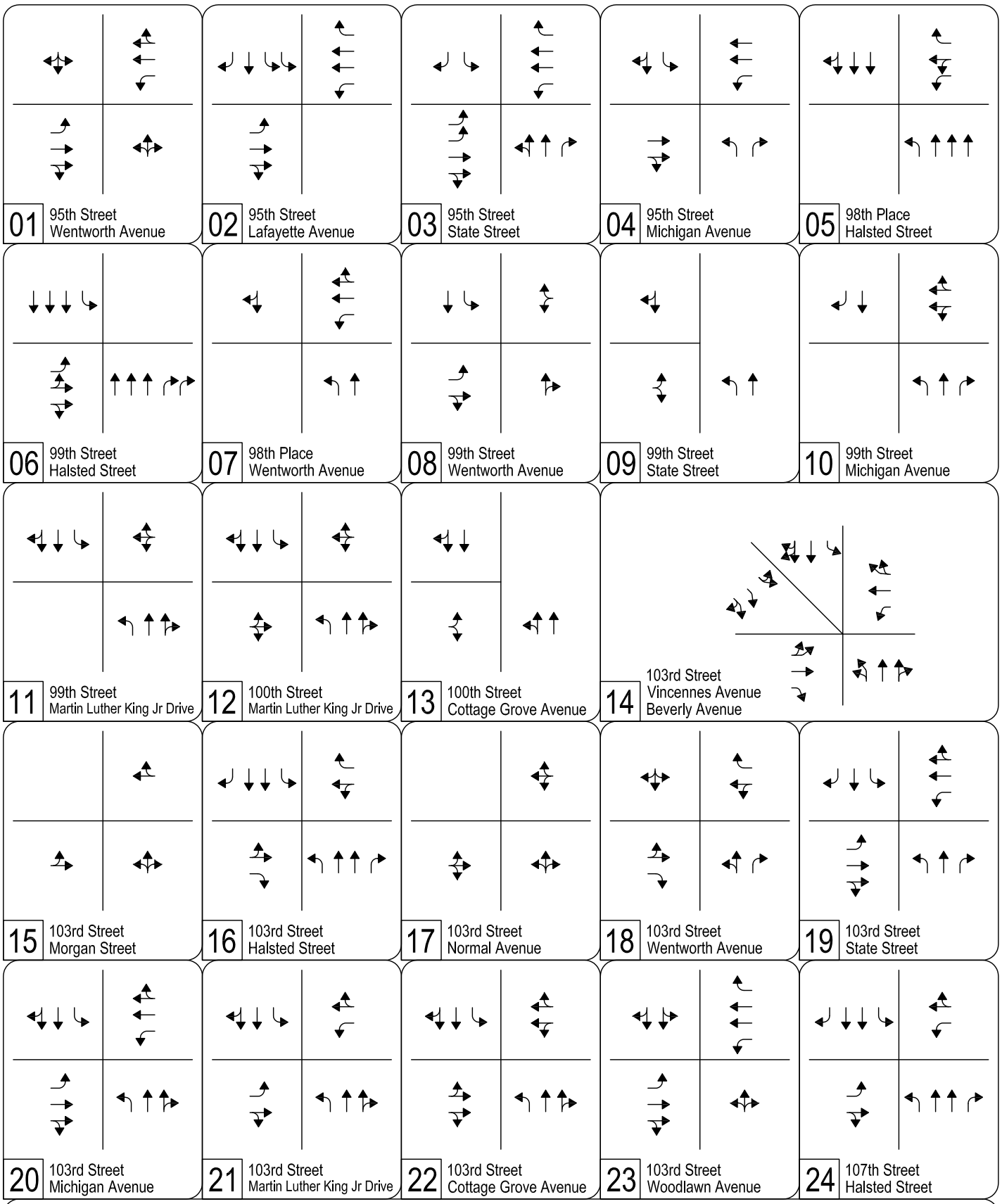
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	98	520	0	1	589	39	3	2	28	202	0	148
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12	12	11	12	11
Total Lost time (s)		4.0			4.0			3.0			3.0	3.0
Lane Util. Factor		1.00			0.95			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			0.94			1.00	0.98
Flpb, ped/bikes		1.00			1.00			1.00			0.99	1.00
Frt		1.00			0.99			0.88			1.00	0.85
Flt Protected		0.99			1.00			1.00			0.95	1.00
Satd. Flow (prot)		1766			3341			1467			1670	1348
Flt Permitted		0.79			0.95			0.88			0.88	1.00
Satd. Flow (perm)		1402			3191			1296			1545	1348
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	109	578	0	1	654	43	3	2	31	224	0	164
RTOR Reduction (vph)	0	0	0	0	6	0	0	28	0	0	0	110
Lane Group Flow (vph)	0	687	0	0	692	0	0	8	0	0	224	54
Confl. Peds. (#/hr)	60		44	44		60	14		10	10		14
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	0%	1%	0%	0%	1%	3%	20%	0%	0%	1%	0%	7%
Turn Type	Perm			Prot			Perm			pm+pt		Perm
Protected Phases		4		3	3 4			1		2	1 2	
Permitted Phases	4				3		1	1		1 2		1 2
Actuated Green, G (s)		31.0			45.0			9.0			25.0	28.0
Effective Green, g (s)		31.0			45.0			9.0			25.0	28.0
Actuated g/C Ratio		0.36			0.53			0.11			0.29	0.33
Clearance Time (s)		4.0						3.0				
Lane Grp Cap (vph)		511			1714			137			478	444
v/s Ratio Prot					c0.07						c0.09	
v/s Ratio Perm		c0.49			0.15			0.01			c0.05	0.04
v/c Ratio		1.34			0.40			0.06			0.47	0.12
Uniform Delay, d1		27.0			12.0			34.2			24.6	19.9
Progression Factor		1.00			1.40			1.00			1.00	1.00
Incremental Delay, d2		167.7			0.1			0.8			3.3	0.6
Delay (s)		194.7			16.8			35.0			27.8	20.5
Level of Service		F			B			D			C	C
Approach Delay (s)		194.7			16.8			35.0			24.7	
Approach LOS		F			B			D			C	

Intersection Summary			
HCM Average Control Delay	86.4	HCM Level of Service	F
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	81.9%	ICU Level of Service	D
Analysis Period (min)	15		

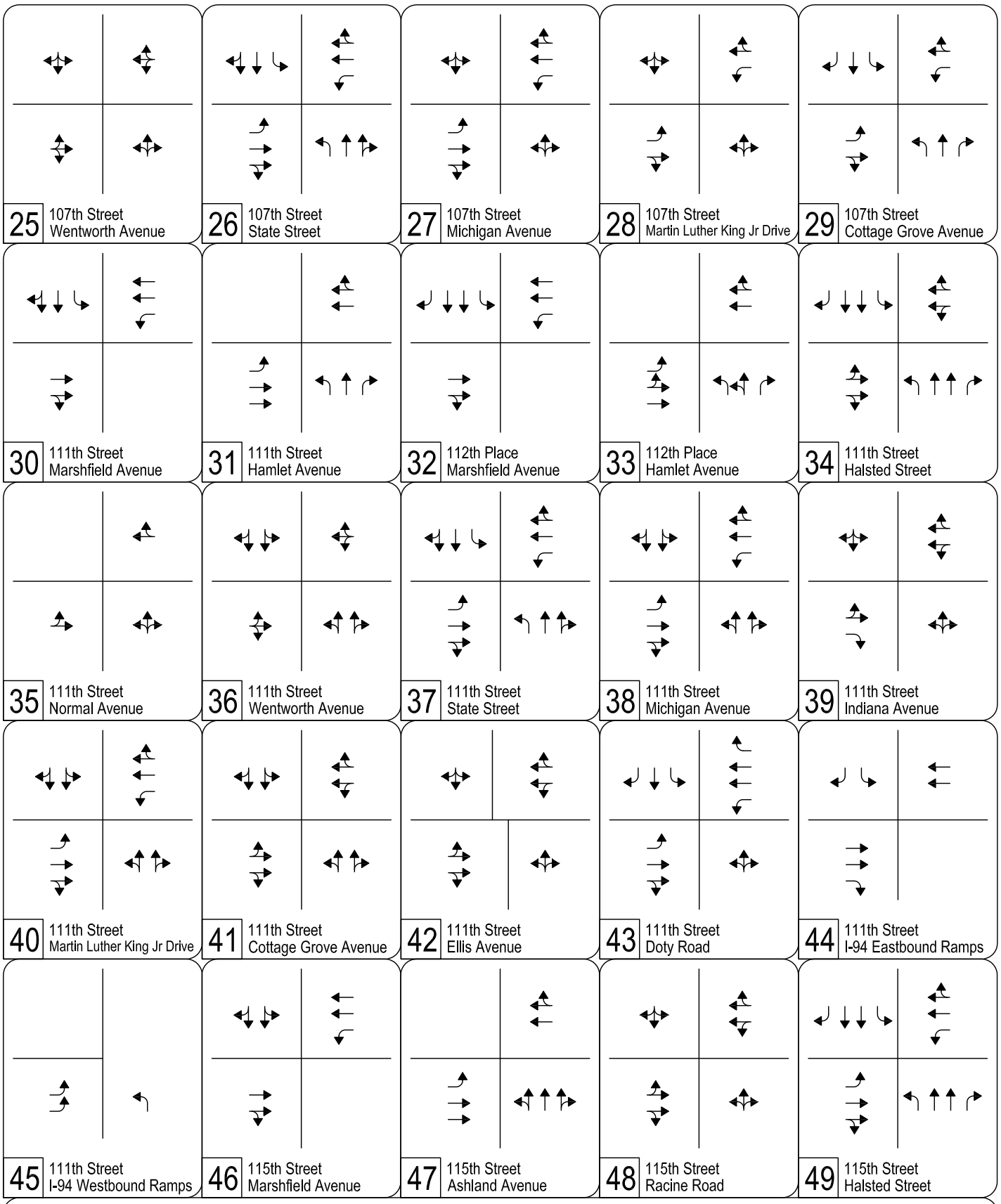
c Critical Lane Group



BRT Alternative Mitigated (2030) Intersection Lane Geometry

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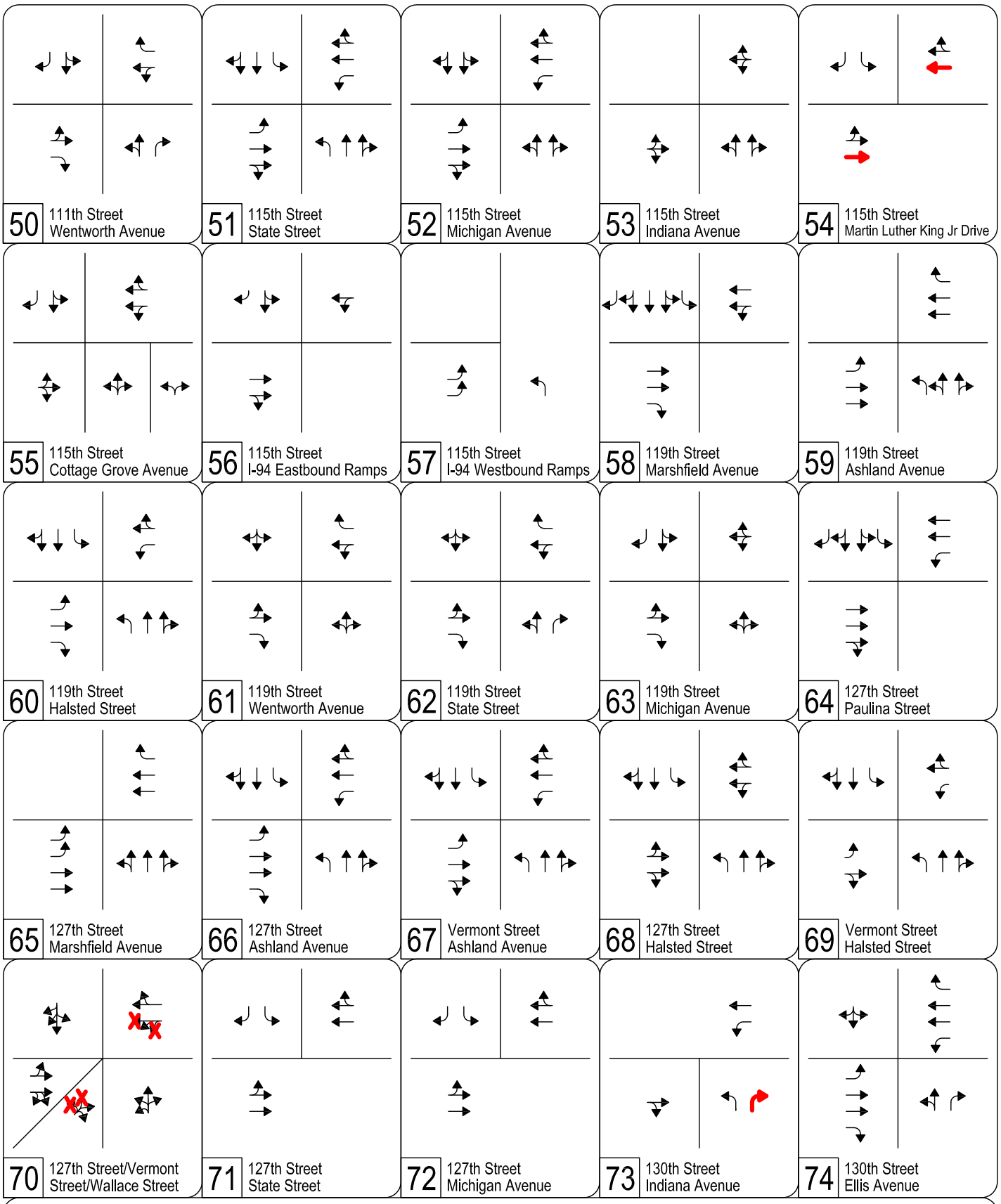
Legend: Existing Added Removed



BRT Alternative Mitigated (2030) Intersection Lane Geometry

Page 2 of 3

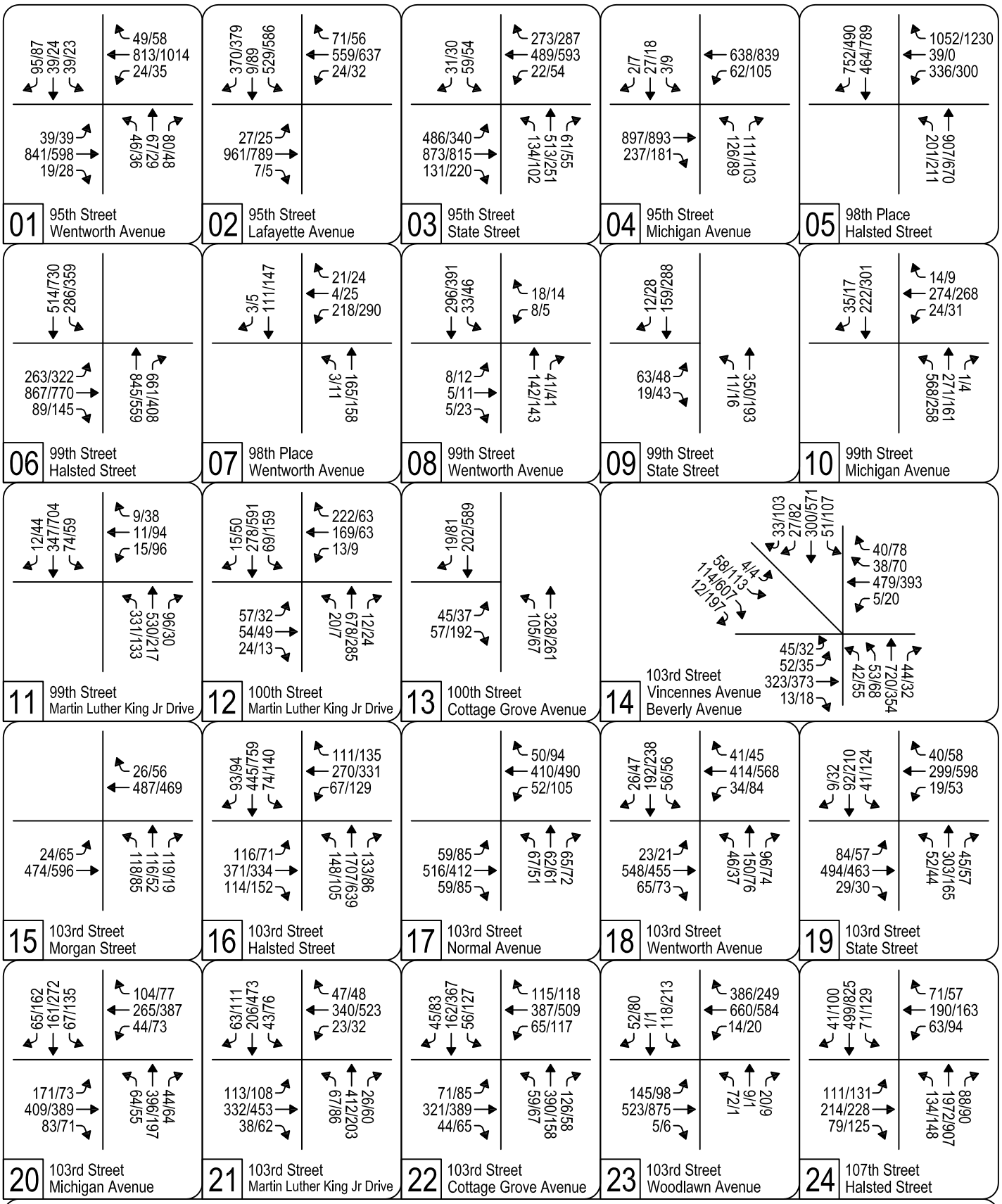
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BRT Alternative Mitigated (2030) Intersection Lane Geometry

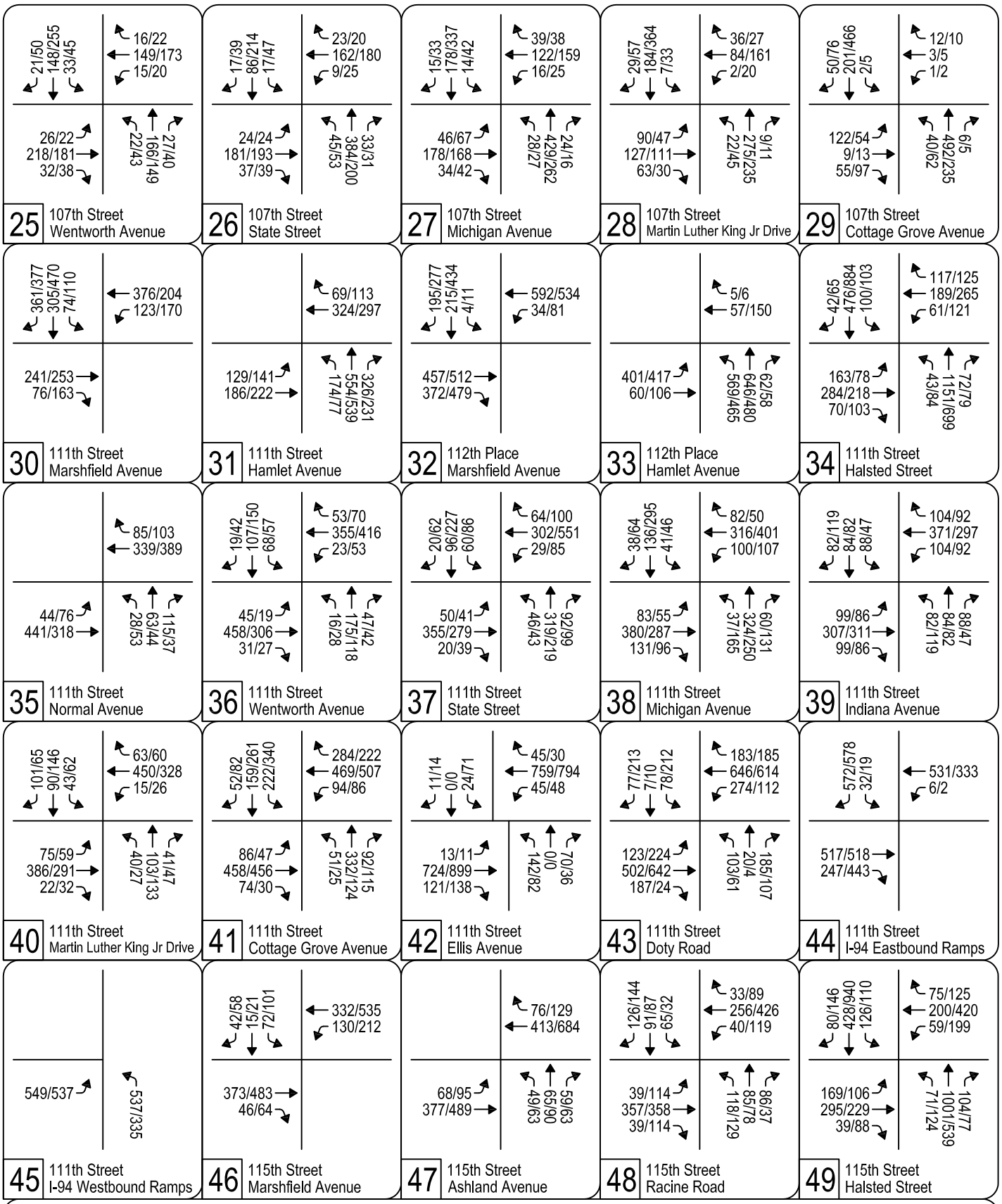
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Legend: Existing Added Removed



BRT Alternative Mitigated (2030) Intersection Traffic Volumes

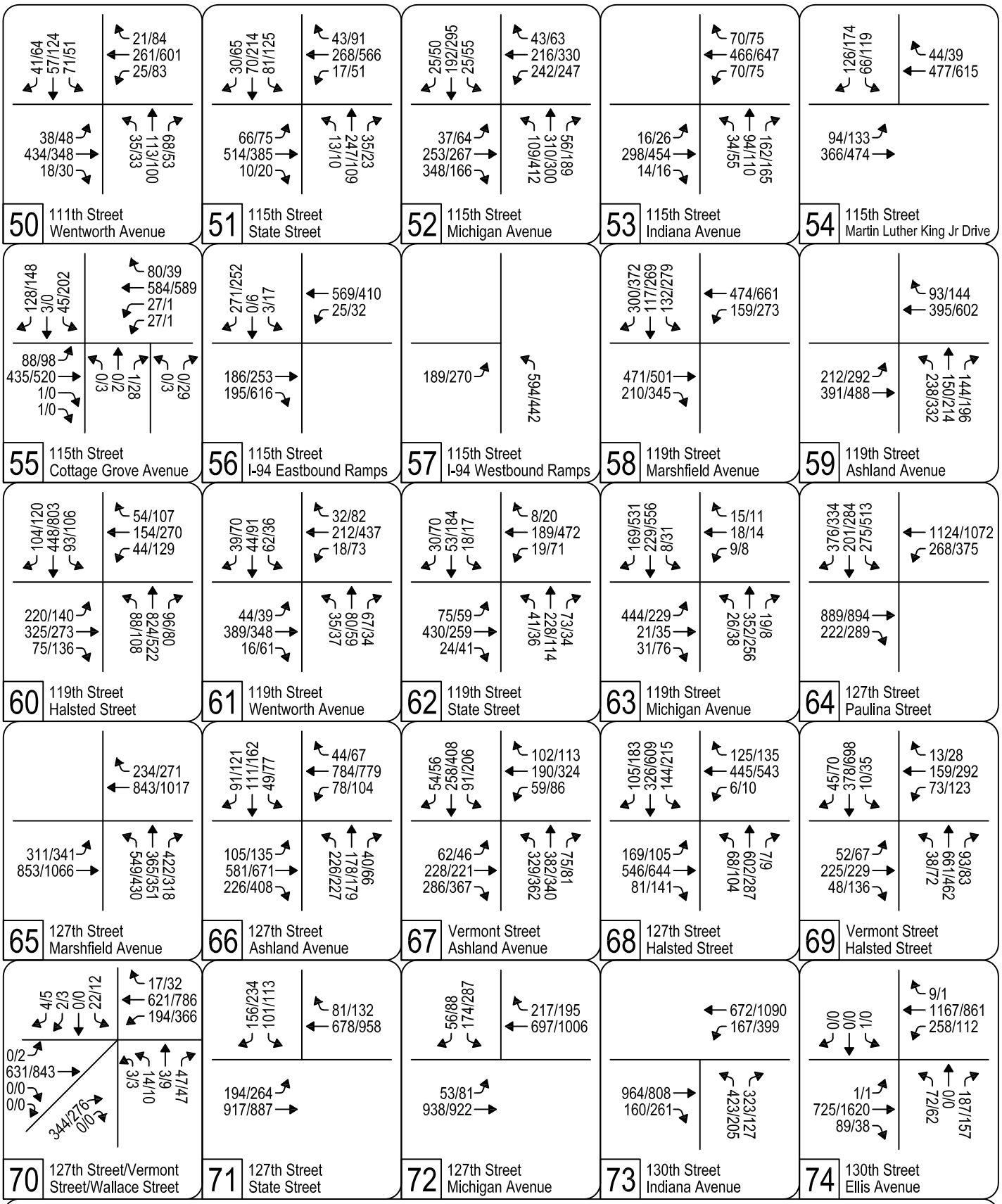
Legend: AM/PM Peak Hour Volumes



BRT Alternative Mitigated (2030) Intersection Traffic Volumes

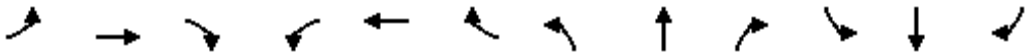
Page 2 of 3

Legend: AM/PM Peak Hour Volumes



BRT Alternative Mitigated (2030) Intersection Traffic Volumes

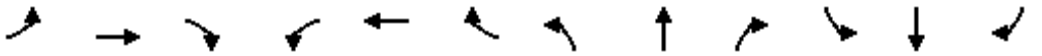
Legend: AM/PM Peak Hour Volumes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	841	19	24	813	49	46	67	80	39	39	95
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	16	10	10	16	8	15	8	8	14	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			0.99			0.99	
Flpb, ped/bikes	0.99	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	0.99			0.94			0.93	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1417	2976		1592	2979			1754			1670	
Flt Permitted	0.25	1.00		0.25	1.00			0.90			0.90	
Satd. Flow (perm)	369	2976		417	2979			1596			1526	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	41	885	20	25	856	52	48	71	84	41	41	100
RTOR Reduction (vph)	0	2	0	0	7	0	0	39	0	0	59	0
Lane Group Flow (vph)	41	903	0	25	901	0	0	164	0	0	123	0
Confl. Peds. (#/hr)	61		11	11		61	3		5	5		3
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	11%	7%	0%	0%	6%	2%	2%	7%	4%	5%	7%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			22.0			22.0	
Effective Green, g (s)	34.0	34.0		34.0	34.0			23.0			23.0	
Actuated g/C Ratio	0.52	0.52		0.52	0.52			0.35			0.35	
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0			5.0	
Lane Grp Cap (vph)	193	1557		218	1558			565			540	
v/s Ratio Prot		c0.30			0.30							
v/s Ratio Perm	0.11			0.06				c0.10			0.08	
v/c Ratio	0.21	0.58		0.11	0.58			0.29			0.23	
Uniform Delay, d1	8.3	10.6		7.9	10.6			15.1			14.8	
Progression Factor	1.00	1.00		0.83	1.16			1.00			1.00	
Incremental Delay, d2	2.5	1.6		0.9	1.4			1.3			1.0	
Delay (s)	10.8	12.2		7.5	13.7			16.4			15.7	
Level of Service	B	B		A	B			B			B	
Approach Delay (s)		12.1			13.5			16.4			15.7	
Approach LOS		B			B			B			B	

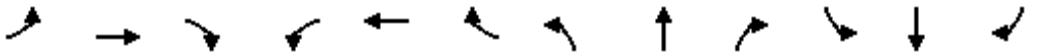
Intersection Summary			
HCM Average Control Delay	13.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	27	961	7	24	559	71	0	0	0	529	9	370
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00				0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.67				1.00	1.00	0.96
Flpb, ped/bikes	0.91	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	778	3285		1710	3138	512				3100	1440	1399
Flt Permitted	0.43	1.00		0.14	1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	352	3285		248	3138	512				3100	1440	1399
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	28	1012	7	25	588	75	0	0	0	557	9	389
RTOR Reduction (vph)	0	1	0	0	0	33	0	0	0	0	0	172
Lane Group Flow (vph)	28	1018	0	25	588	42	0	0	0	557	9	217
Confl. Peds. (#/hr)	354		13	13		354	22		22	22		22
Confl. Bikes (#/hr)	4					4			1	1		
Heavy Vehicles (%)	100%	4%	0%	0%	9%	100%	0%	0%	0%	7%	25%	5%
Turn Type	pm+pt			pm+pt		Perm				Split		Perm
Protected Phases	7	4		3	8					6	6	
Permitted Phases	4			8		8						6
Actuated Green, G (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Effective Green, g (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Actuated g/C Ratio	0.33	0.33		0.56	0.56	0.56				0.23	0.23	0.23
Clearance Time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Grp Cap (vph)	162	1087		634	1762	288				715	332	323
v/s Ratio Prot	0.02	c0.31		0.01	c0.19					c0.18	0.01	
v/s Ratio Perm	0.04			0.01		0.08						0.16
v/c Ratio	0.17	0.94		0.04	0.33	0.15				0.78	0.03	0.67
Uniform Delay, d1	31.6	42.2		15.1	15.4	13.6				46.9	38.7	45.5
Progression Factor	0.80	0.82		0.29	0.62	1.93				1.00	1.00	1.00
Incremental Delay, d2	2.0	14.1		0.1	0.3	0.7				8.2	0.2	10.7
Delay (s)	27.1	48.9		4.4	9.8	26.9				55.1	38.9	56.2
Level of Service	C	D		A	A	C				E	D	E
Approach Delay (s)		48.3			11.5			0.0			55.4	
Approach LOS		D			B			A			E	

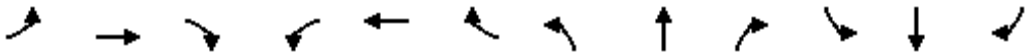
Intersection Summary			
HCM Average Control Delay	41.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	52.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	486	873	131	22	489	273	134	513	61	59	0	31
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.65		1.00	0.95	1.00		0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.98		1.00	1.00	0.85		1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (prot)	3190	3107		1555	2923	944		3300	1419	855		738
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (perm)	3190	3107		1555	2923	944		3300	1419	855		738
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	512	919	138	23	515	287	141	540	64	62	0	33
RTOR Reduction (vph)	0	9	0	0	0	158	0	0	25	0	0	30
Lane Group Flow (vph)	512	1048	0	23	515	129	0	681	39	62	0	3
Confl. Peds. (#/hr)	425		21	21		425	6		34	34		6
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	4%	8%	3%	10%	17%	5%	1%	3%	2%	100%	0%	100%
Turn Type	Prot			Prot		Perm	Split		Perm	Prot		custom
Protected Phases	7	4		3	8		2	2		6		
Permitted Phases						8			2			6
Actuated Green, G (s)	40.0	62.0		9.0	31.0	31.0		31.0	31.0	10.0		10.0
Effective Green, g (s)	40.0	62.0		9.0	31.0	31.0		31.0	31.0	10.0		10.0
Actuated g/C Ratio	0.31	0.48		0.07	0.24	0.24		0.24	0.24	0.08		0.08
Clearance Time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	982	1482		108	697	225		787	338	66		57
v/s Ratio Prot	0.16	c0.34		0.01	c0.18			c0.21		c0.07		
v/s Ratio Perm						0.14			0.03			0.00
v/c Ratio	0.52	0.71		0.21	0.74	0.57		0.87	0.11	0.94		0.04
Uniform Delay, d1	37.1	26.8		57.2	45.8	43.6		47.5	38.8	59.7		55.6
Progression Factor	0.75	0.22		1.00	1.00	1.00		0.94	0.89	1.00		1.00
Incremental Delay, d2	0.9	1.3		4.5	6.9	10.1		12.1	0.7	88.5		0.3
Delay (s)	28.8	7.1		61.6	52.7	53.8		56.9	35.2	148.2		55.9
Level of Service	C	A		E	D	D		E	D	F		E
Approach Delay (s)		14.2			53.3			55.0			116.1	
Approach LOS		B			D			E			F	

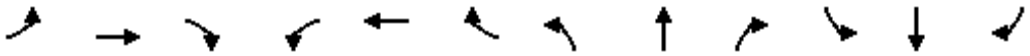
Intersection Summary			
HCM Average Control Delay	36.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	72.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	897	237	62	638	0	126	0	111	3	27	2
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	11	11	8	12	12	12	14	15	12
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes		0.99		1.00	1.00		1.00		0.98	1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00		1.00		1.00	0.99	1.00	
Frt		0.97		1.00	1.00		1.00		0.85	1.00	0.99	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		2852		1650	3005		1390		1465	1803	1961	
Flt Permitted		1.00		0.15	1.00		0.74		1.00	0.95	1.00	
Satd. Flow (perm)		2852		260	3005		1078		1465	1803	1961	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	997	263	69	709	0	140	0	123	3	30	2
RTOR Reduction (vph)	0	24	0	0	0	0	0	0	77	0	1	0
Lane Group Flow (vph)	0	1236	0	69	709	0	140	0	46	3	31	0
Confl. Peds. (#/hr)	49		15	15		49			12	12		
Heavy Vehicles (%)	0%	6%	14%	0%	10%	0%	23%	0%	2%	0%	0%	0%
Turn Type				Perm			custom		custom	Perm		
Protected Phases		4			8						6	
Permitted Phases				8			2		2	6		
Actuated Green, G (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Effective Green, g (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Actuated g/C Ratio		0.60		0.60	0.60		0.32		0.32	0.32	0.32	
Clearance Time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)		1711		156	1803		345		469	577	628	
v/s Ratio Prot		c0.43			0.24						0.02	
v/s Ratio Perm				0.27			c0.13		0.03	0.00		
v/c Ratio		0.72		0.44	0.39		0.41		0.10	0.01	0.05	
Uniform Delay, d1		14.1		10.9	10.5		26.6		23.9	23.2	23.5	
Progression Factor		1.00		1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		2.7		8.8	0.6		3.5		0.4	0.0	0.1	
Delay (s)		16.8		19.7	11.1		30.1		24.3	23.2	23.6	
Level of Service		B		B	B		C		C	C	C	
Approach Delay (s)		16.8			11.9			27.4			23.6	
Approach LOS		B			B			C			C	

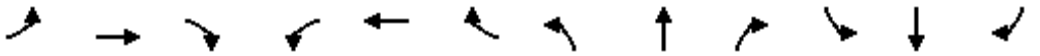
Intersection Summary			
HCM Average Control Delay	16.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	336	39	1052	201	907	0	0	464	752
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	12	10	10	12	12	11	12
Total Lost time (s)				4.0	4.0	5.0	3.0	4.0			4.0	
Lane Util. Factor				0.95	0.95	1.00	1.00	0.91			0.91	
Frpb, ped/bikes				1.00	1.00	0.99	1.00	1.00			0.98	
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00			1.00	
Frt				1.00	1.00	0.85	1.00	1.00			0.91	
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (prot)				1525	1629	1479	1550	4368			3933	
Flt Permitted				0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (perm)				1525	1629	1479	1550	4368			3933	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	343	40	1073	205	926	0	0	473	767
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	343	40	1073	205	926	0	0	1240	0
Confl. Peds. (#/hr)	2					2	12		8	8		12
Heavy Vehicles (%)	0%	0%	0%	3%	5%	2%	3%	5%	0%	0%	5%	8%
Turn Type				Perm		Perm	Prot					
Protected Phases					8		5	2			6	
Permitted Phases				8		8						
Actuated Green, G (s)				30.0	30.0	30.0	32.0	66.0			31.0	
Effective Green, g (s)				31.0	31.0	30.0	32.0	66.0			31.0	
Actuated g/C Ratio				0.30	0.30	0.29	0.30	0.63			0.30	
Clearance Time (s)				5.0	5.0	5.0	3.0	4.0			4.0	
Lane Grp Cap (vph)				450	481	423	472	2746			1161	
v/s Ratio Prot							c0.13	0.21			c0.32	
v/s Ratio Perm				0.22	0.02	c0.73						
v/c Ratio				0.76	0.08	2.54	0.43	0.34			1.91dr	
Uniform Delay, d1				33.6	26.7	37.5	29.2	9.2			37.0	
Progression Factor				1.00	1.00	1.00	0.66	2.38			1.00	
Incremental Delay, d2				11.6	0.3	698.4	2.0	0.2			46.6	
Delay (s)				45.2	27.1	735.9	21.2	22.1			83.6	
Level of Service				D	C	F	C	C			F	
Approach Delay (s)		0.0			553.8			21.9			83.6	
Approach LOS		A			F			C			F	

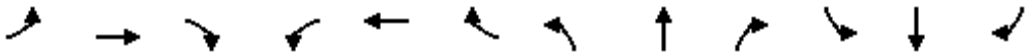
Intersection Summary			
HCM Average Control Delay	244.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.32		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.0%	ICU Level of Service	F
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group



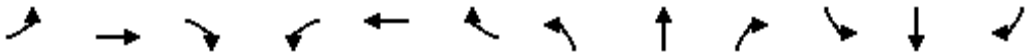
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	263	867	89	0	0	0	0	845	661	286	514	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	13	12	12	12	12	12	10	10	8	12	12	12
Total Lost time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Util. Factor	0.91	0.91						0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00						1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00						1.00	1.00	1.00	1.00	
Frt	1.00	0.99						1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1497	3185						4368	2187	1583	4636	
Flt Permitted	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1497	3185						4368	2187	1583	4636	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	271	894	92	0	0	0	0	871	681	295	530	0
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	244	1006	0	0	0	0	0	871	681	295	530	0
Confl. Peds. (#/hr)	4		14	14		4	4		3	3		4
Heavy Vehicles (%)	7%	1%	0%	0%	0%	0%	0%	5%	4%	8%	6%	0%
Turn Type	Perm								Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Actuated Green, G (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Effective Green, g (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Actuated g/C Ratio	0.32	0.32						0.27	0.27	0.30	0.59	
Clearance Time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Grp Cap (vph)	485	1031						1165	583	467	2737	
v/s Ratio Prot								0.20		c0.19	0.11	
v/s Ratio Perm	0.16	0.32							c0.31			
v/c Ratio	0.50	0.98						0.75	1.17	0.63	0.19	
Uniform Delay, d1	28.7	35.1						35.3	38.5	32.1	9.9	
Progression Factor	1.00	1.00						0.43	0.46	1.06	0.43	
Incremental Delay, d2	3.7	22.8						0.4	77.5	2.4	0.1	
Delay (s)	32.4	57.9						15.7	95.2	36.4	4.3	
Level of Service	C	E						B	F	D	A	
Approach Delay (s)		52.9			0.0			50.6			15.8	
Approach LOS		D			A			D			B	

Intersection Summary			
HCM Average Control Delay	43.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



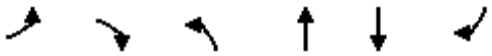
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	218	4	21	3	165	0	0	111	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	14	12	12	16	12
Total Lost time (s)				4.0	4.0		4.0	4.0			-3.0	
Lane Util. Factor				1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes				1.00	0.98		1.00	1.00			1.00	
Flpb, ped/bikes				1.00	1.00		1.00	1.00			1.00	
Frt				1.00	0.87		1.00	1.00			1.00	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1578	2709		1285	1882			1960	
Flt Permitted				0.95	1.00		0.58	1.00			1.00	
Satd. Flow (perm)				1578	2709		788	1882			1960	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	242	4	23	3	183	0	0	123	3
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	242	9	0	3	183	0	0	125	0
Confl. Peds. (#/hr)	2		2	2		2	3					3
Heavy Vehicles (%)	0%	0%	0%	8%	25%	5%	33%	2%	0%	0%	3%	33%
Turn Type				Perm			pm+pt					
Protected Phases					8		7	2			6	
Permitted Phases				8			2					
Actuated Green, G (s)				27.0	27.0		50.0	50.0			40.0	
Effective Green, g (s)				27.0	27.0		50.0	50.0			46.0	
Actuated g/C Ratio				0.32	0.32		0.59	0.59			0.54	
Clearance Time (s)				4.0	4.0		4.0	4.0			3.0	
Lane Grp Cap (vph)				501	861		504	1107			1061	
v/s Ratio Prot					0.00		0.00	c0.10			0.06	
v/s Ratio Perm				c0.15			0.00					
v/c Ratio				0.48	0.01		0.01	0.17			0.12	
Uniform Delay, d1				23.4	19.9		9.9	8.0			9.6	
Progression Factor				1.00	1.00		1.06	1.19			1.00	
Incremental Delay, d2				3.3	0.0		0.0	0.3			0.2	
Delay (s)				26.7	19.9		10.5	9.8			9.8	
Level of Service				C	B		B	A			A	
Approach Delay (s)		0.0			26.0			9.8			9.8	
Approach LOS		A			C			A			A	

Intersection Summary			
HCM Average Control Delay	17.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



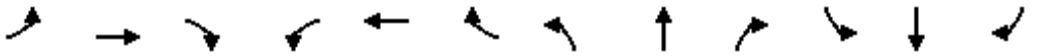
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	8	5	5	8	0	18	0	142	41	33	296	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	16	15	12	8	12	8	12	12	12	10	13	12
Total Lost time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99			1.00			1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00			1.00		1.00	1.00	
Frt	1.00	0.93			0.91			0.97		1.00	1.00	
Flt Protected	0.95	1.00			0.99			1.00		0.95	1.00	
Satd. Flow (prot)	1938	1809			1603			1686		1595	1755	
Flt Permitted	0.74	1.00			0.96			1.00		0.60	1.00	
Satd. Flow (perm)	1509	1809			1558			1686		1010	1755	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	8	5	5	8	0	19	0	149	43	35	312	0
RTOR Reduction (vph)	0	3	0	0	13	0	0	12	0	0	0	0
Lane Group Flow (vph)	8	7	0	0	14	0	0	180	0	35	312	0
Confl. Peds. (#/hr)			3	3			5		2	2		5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	3%	0%	6%	0%
Turn Type	Perm			Perm						pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Effective Green, g (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Actuated g/C Ratio	0.32	0.32			0.32			0.47		0.59	0.59	
Clearance Time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Grp Cap (vph)	479	575			495			793		642	1032	
v/s Ratio Prot		0.00						0.11		0.00	c0.18	
v/s Ratio Perm	0.01				c0.01					0.03		
v/c Ratio	0.02	0.01			0.03			0.23		0.05	0.30	
Uniform Delay, d1	19.9	19.9			20.0			13.3		8.5	8.8	
Progression Factor	1.00	1.00			1.00			1.00		0.99	0.90	
Incremental Delay, d2	0.1	0.0			0.1			0.7		0.2	0.7	
Delay (s)	20.0	19.9			20.1			14.0		8.6	8.6	
Level of Service	B	B			C			B		A	A	
Approach Delay (s)		19.9			20.1			14.0			8.6	
Approach LOS		B			C			B			A	

Intersection Summary			
HCM Average Control Delay	11.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.21		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



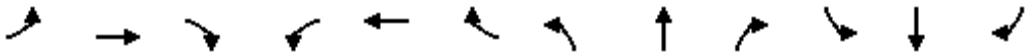
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	63	19	11	350	159	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	14	12	13	12	10	12
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	0.99		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.97		1.00	1.00	0.99	
Flt Protected	0.96		0.95	1.00	1.00	
Satd. Flow (prot)	1782		1767	1765	1634	
Flt Permitted	0.96		0.64	1.00	1.00	
Satd. Flow (perm)	1782		1187	1765	1634	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	70	21	12	389	177	13
RTOR Reduction (vph)	14	0	0	0	4	0
Lane Group Flow (vph)	77	0	12	389	186	0
Confl. Peds. (#/hr)		2				
Heavy Vehicles (%)	0%	0%	0%	2%	2%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.0		36.0	36.0	36.0	
Effective Green, g (s)	21.0		36.0	36.0	36.0	
Actuated g/C Ratio	0.32		0.55	0.55	0.55	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	576		657	978	905	
v/s Ratio Prot	c0.04			c0.22	0.11	
v/s Ratio Perm			0.01			
v/c Ratio	0.13		0.02	0.40	0.21	
Uniform Delay, d1	15.6		6.5	8.3	7.3	
Progression Factor	1.00		0.31	0.51	1.12	
Incremental Delay, d2	0.5		0.0	1.1	0.4	
Delay (s)	16.0		2.1	5.4	8.6	
Level of Service	B		A	A	A	
Approach Delay (s)	16.0			5.3	8.6	
Approach LOS	B			A	A	

Intersection Summary			
HCM Average Control Delay	7.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	39.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	24	274	14	568	271	1	0	222	35
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	14	16	12	12	15	12	12	13	10
Total Lost time (s)					4.0		4.0	4.0			3.0	3.0
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Frt					0.99		1.00	1.00			1.00	0.85
Flt Protected					1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3737		1660	1752			1603	1298
Flt Permitted					1.00		0.54	1.00			1.00	1.00
Satd. Flow (perm)					3737		943	1752			1603	1298
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	27	304	16	631	301	1	0	247	39
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	0	0	0	22
Lane Group Flow (vph)	0	0	0	0	343	0	631	302	0	0	247	17
Confl. Peds. (#/hr)									30	30		
Heavy Vehicles (%)	0%	0%	0%	11%	2%	0%	3%	13%	0%	0%	16%	10%
Turn Type				Split			pm+pt					Perm
Protected Phases				8	8		7	2			6	
Permitted Phases							2					6
Actuated Green, G (s)					26.0		51.0	51.0			38.0	38.0
Effective Green, g (s)					26.0		51.0	51.0			38.0	38.0
Actuated g/C Ratio					0.31		0.60	0.60			0.45	0.45
Clearance Time (s)					4.0		4.0	4.0			3.0	3.0
Lane Grp Cap (vph)					1143		650	1051			717	580
v/s Ratio Prot					c0.09		c0.11	0.17			0.15	
v/s Ratio Perm							c0.47					0.01
v/c Ratio					0.30		0.97	0.29			0.34	0.03
Uniform Delay, d1					22.5		17.9	8.2			15.4	13.2
Progression Factor					1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2					0.7		28.8	0.7			1.3	0.1
Delay (s)					23.2		46.7	8.9			16.7	13.3
Level of Service					C		D	A			B	B
Approach Delay (s)		0.0			23.2			34.5			16.2	
Approach LOS		A			C			C			B	

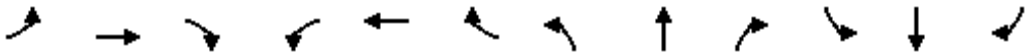
Intersection Summary			
HCM Average Control Delay	28.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	64.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	15	11	9	331	530	96	74	347	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	15	12	12	12	12	12	13	12
Total Lost time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.97		1.00	0.98		1.00	1.00	
Flt Protected					0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1803		1692	3237		1707	3353	
Flt Permitted					0.98		0.50	1.00		0.31	1.00	
Satd. Flow (perm)					1803		882	3237		563	3353	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	17	12	10	368	589	107	82	386	13
RTOR Reduction (vph)	0	0	0	0	7	0	0	20	0	0	3	0
Lane Group Flow (vph)	0	0	0	0	32	0	368	676	0	82	396	0
Confl. Peds. (#/hr)	2					2	6		20	20		6
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	0%	0%	0%	11%	0%	1%	3%	0%	0%	5%	0%
Turn Type				Split			pm+pt			pm+pt		
Protected Phases				8	8		5	2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)					23.0		41.0	34.0		41.0	34.0	
Effective Green, g (s)					23.0		41.0	34.0		41.0	34.0	
Actuated g/C Ratio					0.31		0.55	0.45		0.55	0.45	
Clearance Time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Grp Cap (vph)					553		558	1467		415	1520	
v/s Ratio Prot					c0.02		c0.06	0.21		0.02	0.12	
v/s Ratio Perm							c0.30			0.09		
v/c Ratio					0.06		0.66	0.46		0.20	0.26	
Uniform Delay, d1					18.4		13.9	14.2		12.4	12.7	
Progression Factor					1.00		0.69	0.74		1.00	1.00	
Incremental Delay, d2					0.2		5.5	1.0		1.1	0.4	
Delay (s)					18.6		15.1	11.4		13.4	13.1	
Level of Service					B		B	B		B	B	
Approach Delay (s)		0.0			18.6			12.7			13.2	
Approach LOS		A			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	15		

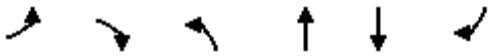
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	57	54	24	13	169	222	20	678	12	69	278	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	16	12	12	10	11	12	12	11	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.93		1.00	1.00		1.00	0.99	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1946			1626		1596	3232		1641	3132	
Flt Permitted		0.68			0.99		0.56	1.00		0.33	1.00	
Satd. Flow (perm)		1354			1613		947	3232		573	3132	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	60	57	25	14	178	234	21	714	13	73	293	16
RTOR Reduction (vph)	0	10	0	0	59	0	0	2	0	0	5	0
Lane Group Flow (vph)	0	132	0	0	367	0	21	725	0	73	304	0
Confl. Peds. (#/hr)									6	6		
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	0%	0%	12%	2%	2%	0%	2%	0%	4%	5%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Effective Green, g (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Actuated g/C Ratio		0.33			0.33		0.56	0.56		0.56	0.56	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		451			538		530	1810		321	1754	
v/s Ratio Prot								c0.22			0.10	
v/s Ratio Perm		0.10			c0.23		0.02			0.13		
v/c Ratio		0.29			0.68		0.04	0.40		0.23	0.17	
Uniform Delay, d1		18.5			21.6		7.4	9.4		8.3	8.0	
Progression Factor		1.00			1.00		1.00	1.00		0.17	0.07	
Incremental Delay, d2		1.6			6.9		0.1	0.7		1.6	0.2	
Delay (s)		20.1			28.4		7.6	10.0		3.0	0.8	
Level of Service		C			C		A	B		A	A	
Approach Delay (s)		20.1			28.4			10.0			1.2	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM Average Control Delay	13.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.9%	ICU Level of Service	C
Analysis Period (min)	15		

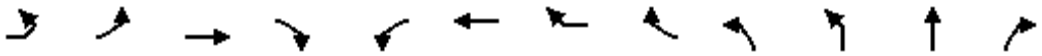
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	45	57	105	328	202	19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	50	63	117	364	224	21

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	113	238	243	150	96
Volume Left (vph)	50	117	0	0	0
Volume Right (vph)	63	0	0	0	21
Hadj (s)	-0.16	0.33	0.09	0.09	-0.07
Departure Headway (s)	5.3	5.4	5.2	5.4	5.2
Degree Utilization, x	0.17	0.36	0.35	0.22	0.14
Capacity (veh/h)	624	652	683	641	659
Control Delay (s)	9.3	10.2	9.7	8.8	7.9
Approach Delay (s)	9.3	9.9		8.4	
Approach LOS	A	A		A	

Intersection Summary			
Delay	9.4		
HCM Level of Service	A		
Intersection Capacity Utilization	35.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	45	52	323	13	5	479	38	40	42	53	720	44
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	0.95	
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.97			1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Frt		1.00	1.00	0.85	1.00	1.00	0.85			1.00	0.99	
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	
Satd. Flow (prot)		1575	1731	1530	1710	1731	1487			1710	3291	
Flt Permitted		0.11	1.00	1.00	0.55	1.00	1.00			0.39	1.00	
Satd. Flow (perm)		187	1731	1530	984	1731	1487			700	3291	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	50	58	359	14	6	532	42	44	47	59	800	49
RTOR Reduction (vph)	0	0	0	7	0	0	31	0	0	0	5	0
Lane Group Flow (vph)	0	108	359	7	6	532	55	0	0	106	844	0
Confl. Peds. (#/hr)		5					5					6
Heavy Vehicles (%)	8%	9%	4%	0%	0%	4%	0%	0%	0%	0%	3%	0%
Turn Type	Perm	pm+pt		Perm	Perm		Perm		Perm	Perm		
Protected Phases		7	4			8					2	
Permitted Phases	4	4		4	8		8		2	2		
Actuated Green, G (s)		50.0	50.0	50.0	32.0	32.0	32.0			25.0	25.0	
Effective Green, g (s)		50.0	50.0	50.0	32.0	32.0	32.0			25.0	25.0	
Actuated g/C Ratio		0.48	0.48	0.48	0.30	0.30	0.30			0.24	0.24	
Clearance Time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Grp Cap (vph)		281	824	729	300	528	453			167	784	
v/s Ratio Prot		0.05	c0.21			c0.31					c0.26	
v/s Ratio Perm		0.13		0.00	0.01		0.04			0.15		
v/c Ratio		0.38	0.44	0.01	0.02	1.01	0.12			0.63	1.08	
Uniform Delay, d1		20.2	18.2	14.5	25.5	36.5	26.4			35.9	40.0	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Incremental Delay, d2		3.9	1.7	0.0	0.1	41.1	0.6			17.0	54.9	
Delay (s)		24.1	19.9	14.5	25.7	77.6	26.9			52.9	94.9	
Level of Service		C	B	B	C	E	C			D	F	
Approach Delay (s)			20.7			70.1					90.3	
Approach LOS			C			E					F	

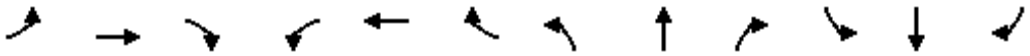
Intersection Summary			
HCM Average Control Delay	62.2	HCM Level of Service	E
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	79.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations								
Volume (vph)	51	300	27	33	4	58	114	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5				4.5	4.5	
Lane Util. Factor	1.00	0.95				1.00	0.88	
Frpb, ped/bikes	1.00	1.00				1.00	1.00	
Flpb, ped/bikes	1.00	1.00				1.00	1.00	
Frt	1.00	0.97				1.00	0.85	
Flt Protected	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1706	3279				1710	2621	
Flt Permitted	0.16	1.00				0.95	1.00	
Satd. Flow (perm)	293	3279				1710	2621	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	57	333	30	37	4	64	127	13
RTOR Reduction (vph)	0	8	0	0	0	0	7	0
Lane Group Flow (vph)	57	392	0	0	0	68	133	0
Confl. Peds. (#/hr)	6							
Heavy Vehicles (%)	0%	2%	0%	0%	0%	0%	3%	0%
Turn Type	Perm				Split		Perm	
Protected Phases		6			9	9		
Permitted Phases	6						9	
Actuated Green, G (s)	24.5	24.5				17.5	17.5	
Effective Green, g (s)	24.5	24.5				17.5	17.5	
Actuated g/C Ratio	0.23	0.23				0.17	0.17	
Clearance Time (s)	4.5	4.5				4.5	4.5	
Lane Grp Cap (vph)	68	765				285	437	
v/s Ratio Prot		0.12				0.04		
v/s Ratio Perm	0.19						c0.05	
v/c Ratio	0.84	0.51				0.24	0.31	
Uniform Delay, d1	38.4	35.1				38.0	38.4	
Progression Factor	1.00	1.00				1.00	1.00	
Incremental Delay, d2	69.9	2.4				2.0	1.8	
Delay (s)	108.3	37.5				39.9	40.2	
Level of Service	F	D				D	D	
Approach Delay (s)		46.3				40.1		
Approach LOS		D				D		

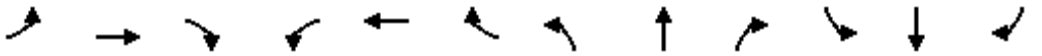
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	474	0	0	487	26	118	116	119	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	11	11	16	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.99			0.95				
Flt Protected		1.00			1.00			0.98				
Satd. Flow (prot)		1653			1930			1770				
Flt Permitted		0.96			1.00			0.98				
Satd. Flow (perm)		1596			1930			1770				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	527	0	0	541	29	131	129	132	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	554	0	0	570	0	0	392	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		31.0			31.0			26.0				
Effective Green, g (s)		31.0			31.0			26.0				
Actuated g/C Ratio		0.48			0.48			0.40				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		761			920			708				
v/s Ratio Prot					0.30							
v/s Ratio Perm		c0.35						0.22				
v/c Ratio		0.73			0.62			0.55				
Uniform Delay, d1		13.6			12.6			15.0				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		6.0			3.1			3.1				
Delay (s)		19.7			15.8			18.1				
Level of Service		B			B			B				
Approach Delay (s)		19.7			15.8			18.1			0.0	
Approach LOS		B			B			B			A	

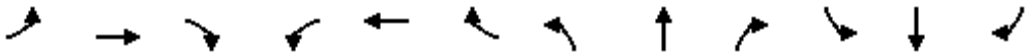
Intersection Summary			
HCM Average Control Delay	17.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	74.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	116	371	114	67	270	111	148	1707	133	74	445	93
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	9	9	10	9
Total Lost time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.96	1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1922	1426		1923	1396	1500	3099	1284	1425	2956	1265
Flt Permitted		0.65	1.00		0.57	1.00	0.40	1.00	1.00	0.09	1.00	1.00
Satd. Flow (perm)		1270	1426		1113	1396	627	3099	1284	142	2956	1265
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	122	391	120	71	284	117	156	1797	140	78	468	98
RTOR Reduction (vph)	0	0	71	0	0	69	0	0	30	0	0	59
Lane Group Flow (vph)	0	513	49	0	355	48	156	1797	110	78	468	39
Confl. Peds. (#/hr)	42		39	39		42	20		8	8		20
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	6%	4%	3%	0%	6%	5%	6%	3%	4%	8%	8%	4%
Turn Type	pm+pt		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		43.0	43.0		43.0	43.0	53.0	44.3	44.3	49.0	42.3	42.3
Effective Green, g (s)		43.0	43.0		43.0	43.0	53.0	44.3	44.3	49.0	42.3	42.3
Actuated g/C Ratio		0.41	0.41		0.41	0.41	0.50	0.42	0.42	0.47	0.40	0.40
Clearance Time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		520	584		456	572	389	1307	542	148	1191	510
v/s Ratio Prot							c0.03	c0.58		c0.03	0.16	
v/s Ratio Perm		c0.40	0.03		0.32	0.03	0.17		0.09	0.21		0.03
v/c Ratio		0.99	0.08		0.78	0.08	0.40	1.37	0.20	0.53	0.39	0.08
Uniform Delay, d1		30.7	19.0		26.9	19.0	14.7	30.4	19.2	23.2	22.2	19.3
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.15	0.76	0.42
Incremental Delay, d2		35.7	0.3		12.3	0.3	0.7	173.6	0.8	3.3	0.9	0.3
Delay (s)		66.4	19.2		39.2	19.2	15.4	204.0	20.0	29.9	17.9	8.3
Level of Service		E	B		D	B	B	F	C	C	B	A
Approach Delay (s)		57.4			34.3			177.6			17.9	
Approach LOS		E			C			F			B	

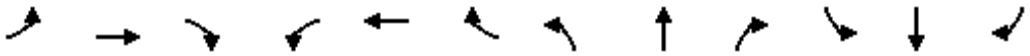
Intersection Summary			
HCM Average Control Delay	113.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	113.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	516	59	52	410	50	67	62	65	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		0.99			0.99			0.95				
Flt Protected		1.00			0.99			0.98				
Satd. Flow (prot)		1629			1627			1770				
Flt Permitted		0.91			0.89			0.98				
Satd. Flow (perm)		1494			1459			1770				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	66	573	66	58	456	56	74	69	72	0	0	0
RTOR Reduction (vph)	0	6	0	0	6	0	0	28	0	0	0	0
Lane Group Flow (vph)	0	699	0	0	564	0	0	187	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		38.0			38.0			19.0				
Effective Green, g (s)		38.0			38.0			19.0				
Actuated g/C Ratio		0.58			0.58			0.29				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		873			853			517				
v/s Ratio Prot												
v/s Ratio Perm		c0.47			0.39			0.11				
v/c Ratio		0.80			0.66			0.36				
Uniform Delay, d1		10.5			9.1			18.2				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		7.6			4.0			2.0				
Delay (s)		18.2			13.1			20.2				
Level of Service		B			B			C				
Approach Delay (s)		18.2			13.1			20.2			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM Average Control Delay	16.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	64.6%	ICU Level of Service	C
Analysis Period (min)	15		

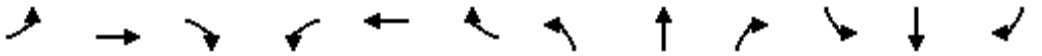
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	548	65	34	414	41	46	150	96	56	192	26
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	11	12	12	15	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.97		1.00	0.95		1.00	0.98		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		0.99	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.99	
Flt Protected		1.00	1.00		1.00	1.00		0.99	1.00		0.99	
Satd. Flow (prot)		1656	1255		1634	1288		1663	1490		1775	
Flt Permitted		0.98	1.00		0.94	1.00		0.89	1.00		0.90	
Satd. Flow (perm)		1619	1255		1536	1288		1493	1490		1613	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	24	577	68	36	436	43	48	158	101	59	202	27
RTOR Reduction (vph)	0	0	29	0	0	17	0	0	69	0	5	0
Lane Group Flow (vph)	0	601	39	0	472	26	0	206	32	0	283	0
Confl. Peds. (#/hr)	33		15	15		33	68		5	5		68
Confl. Bikes (#/hr)	4					4						
Heavy Vehicles (%)	0%	5%	14%	19%	5%	9%	2%	2%	1%	10%	7%	8%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Effective Green, g (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.32	0.32		0.32	
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Grp Cap (vph)		928	720		881	738		478	477		516	
v/s Ratio Prot												
v/s Ratio Perm		c0.37	0.03		0.31	0.02		0.14	0.02		c0.18	
v/c Ratio		0.65	0.05		0.54	0.03		0.43	0.07		0.55	
Uniform Delay, d1		10.9	7.0		9.9	7.0		20.1	17.7		21.0	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		3.5	0.1		2.3	0.1		2.8	0.3		4.2	
Delay (s)		14.3	7.2		12.2	7.1		22.9	18.0		25.2	
Level of Service		B	A		B	A		C	B		C	
Approach Delay (s)		13.6			11.8			21.3			25.2	
Approach LOS		B			B			C			C	

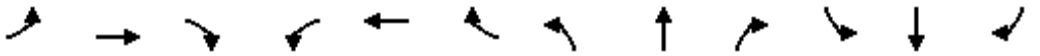
Intersection Summary			
HCM Average Control Delay	16.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	92.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



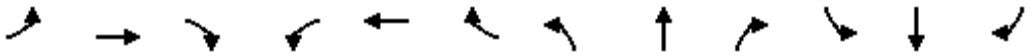
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	84	494	29	19	299	40	52	303	45	41	92	9
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	11	16	8	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.98	1.00	1.00	0.99
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1463	2993		1459	3530		1534	1647	1301	1517	1541	1156
Flt Permitted	0.53	1.00		0.39	1.00		0.69	1.00	1.00	0.45	1.00	1.00
Satd. Flow (perm)	809	2993		602	3530		1116	1647	1301	720	1541	1156
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	93	549	32	21	332	44	58	337	50	46	102	10
RTOR Reduction (vph)	0	6	0	0	16	0	0	0	26	0	0	6
Lane Group Flow (vph)	93	575	0	21	360	0	58	337	24	46	102	4
Confl. Peds. (#/hr)	16		9	9		16	1		5	5		1
Heavy Vehicles (%)	8%	6%	0%	13%	8%	3%	4%	2%	8%	5%	9%	22%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Effective Green, g (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	386	1427		287	1684		446	659	520	288	616	462
v/s Ratio Prot		c0.19			0.10			c0.20			0.07	
v/s Ratio Perm	0.11			0.03			0.05		0.02	0.06		0.00
v/c Ratio	0.24	0.40		0.07	0.21		0.13	0.51	0.05	0.16	0.17	0.01
Uniform Delay, d1	10.0	11.0		9.2	9.9		12.3	14.7	11.9	12.5	12.5	11.7
Progression Factor	1.00	1.00		1.00	1.00		0.63	0.77	0.35	0.55	0.55	0.31
Incremental Delay, d2	1.5	0.8		0.5	0.3		0.6	2.8	0.2	1.2	0.6	0.0
Delay (s)	11.5	11.9		9.7	10.2		8.3	14.0	4.3	8.1	7.5	3.7
Level of Service	B	B		A	B		A	B	A	A	A	A
Approach Delay (s)		11.8			10.2			12.2			7.4	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



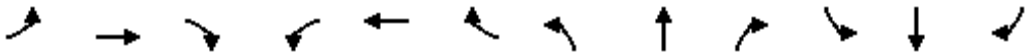
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	171	409	83	44	265	104	64	396	44	67	161	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	11	10	11	11	10	11	11	10	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.98		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.96	1.00		1.00	1.00		0.99	1.00		0.97	1.00	
Frt	1.00	0.97		1.00	0.96		1.00	0.99		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1466	3059		1588	2939		1542	3028		1405	2760	
Flt Permitted	0.51	1.00		0.42	1.00		0.60	1.00		0.44	1.00	
Satd. Flow (perm)	784	3059		707	2939		981	3028		652	2760	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	180	431	87	46	279	109	67	417	46	71	169	68
RTOR Reduction (vph)	0	0	0	0	0	0	0	11	0	0	40	0
Lane Group Flow (vph)	180	518	0	46	388	0	67	452	0	71	197	0
Confl. Peds. (#/hr)	98		10	10		98	28		52	52		28
Heavy Vehicles (%)	5%	5%	4%	0%	5%	7%	2%	6%	13%	10%	11%	20%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.41	0.41		0.41	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	376	1468		339	1411		405	1252		269	1141	
v/s Ratio Prot		0.17			0.13			c0.15			0.07	
v/s Ratio Perm	c0.23			0.07			0.07			0.11		
v/c Ratio	0.48	0.35		0.14	0.27		0.17	0.36		0.26	0.17	
Uniform Delay, d1	13.2	12.2		10.8	11.7		13.9	15.2		14.5	13.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.3	0.7		0.8	0.5		0.9	0.8		2.4	0.3	
Delay (s)	17.5	12.9		11.7	12.2		14.7	16.0		16.9	14.2	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		14.1			12.1			15.8			14.8	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	14.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	113	332	38	23	340	47	67	412	26	43	206	63
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	8	16	12	9	10	10	9	10	10
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1533	1576		1474	1842		1534	3073		1372	2867	
Flt Permitted	0.43	1.00		0.46	1.00		0.58	1.00		0.41	1.00	
Satd. Flow (perm)	700	1576		708	1842		933	3073		597	2867	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	119	349	40	24	358	49	71	434	27	45	217	66
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	119	389	0	24	407	0	71	461	0	45	283	0
Confl. Peds. (#/hr)	7		23	23		7	10		8	8		10
Confl. Bikes (#/hr)	1		2	2		1	1		1	1		1
Heavy Vehicles (%)	4%	8%	10%	0%	9%	5%	0%	3%	0%	12%	7%	6%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	47.0	41.8		40.6	38.6		26.8	22.2		23.6	20.6	
Effective Green, g (s)	47.0	39.8		40.6	36.6		26.8	20.2		23.6	18.6	
Actuated g/C Ratio	0.55	0.47		0.48	0.43		0.32	0.24		0.28	0.22	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	438	738		356	793		327	730		193	627	
v/s Ratio Prot	c0.02	c0.25		0.00	0.22		c0.01	c0.15		0.01	0.10	
v/s Ratio Perm	0.13			0.03			0.06			0.06		
v/c Ratio	0.27	0.53		0.07	0.51		0.22	0.63		0.23	0.45	
Uniform Delay, d1	14.0	16.0		15.1	17.7		21.6	29.1		26.1	28.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	2.7		0.1	2.4		0.3	4.1		0.6	2.3	
Delay (s)	14.3	18.6		15.1	20.1		21.9	33.2		26.8	31.1	
Level of Service	B	B		B	C		C	C		C	C	
Approach Delay (s)		17.6			19.8			31.7			30.5	
Approach LOS		B			B			C			C	

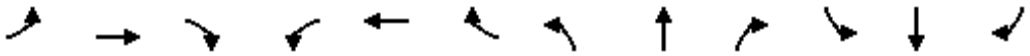
Intersection Summary			
HCM Average Control Delay	24.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	64.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	71	321	44	65	387	115	59	390	126	56	162	45
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	11	11	11	11	12	12	10	10	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		0.99	1.00	
Frt		0.98			0.97		1.00	0.96		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3492			2914		1614	3156		1581	2901	
Flt Permitted		0.78			0.84		0.61	1.00		0.38	1.00	
Satd. Flow (perm)		2730			2467		1034	3156		628	2901	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	79	357	49	72	430	128	66	433	140	62	180	50
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	485	0	0	630	0	66	573	0	62	230	0
Confl. Peds. (#/hr)	20		16	16		20	5		33	33		5
Confl. Bikes (#/hr)	2					2			2	2		
Heavy Vehicles (%)	9%	9%	0%	24%	7%	6%	2%	4%	2%	0%	5%	9%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.0			33.0		32.0	32.0		32.0	32.0	
Effective Green, g (s)		34.0			34.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio		0.45			0.45		0.44	0.44		0.44	0.44	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		1238			1118		455	1389		276	1276	
v/s Ratio Prot								c0.18			0.08	
v/s Ratio Perm		0.18			c0.26		0.06			0.10		
v/c Ratio		0.39			0.56		0.15	0.41		0.22	0.18	
Uniform Delay, d1		13.6			15.1		12.6	14.4		13.0	12.8	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.9			2.1		0.7	0.9		1.9	0.3	
Delay (s)		14.6			17.1		13.2	15.3		14.9	13.1	
Level of Service		B			B		B	B		B	B	
Approach Delay (s)		14.6			17.1			15.1			13.5	
Approach LOS		B			B			B			B	

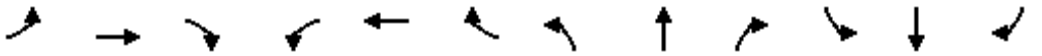
Intersection Summary			
HCM Average Control Delay	15.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	145	523	5	14	660	386	72	9	20	118	1	52
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	12	12	12	12	12	13	13	13
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	1.00		1.00	1.00	0.85		0.97			0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97			0.97	
Satd. Flow (prot)	1574	3144		1629	3257	1457		1611			3105	
Flt Permitted	0.35	1.00		0.42	1.00	1.00		0.69			0.75	
Satd. Flow (perm)	582	3144		720	3257	1457		1158			2398	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	161	581	6	16	733	429	80	10	22	131	1	58
RTOR Reduction (vph)	0	1	0	0	0	150	0	12	0	0	44	0
Lane Group Flow (vph)	161	586	0	16	733	279	0	100	0	0	146	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	46.0	46.0		46.0	46.0	46.0		16.7			16.7	
Effective Green, g (s)	46.0	46.0		46.0	46.0	46.0		16.7			16.7	
Actuated g/C Ratio	0.65	0.65		0.65	0.65	0.65		0.24			0.24	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		8.0			8.0	
Lane Grp Cap (vph)	379	2046		468	2119	948		274			566	
v/s Ratio Prot		0.19			0.23							
v/s Ratio Perm	c0.28			0.02		0.19		c0.09			0.06	
v/c Ratio	0.42	0.29		0.03	0.35	0.29		0.36			0.26	
Uniform Delay, d1	6.0	5.3		4.4	5.6	5.3		22.6			22.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	3.5	0.4		0.1	0.4	0.8		3.5			1.0	
Delay (s)	9.4	5.7		4.5	6.0	6.1		26.1			23.0	
Level of Service	A	A		A	A	A		C			C	
Approach Delay (s)		6.5			6.0			26.1			23.0	
Approach LOS		A			A			C			C	

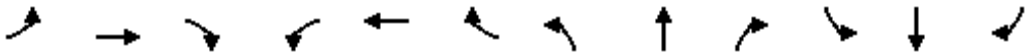
Intersection Summary			
HCM Average Control Delay	8.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	70.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	111	214	79	63	190	71	134	1972	88	71	499	41
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	9	12	10	10	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.96	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.96		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1548	1496		1547	1584		1493	3069	1271	1452	2983	1301
Flt Permitted	0.37	1.00		0.31	1.00		0.39	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	608	1496		513	1584		612	3069	1271	180	2983	1301
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	117	225	83	66	200	75	141	2076	93	75	525	43
RTOR Reduction (vph)	0	16	0	0	16	0	0	0	18	0	0	25
Lane Group Flow (vph)	117	292	0	66	259	0	141	2076	75	75	525	18
Confl. Peds. (#/hr)	4		9	9		4	6		16	16		6
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	3%	3%	4%	3%	1%	2%	3%	4%	4%	6%	7%	3%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	28.0	21.0		28.0	21.0		42.0	35.0	35.0	42.0	35.0	35.0
Effective Green, g (s)	26.0	22.0		26.0	22.0		40.0	35.0	35.0	40.0	35.0	35.0
Actuated g/C Ratio	0.31	0.26		0.31	0.26		0.47	0.41	0.41	0.47	0.41	0.41
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	252	387		230	410		350	1264	523	174	1228	536
v/s Ratio Prot	c0.03	c0.20		0.02	0.16		0.03	c0.68		c0.03	0.18	
v/s Ratio Perm	0.11			0.07			0.16		0.06	0.17		0.01
v/c Ratio	0.46	0.76		0.29	0.63		0.40	1.64	0.14	0.43	0.43	0.03
Uniform Delay, d1	22.5	29.0		21.9	27.9		13.3	25.0	15.6	18.1	17.8	14.9
Progression Factor	1.00	1.00		1.00	1.00		0.61	0.70	0.49	1.00	1.00	1.00
Incremental Delay, d2	6.0	12.9		3.1	7.2		2.8	292.0	0.5	7.6	1.1	0.1
Delay (s)	28.6	41.9		25.0	35.2		11.0	309.6	8.1	25.7	18.9	15.0
Level of Service	C	D		C	D		B	F	A	C	B	B
Approach Delay (s)		38.2			33.2			279.3			19.5	
Approach LOS		D			C			F			B	

Intersection Summary			
HCM Average Control Delay	184.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	96.8%	ICU Level of Service	F
Analysis Period (min)	15		

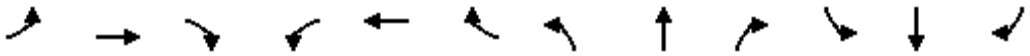
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	26	218	32	15	149	16	22	166	27	33	148	21
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	14	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.99			0.98			0.99	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1837			1839			1899			1931	
Flt Permitted		0.97			0.97			0.96			0.94	
Satd. Flow (perm)		1782			1791			1840			1822	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	27	225	33	15	154	16	23	171	28	34	153	22
RTOR Reduction (vph)	0	7	0	0	5	0	0	8	0	0	6	0
Lane Group Flow (vph)	0	278	0	0	180	0	0	214	0	0	203	0
Confl. Peds. (#/hr)	5		11	11		5	7		34	34		7
Confl. Bikes (#/hr)			3	3								
Heavy Vehicles (%)	4%	2%	0%	20%	1%	0%	12%	3%	8%	0%	3%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.42			0.42			0.46			0.46	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		740			744			849			841	
v/s Ratio Prot												
v/s Ratio Perm		c0.16			0.10			c0.12			0.11	
v/c Ratio		0.38			0.24			0.25			0.24	
Uniform Delay, d1		13.2			12.3			10.7			10.6	
Progression Factor		1.00			0.66			1.11			1.00	
Incremental Delay, d2		1.5			0.8			0.7			0.7	
Delay (s)		14.6			9.0			12.5			11.3	
Level of Service		B			A			B			B	
Approach Delay (s)		14.6			9.0			12.5			11.3	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	12.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.0%	ICU Level of Service	A
Analysis Period (min)	15		

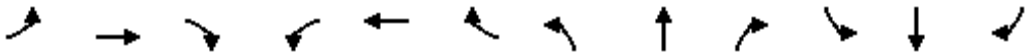
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	181	37	9	162	23	45	384	33	17	86	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.96	1.00		1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.98		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1466	2989		1302	3018		1529	3093		1492	2868	
Flt Permitted	0.62	1.00		0.60	1.00		0.68	1.00		0.48	1.00	
Satd. Flow (perm)	960	2989		825	3018		1093	3093		757	2868	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	201	41	10	180	26	50	427	37	19	96	19
RTOR Reduction (vph)	0	26	0	0	18	0	0	10	0	0	8	0
Lane Group Flow (vph)	27	216	0	10	188	0	50	454	0	19	107	0
Confl. Peds. (#/hr)	35		6	6		35	18					18
Confl. Bikes (#/hr)	14		32	32		14	23		7	7		23
Heavy Vehicles (%)	4%	4%	0%	22%	2%	6%	3%	2%	0%	7%	8%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0		39.0	39.0		39.0	39.0	
Effective Green, g (s)	19.0	19.0		19.0	19.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.58	0.58		0.58	0.58	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	281	874		241	882		639	1808		443	1677	
v/s Ratio Prot		c0.07			0.06			c0.15			0.04	
v/s Ratio Perm	0.03			0.01			0.05			0.03		
v/c Ratio	0.10	0.25		0.04	0.21		0.08	0.25		0.04	0.06	
Uniform Delay, d1	16.7	17.5		16.5	17.4		5.9	6.6		5.8	5.8	
Progression Factor	0.73	0.73		0.76	0.74		0.91	0.95		0.52	0.46	
Incremental Delay, d2	0.6	0.6		0.3	0.5		0.2	0.3		0.2	0.1	
Delay (s)	12.8	13.5		12.8	13.4		5.6	6.6		3.1	2.8	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		13.4			13.4			6.5			2.8	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	9.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	41.6%	ICU Level of Service	A
Analysis Period (min)	15		

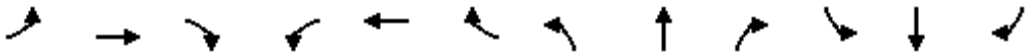
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	46	178	34	16	122	39	28	429	24	14	178	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	9	9	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.98		1.00	0.96			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1556	2952		1515	2866			1878			1807	
Flt Permitted	0.64	1.00		0.60	1.00			0.98			0.96	
Satd. Flow (perm)	1046	2952		965	2866			1838			1742	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	51	198	38	18	136	43	31	477	27	16	198	17
RTOR Reduction (vph)	0	23	0	0	26	0	0	3	0	0	4	0
Lane Group Flow (vph)	51	213	0	18	153	0	0	532	0	0	227	0
Confl. Peds. (#/hr)	10		29	29		10	17		10	10		17
Confl. Bikes (#/hr)									2	2		
Heavy Vehicles (%)	2%	4%	10%	0%	4%	0%	0%	8%	4%	0%	13%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Effective Green, g (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40			0.48			0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	418	1181		386	1146			877			831	
v/s Ratio Prot		c0.07			0.05							
v/s Ratio Perm	0.05			0.02				c0.29			0.13	
v/c Ratio	0.12	0.18		0.05	0.13			0.61			0.27	
Uniform Delay, d1	12.3	12.6		11.9	12.4			12.5			10.2	
Progression Factor	1.02	0.93		0.85	0.87			1.26			1.00	
Incremental Delay, d2	0.6	0.3		0.2	0.2			3.0			0.8	
Delay (s)	13.1	12.1		10.3	11.0			18.8			11.0	
Level of Service	B	B		B	B			B			B	
Approach Delay (s)		12.3			10.9			18.8			11.0	
Approach LOS		B			B			B			B	

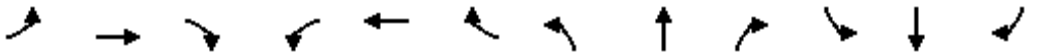
Intersection Summary			
HCM Average Control Delay	14.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



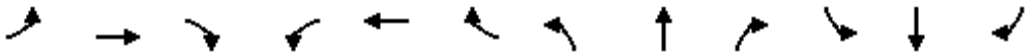
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	90	127	63	2	84	36	22	275	9	7	184	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	16	12	10	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.95		1.00	0.95			1.00			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1605	1876		1587	1870			1971			1933	
Flt Permitted	0.67	1.00		0.56	1.00			0.97			0.99	
Satd. Flow (perm)	1135	1876		942	1870			1925			1916	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	100	141	70	2	93	40	24	306	10	8	204	32
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	100	211	0	2	133	0	0	340	0	0	244	0
Confl. Peds. (#/hr)			8	8			1		8	8		1
Heavy Vehicles (%)	3%	3%	2%	0%	6%	0%	0%	3%	0%	0%	4%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Effective Green, g (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Actuated g/C Ratio	0.31	0.31		0.31	0.31			0.57			0.57	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	349	577		290	575			1096			1091	
v/s Ratio Prot		c0.11			0.07							
v/s Ratio Perm	0.09			0.00				c0.18			0.13	
v/c Ratio	0.29	0.37		0.01	0.23			0.31			0.22	
Uniform Delay, d1	17.1	17.6		15.6	16.8			7.3			6.9	
Progression Factor	0.91	0.90		0.89	0.92			0.98			1.00	
Incremental Delay, d2	2.0	1.8		0.0	0.9			0.7			0.5	
Delay (s)	17.6	17.6		14.0	16.4			7.9			7.4	
Level of Service	B	B		B	B			A			A	
Approach Delay (s)		17.6			16.3			7.9			7.4	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	122	9	55	1	3	12	40	492	6	2	201	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	10	11	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.97		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	0.98	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.87		1.00	0.88		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1603	1672		1710	1422		1491	1631	1392	1649	1907	1427
Flt Permitted	0.75	1.00		0.71	1.00		0.62	1.00	1.00	0.37	1.00	1.00
Satd. Flow (perm)	1260	1672		1279	1422		971	1631	1392	648	1907	1427
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	136	10	61	1	3	13	44	547	7	2	223	56
RTOR Reduction (vph)	0	44	0	0	9	0	0	0	3	0	0	22
Lane Group Flow (vph)	136	27	0	1	7	0	44	547	4	2	223	34
Confl. Peds. (#/hr)	9					9	1		6	6		1
Heavy Vehicles (%)	5%	14%	5%	0%	67%	12%	7%	3%	0%	0%	7%	5%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	17.0	17.0		17.0	17.0		39.0	39.0	39.0	39.0	39.0	39.0
Effective Green, g (s)	18.0	18.0		18.0	18.0		39.0	39.0	39.0	39.0	39.0	39.0
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.60	0.60	0.60	0.60	0.60	0.60
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	349	463		354	394		583	979	835	389	1144	856
v/s Ratio Prot		0.02			0.00			c0.34			0.12	
v/s Ratio Perm	c0.11			0.00			0.05		0.00	0.00		0.02
v/c Ratio	0.39	0.06		0.00	0.02		0.08	0.56	0.01	0.01	0.19	0.04
Uniform Delay, d1	19.0	17.3		17.0	17.1		5.4	7.8	5.2	5.2	5.9	5.3
Progression Factor	1.46	2.40		1.00	1.00		1.17	1.10	1.33	1.00	1.00	1.00
Incremental Delay, d2	3.2	0.2		0.0	0.1		0.2	1.7	0.0	0.0	0.4	0.1
Delay (s)	31.0	41.8		17.0	17.1		6.5	10.3	6.9	5.2	6.3	5.4
Level of Service	C	D		B	B		A	B	A	A	A	A
Approach Delay (s)		34.7			17.1			10.0			6.1	
Approach LOS		C			B			A			A	

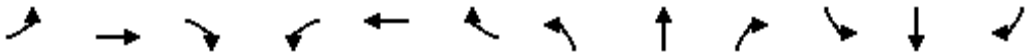
Intersection Summary			
HCM Average Control Delay	13.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	241	76	123	376	0	0	0	0	74	305	361
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)		4.0		3.0	3.0					5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	
Frpb, ped/bikes		0.99		1.00	1.00					1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Frt		0.96		1.00	1.00					1.00	0.92	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		2826		1621	3288					1574	2907	
Flt Permitted		1.00		0.50	1.00					0.95	1.00	
Satd. Flow (perm)		2826		846	3288					1574	2907	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	254	80	129	396	0	0	0	0	78	321	380
RTOR Reduction (vph)	0	30	0	0	0	0	0	0	0	0	214	0
Lane Group Flow (vph)	0	304	0	129	396	0	0	0	0	78	487	0
Confl. Peds. (#/hr)	14		32	32		14	14					14
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	9%	4%	5%	4%	0%	0%	0%	0%	5%	2%	4%
Turn Type				D.P+P						custom		
Protected Phases		8		7	7 8					6	6	
Permitted Phases				8						6		
Actuated Green, G (s)		33.0		56.0	59.0					32.0	32.0	
Effective Green, g (s)		33.0		56.0	59.0					32.0	32.0	
Actuated g/C Ratio		0.33		0.56	0.59					0.32	0.32	
Clearance Time (s)		4.0		3.0						5.0	5.0	
Lane Grp Cap (vph)		933		652	1940					504	930	
v/s Ratio Prot		c0.11		0.05	c0.12					0.05	c0.17	
v/s Ratio Perm				0.07								
v/c Ratio		0.33		0.20	0.20					0.15	0.52	
Uniform Delay, d1		25.1		10.6	9.6					24.3	27.8	
Progression Factor		1.00		1.95	2.06					1.00	1.00	
Incremental Delay, d2		0.9		0.6	0.2					0.7	2.1	
Delay (s)		26.1		21.2	19.8					25.0	29.9	
Level of Service		C		C	B					C	C	
Approach Delay (s)		26.1			20.2			0.0			29.4	
Approach LOS		C			C			A			C	

Intersection Summary			
HCM Average Control Delay	25.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

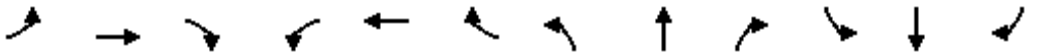
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	129	186	0	0	324	69	174	554	326	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	9	12	13	12	13	12	12	12
Total Lost time (s)	4.0	4.0			4.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.97		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1673	3054			2831		1750	1782	1514			
Flt Permitted	0.34	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	603	3054			2831		1750	1782	1514			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	136	196	0	0	341	73	183	583	343	0	0	0
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	230	0	0	0
Lane Group Flow (vph)	136	196	0	0	396	0	183	583	113	0	0	0
Confl. Peds. (#/hr)	14		16	16		14			1	1		
Confl. Bikes (#/hr)	1					1			1	1		
Heavy Vehicles (%)	2%	12%	0%	0%	5%	4%	1%	1%	3%	0%	0%	0%
Turn Type	pm+pt						custom		Perm			
Protected Phases	4	1 4			1		2	2				
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	54.0	58.0			21.0		33.0	33.0	33.0			
Effective Green, g (s)	54.0	58.0			21.0		33.0	33.0	33.0			
Actuated g/C Ratio	0.54	0.58			0.21		0.33	0.33	0.33			
Clearance Time (s)	4.0				4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	679	1771			595		578	588	500			
v/s Ratio Prot	c0.07	0.06			c0.14		0.10	c0.33				
v/s Ratio Perm	0.04								0.07			
v/c Ratio	0.20	0.11			0.67		0.32	0.99	0.23			
Uniform Delay, d1	11.8	9.4			36.3		25.1	33.4	24.3			
Progression Factor	0.24	0.25			1.00		0.75	0.79	1.93			
Incremental Delay, d2	0.6	0.1			5.8		0.9	27.7	0.7			
Delay (s)	3.5	2.5			42.1		19.8	54.1	47.6			
Level of Service	A	A			D		B	D	D			
Approach Delay (s)		2.9			42.1			46.4			0.0	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM Average Control Delay	37.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

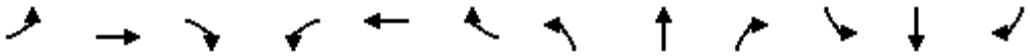
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	457	372	34	592	0	0	0	0	4	215	195
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	11	12	12	12	12	10	10	12
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	1.00
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.93		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3107		1613	3273					1596	3160	1443
Flt Permitted		1.00		0.17	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3107		284	3273					1596	3160	1443
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	476	388	35	617	0	0	0	0	4	224	203
RTOR Reduction (vph)	0	147	0	0	0	0	0	0	0	0	0	134
Lane Group Flow (vph)	0	717	0	35	617	0	0	0	0	4	224	69
Confl. Peds. (#/hr)	22		3	3		22						
Confl. Bikes (#/hr)	4					4			32	32		
Heavy Vehicles (%)	0%	2%	2%	6%	1%	0%	0%	0%	0%	0%	1%	6%
Turn Type				pm+pt						Split		Prot
Protected Phases		8		7	7 8					6	6	6
Permitted Phases				7 8								
Actuated Green, G (s)		36.0		54.0	58.0					34.0	34.0	34.0
Effective Green, g (s)		36.0		54.0	58.0					34.0	34.0	34.0
Actuated g/C Ratio		0.36		0.54	0.58					0.34	0.34	0.34
Clearance Time (s)		4.0		4.0						4.0	4.0	4.0
Lane Grp Cap (vph)		1119		393	1898					543	1074	491
v/s Ratio Prot		c0.23		0.02	c0.19					0.00	c0.07	0.05
v/s Ratio Perm				0.03								
v/c Ratio		0.64		0.09	0.33					0.01	0.21	0.14
Uniform Delay, d1		26.6		12.5	10.9					21.8	23.4	22.9
Progression Factor		1.00		0.54	0.68					0.73	0.79	0.92
Incremental Delay, d2		2.8		0.2	0.2					0.0	0.4	0.5
Delay (s)		29.4		6.9	7.6					16.0	18.9	21.5
Level of Service		C		A	A					B	B	C
Approach Delay (s)		29.4			7.5			0.0			20.1	
Approach LOS		C			A			A			C	

Intersection Summary			
HCM Average Control Delay	20.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.4%	ICU Level of Service	E
Analysis Period (min)	15		

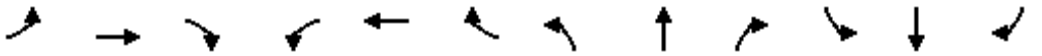
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	401	60	0	0	57	5	569	646	62	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	10	12	11	11	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	0.91	0.91			0.95		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	1.00			
Flpb, ped/bikes	0.99	0.99			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.99		1.00	1.00	0.85			
Flt Protected	0.95	0.96			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1444	3042			3079		1555	1637	1500			
Flt Permitted	0.71	0.74			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	1084	2339			3079		1555	1637	1500			
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	413	62	0	0	59	5	587	666	64	0	0	0
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	38	0	0	0
Lane Group Flow (vph)	206	269	0	0	60	0	587	666	26	0	0	0
Confl. Peds. (#/hr)	30		2	2		30			4	4		
Confl. Bikes (#/hr)	3					3			2	2		
Heavy Vehicles (%)	3%	2%	0%	0%	2%	0%	1%	1%	2%	0%	0%	0%
Turn Type	pm+pt						custom		custom			
Protected Phases	4	1 4			1		2	2	2			
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Effective Green, g (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Actuated g/C Ratio	0.51	0.51			0.15		0.37	0.37	0.37			
Clearance Time (s)	4.0				4.0		4.0	4.0	4.0			
Lane Grp Cap (vph)	682	1446			462		575	606	555			
v/s Ratio Prot	c0.11	0.07			0.02		0.38	c0.41	0.02			
v/s Ratio Perm	c0.05	0.03										
v/c Ratio	0.30	0.19			0.13		1.02	1.10	0.05			
Uniform Delay, d1	14.0	13.3			36.8		31.5	31.5	20.2			
Progression Factor	0.24	0.25			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.8	0.2			0.6		42.9	66.6	0.2			
Delay (s)	4.1	3.5			37.4		74.4	98.1	20.4			
Level of Service	A	A			D		E	F	C			
Approach Delay (s)		3.8			37.4			83.8			0.0	
Approach LOS		A			D			F			A	

Intersection Summary			
HCM Average Control Delay	61.7	HCM Level of Service	E
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.4%	ICU Level of Service	E
Analysis Period (min)	15		

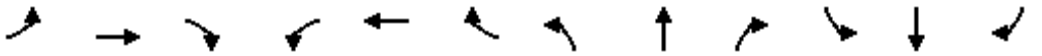
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	163	284	70	61	189	117	43	1151	72	100	476	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	9	10	9	9	10	9
Total Lost time (s)		4.0			4.0		4.0	3.5	4.0	4.0	3.5	4.0
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00			0.98		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.98			0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.98			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		2842			2770		1447	3069	1336	1494	2956	1270
Flt Permitted		0.66			0.79		0.39	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)		1916			2214		600	3069	1336	197	2956	1270
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	170	296	73	64	197	122	45	1199	75	104	496	44
RTOR Reduction (vph)	0	14	0	0	64	0	0	0	28	0	0	27
Lane Group Flow (vph)	0	525	0	0	319	0	45	1199	47	104	496	17
Confl. Peds. (#/hr)	49		20	20		49	26		8	8		26
Confl. Bikes (#/hr)	2					2						
Heavy Vehicles (%)	10%	7%	4%	9%	7%	5%	6%	4%	0%	3%	8%	5%
Turn Type	pm+pt			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		35.0			27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)		36.0			28.0		36.0	33.5	33.0	36.0	33.5	33.0
Actuated g/C Ratio		0.42			0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)		5.0			5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)		877			729		294	1210	519	144	1165	493
v/s Ratio Prot		c0.04					0.01	c0.39		c0.03	0.17	
v/s Ratio Perm		0.21			0.14		0.06		0.04	0.27		0.01
v/c Ratio		0.60			0.44		0.15	0.99	0.09	0.72	0.43	0.03
Uniform Delay, d1		18.9			22.3		14.7	25.6	16.5	19.2	18.7	16.1
Progression Factor		1.00			1.00		1.32	0.86	1.42	1.82	1.63	3.13
Incremental Delay, d2		3.0			1.9		0.6	17.7	0.2	24.6	1.0	0.1
Delay (s)		21.9			24.2		20.2	39.8	23.6	59.5	31.7	50.7
Level of Service		C			C		C	D	C	E	C	D
Approach Delay (s)		21.9			24.2			38.2			37.5	
Approach LOS		C			C			D			D	

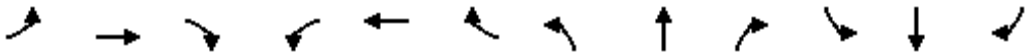
Intersection Summary			
HCM Average Control Delay	33.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	82.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	44	441	0	0	339	85	28	63	115	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.97			0.92				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		1707			1668			1574				
Flt Permitted		0.93			1.00			0.99				
Satd. Flow (perm)		1599			1668			1574				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	49	490	0	0	377	94	31	70	128	0	0	0
RTOR Reduction (vph)	0	0	0	0	14	0	0	70	0	0	0	0
Lane Group Flow (vph)	0	539	0	0	457	0	0	159	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		34.0			34.0			23.0				
Effective Green, g (s)		34.0			34.0			23.0				
Actuated g/C Ratio		0.52			0.52			0.35				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		836			872			557				
v/s Ratio Prot					0.27							
v/s Ratio Perm		c0.34						0.10				
v/c Ratio		0.64			0.52			0.28				
Uniform Delay, d1		11.2			10.2			15.1				
Progression Factor		1.00			0.56			1.00				
Incremental Delay, d2		3.8			2.0			1.3				
Delay (s)		15.0			7.7			16.4				
Level of Service		B			A			B				
Approach Delay (s)		15.0			7.7			16.4			0.0	
Approach LOS		B			A			B			A	

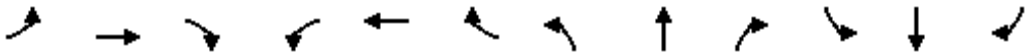
Intersection Summary			
HCM Average Control Delay	12.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	45	458	31	23	355	53	16	175	47	68	107	19
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.98			0.97			0.99	
Flt Protected		1.00			1.00			1.00			0.98	
Satd. Flow (prot)		1889			1831			3160			3149	
Flt Permitted		0.93			0.96			0.93			0.79	
Satd. Flow (perm)		1773			1759			2958			2534	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	50	509	34	26	394	59	18	194	52	76	119	21
RTOR Reduction (vph)	0	3	0	0	8	0	0	30	0	0	12	0
Lane Group Flow (vph)	0	590	0	0	471	0	0	234	0	0	204	0
Confl. Peds. (#/hr)	29		16	16		29	28		14	14		28
Confl. Bikes (#/hr)	1					1	1					1
Heavy Vehicles (%)	3%	7%	4%	12%	8%	13%	0%	4%	4%	4%	4%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0			27.0			27.0	
Effective Green, g (s)		30.0			30.0			27.0			27.0	
Actuated g/C Ratio		0.46			0.46			0.42			0.42	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		818			812			1229			1053	
v/s Ratio Prot												
v/s Ratio Perm		c0.33			0.27			0.08			c0.08	
v/c Ratio		0.72			0.58			0.19			0.19	
Uniform Delay, d1		14.1			12.9			12.1			12.1	
Progression Factor		0.65			0.55			0.95			0.70	
Incremental Delay, d2		4.5			2.9			0.3			0.4	
Delay (s)		13.6			10.0			11.8			8.9	
Level of Service		B			A			B			A	
Approach Delay (s)		13.6			10.0			11.8			8.9	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	80.3%	ICU Level of Service	D
Analysis Period (min)	15		

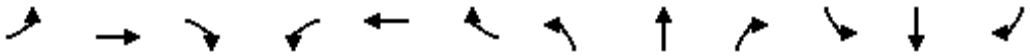
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	355	20	29	302	64	46	319	92	60	96	20
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	9	10	10	9	10	10	12	10	10	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.97		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1502	2948		1585	2934		1497	3031		1594	2943	
Flt Permitted	0.47	1.00		0.46	1.00		0.67	1.00		0.48	1.00	
Satd. Flow (perm)	744	2948		773	2934		1056	3031		806	2943	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	56	394	22	32	336	71	51	354	102	67	107	22
RTOR Reduction (vph)	0	6	0	0	28	0	0	41	0	0	10	0
Lane Group Flow (vph)	56	410	0	32	379	0	51	415	0	67	119	0
Confl. Peds. (#/hr)	25		14	14		25	12		4	4		12
Confl. Bikes (#/hr)	1					1			1	1		
Heavy Vehicles (%)	5%	7%	12%	0%	6%	2%	6%	1%	3%	0%	4%	12%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	252	998		262	993		569	1632		434	1585	
v/s Ratio Prot		c0.14			0.13			c0.14			0.04	
v/s Ratio Perm	0.08			0.04			0.05			0.08		
v/c Ratio	0.22	0.41		0.12	0.38		0.09	0.25		0.15	0.07	
Uniform Delay, d1	15.4	16.5		14.8	16.3		7.3	8.0		7.6	7.2	
Progression Factor	0.63	0.62		0.88	0.89		0.71	0.73		1.34	1.35	
Incremental Delay, d2	1.6	1.0		0.9	1.1		0.3	0.4		0.8	0.1	
Delay (s)	11.2	11.3		14.1	15.6		5.5	6.2		10.9	9.8	
Level of Service	B	B		B	B		A	A		B	A	
Approach Delay (s)		11.3			15.5			6.2			10.2	
Approach LOS		B			B			A			B	

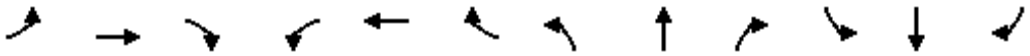
Intersection Summary			
HCM Average Control Delay	10.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	83	380	131	100	316	82	37	324	60	41	136	38
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	9	10	9	9	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.98			1.00			0.99	
Flpb, ped/bikes	0.97	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.96		1.00	0.97			0.98			0.97	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1381	2934		1337	3524			3413			3314	
Flt Permitted	0.49	1.00		0.42	1.00			0.91			0.84	
Satd. Flow (perm)	719	2934		587	3524			3134			2805	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	87	400	138	105	333	86	39	341	63	43	143	40
RTOR Reduction (vph)	0	53	0	0	35	0	0	20	0	0	24	0
Lane Group Flow (vph)	87	485	0	105	384	0	0	423	0	0	202	0
Confl. Peds. (#/hr)	53		34	34		53	67		28	28		67
Heavy Vehicles (%)	8%	5%	0%	14%	6%	1%	0%	9%	20%	5%	15%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Effective Green, g (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48			0.40			0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	343	1399		280	1681			1254			1122	
v/s Ratio Prot		0.17			0.11							
v/s Ratio Perm	0.12			c0.18				c0.13			0.07	
v/c Ratio	0.25	0.35		0.38	0.23			0.34			0.18	
Uniform Delay, d1	10.1	10.7		10.8	10.0			13.5			12.6	
Progression Factor	1.65	1.85		0.77	0.72			1.00			0.64	
Incremental Delay, d2	1.7	0.7		3.3	0.3			0.7			0.3	
Delay (s)	18.4	20.4		11.6	7.4			14.3			8.4	
Level of Service	B	C		B	A			B			A	
Approach Delay (s)		20.1			8.3			14.3			8.4	
Approach LOS		C			A			B			A	

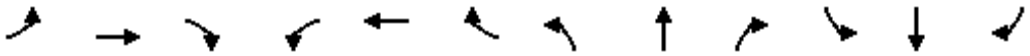
Intersection Summary			
HCM Average Control Delay	13.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	99	307	99	104	371	104	82	84	88	88	84	82
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	16	12	12	16	12
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		0.95			1.00			1.00	
Frt		1.00	0.85		0.97			0.95			0.96	
Flt Protected		0.99	1.00		0.99			0.98			0.98	
Satd. Flow (prot)		1637	1409		3036			1822			1826	
Flt Permitted		0.74	1.00		0.76			0.80			0.78	
Satd. Flow (perm)		1223	1409		2327			1482			1447	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	110	341	110	116	412	116	91	93	98	98	93	91
RTOR Reduction (vph)	0	0	52	0	29	0	0	30	0	0	26	0
Lane Group Flow (vph)	0	451	58	0	615	0	0	252	0	0	256	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		34.0	34.0		34.0			21.0			21.0	
Effective Green, g (s)		34.0	34.0		34.0			21.0			21.0	
Actuated g/C Ratio		0.52	0.52		0.52			0.32			0.32	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Grp Cap (vph)		640	737		1217			479			467	
v/s Ratio Prot												
v/s Ratio Perm		c0.37	0.04		0.26			0.17			c0.18	
v/c Ratio		0.70	0.08		0.51			0.53			0.55	
Uniform Delay, d1		11.7	7.7		10.1			17.9			18.1	
Progression Factor		1.78	4.62		0.43			1.00			1.00	
Incremental Delay, d2		6.2	0.2		1.4			4.1			4.6	
Delay (s)		27.1	35.8		5.7			22.0			22.6	
Level of Service		C	D		A			C			C	
Approach Delay (s)		28.8			5.7			22.0			22.6	
Approach LOS		C			A			C			C	

Intersection Summary			
HCM Average Control Delay	18.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	73.3%	ICU Level of Service	D
Analysis Period (min)	15		

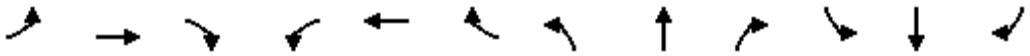
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	75	386	22	15	450	63	40	103	41	43	90	101
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	15	8	16	8	8	16	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00			0.99	
Flpb, ped/bikes	0.99	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.98			0.97			0.94	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1475	3017		1573	3003			3457			3397	
Flt Permitted	0.38	1.00		0.46	1.00			0.86			0.88	
Satd. Flow (perm)	597	3017		764	3003			3010			3010	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	83	429	24	17	500	70	44	114	46	48	100	112
RTOR Reduction (vph)	0	6	0	0	17	0	0	25	0	0	62	0
Lane Group Flow (vph)	83	447	0	17	553	0	0	179	0	0	198	0
Confl. Peds. (#/hr)	22		40	40		22	18		3	3		18
Confl. Bikes (#/hr)			2	2			1					1
Heavy Vehicles (%)	7%	5%	0%	0%	4%	2%	0%	3%	22%	0%	3%	8%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	28.0	28.0		28.0	28.0			29.0			29.0	
Effective Green, g (s)	28.0	28.0		28.0	28.0			29.0			29.0	
Actuated g/C Ratio	0.43	0.43		0.43	0.43			0.45			0.45	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	257	1300		329	1294			1343			1343	
v/s Ratio Prot		0.15			c0.18							
v/s Ratio Perm	0.14			0.02				0.06			c0.07	
v/c Ratio	0.32	0.34		0.05	0.43			0.13			0.15	
Uniform Delay, d1	12.2	12.4		10.8	12.9			10.6			10.7	
Progression Factor	0.96	0.99		1.14	1.00			0.98			0.83	
Incremental Delay, d2	2.5	0.5		0.1	0.5			0.2			0.2	
Delay (s)	14.3	12.8		12.4	13.3			10.6			9.1	
Level of Service	B	B		B	B			B			A	
Approach Delay (s)		13.0			13.3			10.6			9.1	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	12.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.9%	ICU Level of Service	B
Analysis Period (min)	15		

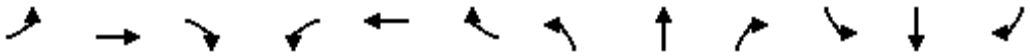
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	86	458	74	94	469	284	51	332	92	222	159	52
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.98			0.95			0.97			0.98	
Flt Protected		0.99			0.99			0.99			0.98	
Satd. Flow (prot)		3177			3076			3146			3118	
Flt Permitted		0.63			0.74			0.87			0.63	
Satd. Flow (perm)		2014			2279			2748			2005	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	96	509	82	104	521	316	57	369	102	247	177	58
RTOR Reduction (vph)	0	16	0	0	98	0	0	32	0	0	17	0
Lane Group Flow (vph)	0	671	0	0	843	0	0	496	0	0	465	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		26.0			26.0			29.0			20.0	
Effective Green, g (s)		26.0			26.0			29.0			20.0	
Actuated g/C Ratio		0.40			0.40			0.45			0.31	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		806			912			1263			617	
v/s Ratio Prot								c0.04				
v/s Ratio Perm		0.33			c0.37			0.14			c0.23	
v/c Ratio		0.83			0.92			0.39			0.96dl	
Uniform Delay, d1		17.5			18.6			12.1			20.3	
Progression Factor		1.73			1.00			1.00			0.89	
Incremental Delay, d2		9.7			16.3			0.9			8.3	
Delay (s)		40.0			34.9			13.0			26.4	
Level of Service		D			C			B			C	
Approach Delay (s)		40.0			34.9			13.0			26.4	
Approach LOS		D			C			B			C	

Intersection Summary			
HCM Average Control Delay	30.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	88.9%	ICU Level of Service	E
Analysis Period (min)	15		

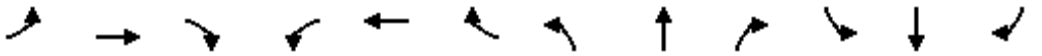
dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	724	121	45	759	0	142	0	70	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	10	10	12	12	12	12	10	10	10
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			1.00				
Frt		0.98			1.00			0.96				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		2975			3032			1585				
Flt Permitted		1.00			0.84			0.80				
Satd. Flow (perm)		2975			2542			1308				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	804	134	50	843	0	158	0	78	0	0	0
RTOR Reduction (vph)	0	18	0	0	0	0	0	20	0	0	0	0
Lane Group Flow (vph)	0	920	0	0	893	0	0	216	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	custom			Perm			Perm			Perm		
Protected Phases		4 5 6 11			8			2			2	
Permitted Phases	4 6 11			8			2			2		
Actuated Green, G (s)		63.0			33.0			18.0				
Effective Green, g (s)		56.0			33.0			18.0				
Actuated g/C Ratio		0.62			0.37			0.20				
Clearance Time (s)					5.0			5.0				
Lane Grp Cap (vph)		1851			932			262				
v/s Ratio Prot		c0.31										
v/s Ratio Perm					c0.35			c0.17				
v/c Ratio		0.50			0.96			0.82				
Uniform Delay, d1		9.3			27.8			34.5				
Progression Factor		0.04			1.57			1.00				
Incremental Delay, d2		0.4			18.9			24.6				
Delay (s)		0.8			62.5			59.1				
Level of Service		A			E			E				
Approach Delay (s)		0.8			62.5			59.1			0.0	
Approach LOS		A			E			E			A	

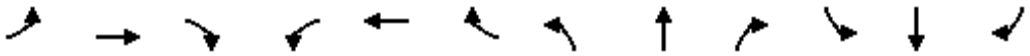
Intersection Summary			
HCM Average Control Delay	34.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	74.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	123	502	187	274	646	183	103	20	185	78	7	77
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	10	12	12	12	12	16	12	12	12	12
Total Lost time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	1.00
Frt	1.00	0.96		1.00	1.00	0.85		0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (prot)	1520	3020		1629	3257	1457		1756		1629	1714	1457
Flt Permitted	0.32	1.00		0.20	1.00	1.00		0.89		0.40	1.00	1.00
Satd. Flow (perm)	508	3020		340	3257	1457		1581		690	1714	1457
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	137	558	208	304	718	203	114	22	206	87	8	86
RTOR Reduction (vph)	0	42	0	0	0	104	0	74	0	0	0	46
Lane Group Flow (vph)	137	724	0	304	718	99	0	268	0	87	8	40
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	40.0	30.6		47.6	35.2	43.8		20.8		32.4	32.4	41.8
Effective Green, g (s)	40.0	30.6		47.6	35.2	43.8		20.8		32.4	32.4	41.8
Actuated g/C Ratio	0.44	0.34		0.53	0.39	0.49		0.23		0.36	0.36	0.46
Clearance Time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Vehicle Extension (s)	4.0	3.0		4.0	3.0	3.0		4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	331	1027		380	1274	709		365		338	617	677
v/s Ratio Prot	0.04	0.24		c0.12	0.22	0.01				c0.02	0.00	0.01
v/s Ratio Perm	0.14			c0.30		0.05		c0.17		0.07		0.02
v/c Ratio	0.41	0.71		0.80	0.56	0.14		0.73		0.26	0.01	0.06
Uniform Delay, d1	15.4	25.8		14.8	21.4	12.7		32.0		21.2	18.5	13.3
Progression Factor	1.91	1.58		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	1.0	3.6		12.0	1.8	0.1		8.0		0.4	0.0	0.1
Delay (s)	30.5	44.5		26.8	23.2	12.8		40.0		21.6	18.5	13.3
Level of Service	C	D		C	C	B		D		C	B	B
Approach Delay (s)		42.4			22.4			40.0			17.5	
Approach LOS		D			C			D			B	

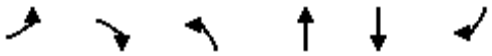
Intersection Summary			
HCM Average Control Delay	31.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	74.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	517	247	6	531	0	0	0	0	32	0	572
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	574	274	7	590	0	0	0	0	36	0	636
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		498										
pX, platoon unblocked												
vC, conflicting volume	590			574			883	1178	287	891	1178	295
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	590			574			883	1178	287	891	1178	295
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	100	100	85	100	8
cM capacity (veh/h)	961			974			19	184	701	231	184	692

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	287	287	274	203	393	36	636
Volume Left	0	0	0	7	0	36	0
Volume Right	0	0	274	0	0	0	636
cSH	1700	1700	1700	974	1700	231	692
Volume to Capacity	0.17	0.17	0.16	0.01	0.23	0.15	0.92
Queue Length 95th (ft)	0	0	0	1	0	13	307
Control Delay (s)	0.0	0.0	0.0	0.4	0.0	23.4	41.6
Lane LOS				A		C	E
Approach Delay (s)	0.0			0.1		40.6	
Approach LOS						E	

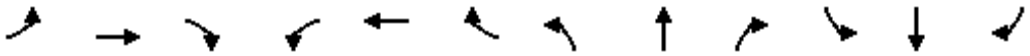
Intersection Summary				
Average Delay	12.9			
Intersection Capacity Utilization	59.7%	ICU Level of Service		B
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	549	0	537	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	610	0	597	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	305	305	597
Volume Left (vph)	305	305	597
Volume Right (vph)	0	0	0
Hadj (s)	0.58	0.58	0.29
Departure Headway (s)	7.0	7.0	5.8
Degree Utilization, x	0.59	0.59	0.95
Capacity (veh/h)	499	499	618
Control Delay (s)	18.2	18.2	49.1
Approach Delay (s)	18.2		49.1
Approach LOS	C		E

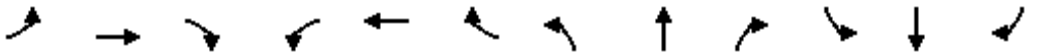
Intersection Summary			
Delay	33.5		
HCM Level of Service	D		
Intersection Capacity Utilization	54.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	373	46	130	332	0	0	0	0	72	15	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)		3.0		4.0	4.0						5.0	
Lane Util. Factor		0.95		1.00	0.95						0.95	
Frt		0.98		1.00	1.00						0.95	
Flt Protected		1.00		0.95	1.00						0.97	
Satd. Flow (prot)		3097		1574	3149						3014	
Flt Permitted		1.00		0.43	1.00						0.97	
Satd. Flow (perm)		3097		706	3149						3014	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	414	51	144	369	0	0	0	0	80	17	47
RTOR Reduction (vph)	0	11	0	0	0	0	0	0	0	0	32	0
Lane Group Flow (vph)	0	454	0	144	369	0	0	0	0	0	112	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type				pm+pt						Split		
Protected Phases		4		3	8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		36.0		49.0	49.0						27.0	
Effective Green, g (s)		36.0		49.0	49.0						27.0	
Actuated g/C Ratio		0.42		0.58	0.58						0.32	
Clearance Time (s)		3.0		4.0	4.0						5.0	
Lane Grp Cap (vph)		1312		509	1815						957	
v/s Ratio Prot		c0.15		c0.03	0.12						c0.04	
v/s Ratio Perm				0.13								
v/c Ratio		0.35		0.28	0.20						0.12	
Uniform Delay, d1		16.5		11.9	8.6						20.6	
Progression Factor		1.00		0.28	0.23						1.00	
Incremental Delay, d2		0.7		1.3	0.2						0.2	
Delay (s)		17.3		4.6	2.2						20.8	
Level of Service		B		A	A						C	
Approach Delay (s)		17.3			2.9			0.0			20.8	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	34.9%	ICU Level of Service	A
Analysis Period (min)	15		

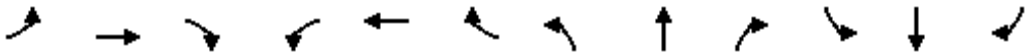
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	68	377	0	0	413	76	49	65	59	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	11	11	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0			3.0			5.0				
Lane Util. Factor	1.00	0.95			0.95			0.91				
Frt	1.00	1.00			0.98			0.95				
Flt Protected	0.95	1.00			1.00			0.99				
Satd. Flow (prot)	1629	3257			3076			4377				
Flt Permitted	0.37	1.00			1.00			0.99				
Satd. Flow (perm)	640	3257			3076			4377				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	76	419	0	0	459	84	54	72	66	0	0	0
RTOR Reduction (vph)	0	0	0	0	18	0	0	45	0	0	0	0
Lane Group Flow (vph)	76	419	0	0	525	0	0	147	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	pm+pt						Split					
Protected Phases	7	4			8		2	2				
Permitted Phases	4											
Actuated Green, G (s)	48.0	48.0			35.0			27.0				
Effective Green, g (s)	48.0	48.0			35.0			27.0				
Actuated g/C Ratio	0.56	0.56			0.41			0.32				
Clearance Time (s)	5.0	5.0			3.0			5.0				
Lane Grp Cap (vph)	478	1839			1267			1390				
v/s Ratio Prot	0.02	c0.13			c0.17			c0.03				
v/s Ratio Perm	0.07											
v/c Ratio	0.16	0.23			0.41			0.11				
Uniform Delay, d1	12.3	9.2			17.7			20.5				
Progression Factor	0.31	0.30			1.00			1.00				
Incremental Delay, d2	0.7	0.3			1.0			0.2				
Delay (s)	4.5	3.1			18.7			20.6				
Level of Service	A	A			B			C				
Approach Delay (s)		3.3			18.7			20.6			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM Average Control Delay	12.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	34.9%	ICU Level of Service	A
Analysis Period (min)	15		

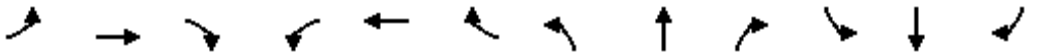
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	357	39	40	256	33	118	85	86	65	91	126
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	12	15	12	12	15	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		0.99			0.98			0.96			0.94	
Flt Protected		1.00			0.99			0.98			0.99	
Satd. Flow (prot)		2986			2976			1773			1752	
Flt Permitted		0.89			0.85			0.77			0.86	
Satd. Flow (perm)		2673			2560			1387			1526	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	43	397	43	44	284	37	131	94	96	72	101	140
RTOR Reduction (vph)	0	11	0	0	13	0	0	24	0	0	45	0
Lane Group Flow (vph)	0	472	0	0	352	0	0	297	0	0	268	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		23.0			23.0			32.0			32.0	
Effective Green, g (s)		23.0			23.0			32.0			32.0	
Actuated g/C Ratio		0.35			0.35			0.49			0.49	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		946			906			683			751	
v/s Ratio Prot												
v/s Ratio Perm		c0.18			0.14			c0.21			0.18	
v/c Ratio		0.50			0.39			0.44			0.36	
Uniform Delay, d1		16.5			15.7			10.7			10.2	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.9			1.3			2.0			1.3	
Delay (s)		18.4			17.0			12.7			11.5	
Level of Service		B			B			B			B	
Approach Delay (s)		18.4			17.0			12.7			11.5	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	15.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	65.0%	ICU Level of Service	C
Analysis Period (min)	15		

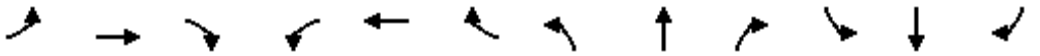
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	169	295	39	59	200	75	71	1001	104	126	428	80
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	12	10	16	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.96
Flpb, ped/bikes	0.99	1.00		1.00	1.00		0.99	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1551	3023		1593	3505		1486	3040	1347	1494	3011	1271
Flt Permitted	0.55	1.00		0.49	1.00		0.43	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	891	3023		819	3505		675	3040	1347	197	3011	1271
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	178	311	41	62	211	79	75	1054	109	133	451	84
RTOR Reduction (vph)	0	12	0	0	45	0	0	0	65	0	0	51
Lane Group Flow (vph)	178	340	0	62	245	0	75	1054	44	133	451	33
Confl. Peds. (#/hr)	31		7	7		31	37		12	12		37
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	2%	4%	0%	0%	6%	2%	3%	5%	0%	3%	6%	4%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	32.0	27.0		32.0	27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)	30.0	28.0		30.0	28.0		36.0	33.0	33.0	36.0	33.0	33.0
Actuated g/C Ratio	0.35	0.33		0.35	0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	346	996		325	1155		324	1180	523	144	1169	493
v/s Ratio Prot	c0.02	0.11		0.01	0.07		0.01	c0.35		c0.04	0.15	
v/s Ratio Perm	c0.16			0.06			0.09		0.03	0.35		0.03
v/c Ratio	0.51	0.34		0.19	0.21		0.23	0.89	0.08	0.92	0.39	0.07
Uniform Delay, d1	20.9	21.5		18.6	20.5		15.0	24.3	16.4	21.1	18.7	16.3
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	2.17	0.62	0.80
Incremental Delay, d2	5.4	0.9		1.3	0.4		1.7	10.5	0.3	54.0	0.9	0.2
Delay (s)	26.3	22.5		19.9	21.0		16.6	34.8	16.8	99.7	12.6	13.3
Level of Service	C	C		B	C		B	C	B	F	B	B
Approach Delay (s)		23.8			20.8			32.1			30.0	
Approach LOS		C			C			C			C	

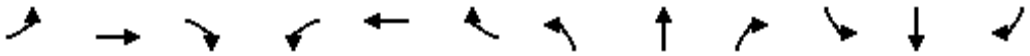
Intersection Summary			
HCM Average Control Delay	28.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	38	434	18	25	261	21	35	113	68	71	57	41
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	16	12	12	16	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00	0.99		1.00	0.98
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected		1.00	1.00		1.00	1.00		0.99	1.00		0.97	1.00
Satd. Flow (prot)		1935	1382		1947	1331		1970	1452		1933	1430
Flt Permitted		0.96	1.00		0.95	1.00		0.92	1.00		0.80	1.00
Satd. Flow (perm)		1860	1382		1848	1331		1839	1452		1581	1430
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	40	457	19	26	275	22	37	119	72	75	60	43
RTOR Reduction (vph)	0	0	10	0	0	12	0	0	42	0	0	25
Lane Group Flow (vph)	0	497	9	0	301	10	0	156	30	0	135	18
Confl. Peds. (#/hr)	5		21	21		5	9		1	1		9
Heavy Vehicles (%)	5%	5%	6%	7%	4%	12%	6%	1%	4%	0%	6%	5%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Effective Green, g (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Actuated g/C Ratio		0.46	0.46		0.46	0.46		0.42	0.42		0.42	0.42
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		858	638		853	614		764	603		657	594
v/s Ratio Prot												
v/s Ratio Perm		c0.27	0.01		0.16	0.01		0.08	0.02		c0.09	0.01
v/c Ratio		0.58	0.01		0.35	0.02		0.20	0.05		0.21	0.03
Uniform Delay, d1		12.9	9.5		11.3	9.5		12.1	11.3		12.1	11.2
Progression Factor		1.00	1.00		0.38	0.16		1.18	1.66		0.99	0.83
Incremental Delay, d2		2.8	0.0		1.1	0.0		0.6	0.2		0.7	0.1
Delay (s)		15.7	9.5		5.3	1.6		14.9	18.9		12.7	9.4
Level of Service		B	A		A	A		B	B		B	A
Approach Delay (s)		15.5			5.1			16.2			11.9	
Approach LOS		B			A			B			B	

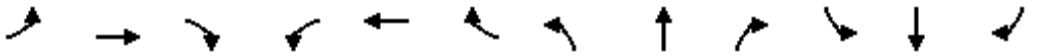
Intersection Summary			
HCM Average Control Delay	12.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	66	514	10	17	268	43	13	247	35	81	70	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00		1.00	0.98		1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1520	3031		1520	2977		1520	2983		1520	2904	
Flt Permitted	0.95	1.00		0.43	1.00		0.68	1.00		0.54	1.00	
Satd. Flow (perm)	1520	3031		692	2977		1091	2983		871	2904	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	73	571	11	19	298	48	14	274	39	90	78	33
RTOR Reduction (vph)	0	2	0	0	20	0	0	17	0	0	19	0
Lane Group Flow (vph)	73	580	0	19	326	0	14	296	0	90	92	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Prot			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Effective Green, g (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.11	0.49		0.34	0.34		0.42	0.42		0.42	0.42	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	164	1492		234	1008		453	1239		362	1206	
v/s Ratio Prot	c0.05	c0.19			0.11			0.10			0.03	
v/s Ratio Perm				0.03			0.01			c0.10		
v/c Ratio	0.45	0.39		0.08	0.32		0.03	0.24		0.25	0.08	
Uniform Delay, d1	27.2	10.4		14.6	16.0		11.3	12.3		12.4	11.5	
Progression Factor	1.07	0.60		1.00	1.00		0.54	0.56		1.12	1.08	
Incremental Delay, d2	7.8	0.7		0.7	0.9		0.1	0.4		1.6	0.1	
Delay (s)	36.9	6.9		15.3	16.8		6.2	7.3		15.5	12.5	
Level of Service	D	A		B	B		A	A		B	B	
Approach Delay (s)		10.3			16.7			7.3			13.8	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM Average Control Delay	11.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	45.1%	ICU Level of Service	A
Analysis Period (min)	15		

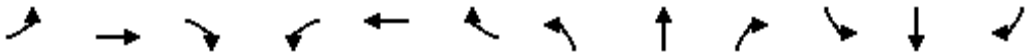
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	37	253	348	242	216	43	109	310	56	25	192	25
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.91		1.00	0.97			0.98			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1520	2776		1520	2964			3163			3190	
Flt Permitted	0.58	1.00		0.95	1.00			0.80			0.88	
Satd. Flow (perm)	921	2776		1520	2964			2565			2816	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	41	281	387	269	240	48	121	344	62	28	213	28
RTOR Reduction (vph)	0	270	0	0	22	0	0	17	0	0	15	0
Lane Group Flow (vph)	41	398	0	269	266	0	0	510	0	0	254	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Prot			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4						2			6		
Actuated Green, G (s)	15.0	15.0		14.0	32.0			17.0			17.0	
Effective Green, g (s)	15.0	15.0		14.0	32.0			17.0			17.0	
Actuated g/C Ratio	0.25	0.25		0.23	0.53			0.28			0.28	
Clearance Time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	230	694		355	1581			727			798	
v/s Ratio Prot		c0.14		c0.18	0.09							
v/s Ratio Perm	0.04							c0.20			0.09	
v/c Ratio	0.18	0.57		0.76	0.17			0.70			0.32	
Uniform Delay, d1	17.7	19.7		21.4	7.2			19.2			16.9	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	1.7	3.4		14.0	0.2			5.6			1.0	
Delay (s)	19.4	23.1		35.5	7.4			24.8			18.0	
Level of Service	B	C		D	A			C			B	
Approach Delay (s)		22.9			21.0			24.8			18.0	
Approach LOS		C			C			C			B	

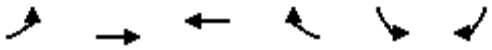
Intersection Summary			
HCM Average Control Delay	22.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	16	298	14	70	466	70	34	94	162	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	14	12	10	15	10
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			0.95				
Frt		0.99			0.98			0.92				
Flt Protected		1.00			0.99			0.99				
Satd. Flow (prot)		1587			1566			3164				
Flt Permitted		0.97			0.92			0.99				
Satd. Flow (perm)		1535			1451			3164				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	18	331	16	78	518	78	38	104	180	0	0	0
RTOR Reduction (vph)	0	2	0	0	6	0	0	138	0	0	0	0
Lane Group Flow (vph)	0	363	0	0	668	0	0	184	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		41.9			41.9			15.1				
Effective Green, g (s)		41.9			41.9			15.1				
Actuated g/C Ratio		0.64			0.64			0.23				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		3.0			3.0			8.0				
Lane Grp Cap (vph)		989			935			735				
v/s Ratio Prot												
v/s Ratio Perm		0.24			c0.46			0.06				
v/c Ratio		0.37			0.71			0.25				
Uniform Delay, d1		5.4			7.6			20.3				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		1.1			4.6			0.8				
Delay (s)		6.4			12.3			21.1				
Level of Service		A			B			C				
Approach Delay (s)		6.4			12.3			21.1			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM Average Control Delay	12.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	72.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	94	366	477	44	66	126
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	99	385	502	46	69	133
Pedestrians		3	5		21	
Lane Width (ft)		16.0	16.0		10.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1319	491			
pX, platoon unblocked						
vC, conflicting volume	569				942	298
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	569				942	298
tC, single (s)	4.3				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	89				70	81
cM capacity (veh/h)	920				229	686

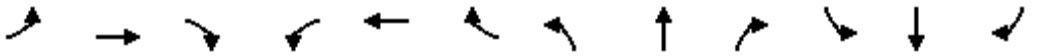
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	SB 2
Volume Total	227	257	335	214	69	133
Volume Left	99	0	0	0	69	0
Volume Right	0	0	0	46	0	133
cSH	920	1700	1700	1700	229	686
Volume to Capacity	0.11	0.15	0.20	0.13	0.30	0.19
Queue Length 95th (ft)	9	0	0	0	31	18
Control Delay (s)	4.7	0.0	0.0	0.0	27.5	11.5
Lane LOS	A				D	B
Approach Delay (s)	2.2		0.0		17.0	
Approach LOS					C	

Intersection Summary			
Average Delay	3.6		
Intersection Capacity Utilization	43.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	477	1	27	691	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0			4.0		
Lane Util. Factor	1.00			1.00		
Frt	1.00			1.00		
Flt Protected	1.00			1.00		
Satd. Flow (prot)	1714			1711		
Flt Permitted	1.00			0.97		
Satd. Flow (perm)	1714			1664		
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	530	1	30	768	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	531	0	0	798	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type			Perm			
Protected Phases	1 2 4			4	3	
Permitted Phases			4			
Actuated Green, G (s)	74.0			44.0		
Effective Green, g (s)	70.0			44.0		
Actuated g/C Ratio	0.78			0.49		
Clearance Time (s)				4.0		
Lane Grp Cap (vph)	1333			814		
v/s Ratio Prot	c0.31					
v/s Ratio Perm				c0.48		
v/c Ratio	0.40			0.98		
Uniform Delay, d1	3.2			22.6		
Progression Factor	0.03			1.00		
Incremental Delay, d2	0.5			27.1		
Delay (s)	0.6			49.7		
Level of Service	A			D		
Approach Delay (s)	0.6			49.7	0.0	
Approach LOS	A			D	A	

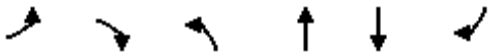
Intersection Summary			
HCM Average Control Delay	30.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	64.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	186	195	25	569	0	0	0	0	3	0	271
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	207	217	28	632	0	0	0	0	3	0	301
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	632			207			1003	1003	212	791	894	632
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	632			207			1003	1003	212	791	894	632
tC, single (s)	4.1			5.5			7.5	6.5	6.9	7.5	6.5	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.9			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			100	100	100	99	100	28
cM capacity (veh/h)	960			983			55	237	800	278	274	418

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	138	286	660	3	301
Volume Left	0	0	28	3	0
Volume Right	0	217	0	0	301
cSH	1700	1700	983	278	418
Volume to Capacity	0.08	0.17	0.03	0.01	0.72
Queue Length 95th (ft)	0	0	2	1	140
Control Delay (s)	0.0	0.0	0.7	18.1	32.8
Lane LOS			A	C	D
Approach Delay (s)	0.0		0.7	32.7	
Approach LOS				D	

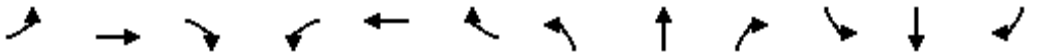
Intersection Summary			
Average Delay	7.5		
Intersection Capacity Utilization	58.4%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	189	0	594	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	210	0	660	0	0	0

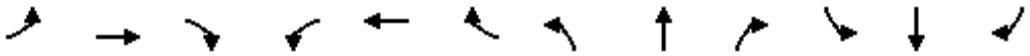
Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	105	105	660
Volume Left (vph)	105	105	660
Volume Right (vph)	0	0	0
Hadj (s)	0.58	0.58	0.29
Departure Headway (s)	6.8	6.8	4.9
Degree Utilization, x	0.20	0.20	0.89
Capacity (veh/h)	511	512	734
Control Delay (s)	10.3	10.3	33.9
Approach Delay (s)	10.3		33.9
Approach LOS	B		D

Intersection Summary			
Delay	28.2		
HCM Level of Service	D		
Intersection Capacity Utilization	47.1%	ICU Level of Service	A
Analysis Period (min)	15		



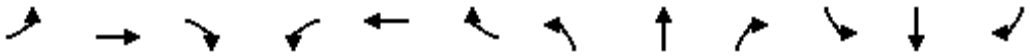
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	471	210	159	474	0	0	0	0	132	117	300
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	13	12	12	12	12	10	10	11
Total Lost time (s)		6.0	6.0		6.0					6.0	6.0	6.0
Lane Util. Factor		0.95	1.00		0.95					0.86	0.81	0.86
Frpb, ped/bikes		1.00	0.98		1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	0.93	0.85
Flt Protected		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (prot)		2978	1202		3372					1346	3693	1122
Flt Permitted		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (perm)		2978	1202		3372					1346	3693	1122
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	496	221	167	499	0	0	0	0	139	123	316
RTOR Reduction (vph)	0	0	149	0	0	0	0	0	0	0	98	94
Lane Group Flow (vph)	0	496	72	0	666	0	0	0	0	76	246	64
Confl. Peds. (#/hr)	5		3	3		5						
Heavy Vehicles (%)	0%	11%	9%	2%	4%	0%	0%	0%	0%	2%	2%	2%
Parking (#/hr)			0									0
Turn Type			Perm	Split						Split		custom
Protected Phases		2		10 12 14	10 12 14					4	4	
Permitted Phases			2									4 2
Actuated Green, G (s)		39.1	39.1		72.6					20.2	20.2	65.3
Effective Green, g (s)		39.1	39.1		72.6					20.2	20.2	65.3
Actuated g/C Ratio		0.24	0.24		0.45					0.13	0.13	0.41
Clearance Time (s)		6.0	6.0							6.0	6.0	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		728	294		1530					170	466	458
v/s Ratio Prot		c0.17			c0.20					0.06	c0.07	
v/s Ratio Perm			0.06									0.06
v/c Ratio		0.68	0.25		0.44					0.45	0.53	0.14
Uniform Delay, d1		54.8	48.6		29.7					64.7	65.4	29.7
Progression Factor		1.00	1.00		0.02					1.00	1.00	1.00
Incremental Delay, d2		5.1	2.0		0.1					1.9	1.1	0.1
Delay (s)		59.9	50.6		0.7					66.6	66.5	29.9
Level of Service		E	D		A					E	E	C
Approach Delay (s)		57.0			0.7			0.0			56.5	
Approach LOS		E			A			A			E	

Intersection Summary			
HCM Average Control Delay	37.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	30.1
Intersection Capacity Utilization	53.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



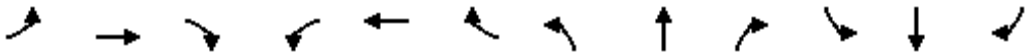
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	212	391	0	0	395	93	238	150	144	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	13	12	12	11	12	13	13	14	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0				
Lane Util. Factor	1.00	0.95			0.95	1.00	0.91	0.91				
Frt	1.00	1.00			1.00	0.85	1.00	0.94				
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (prot)	1574	3366			3149	1457	1531	3001				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (perm)	1574	3366			3149	1457	1531	3001				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	236	434	0	0	439	103	264	167	160	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	82	0	63	0	0	0	0
Lane Group Flow (vph)	236	434	0	0	439	21	201	327	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Split					Perm	Split					
Protected Phases	2 4 8	2 4 8			10		12	12				
Permitted Phases						10						
Actuated Green, G (s)	79.4	79.4			32.7	32.7	21.0	21.0				
Effective Green, g (s)	79.4	79.4			32.7	32.7	21.0	21.0				
Actuated g/C Ratio	0.50	0.50			0.20	0.20	0.13	0.13				
Clearance Time (s)					6.0	6.0	6.0	6.0				
Vehicle Extension (s)					3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	781	1670			644	298	201	394				
v/s Ratio Prot	c0.15	0.13			c0.14		c0.13	0.11				
v/s Ratio Perm						0.01						
v/c Ratio	0.30	0.26			0.68	0.07	1.00	0.83				
Uniform Delay, d1	23.9	23.3			58.8	51.4	69.5	67.8				
Progression Factor	0.07	0.07			1.00	1.00	1.00	1.00				
Incremental Delay, d2	0.2	0.1			3.0	0.1	63.5	13.8				
Delay (s)	1.8	1.8			61.8	51.5	133.0	81.6				
Level of Service	A	A			E	D	F	F				
Approach Delay (s)		1.8			59.9			99.1			0.0	
Approach LOS		A			E			F			A	

Intersection Summary			
HCM Average Control Delay	51.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	28.9
Intersection Capacity Utilization	50.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	220	325	75	44	154	54	88	824	96	93	448	104
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	14	12	10	10	12	9	10	12
Total Lost time (s)	4.0	4.0	5.0	4.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.99	1.00	1.00	1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1538	1556	1328	1595	1713		1525	2965		1509	2870	
Flt Permitted	0.49	1.00	1.00	0.42	1.00		0.34	1.00		0.13	1.00	
Satd. Flow (perm)	791	1556	1328	706	1713		539	2965		214	2870	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	232	342	79	46	162	57	93	867	101	98	472	109
RTOR Reduction (vph)	0	0	52	0	14	0	0	10	0	0	22	0
Lane Group Flow (vph)	232	342	27	46	205	0	93	958	0	98	559	0
Confl. Peds. (#/hr)	33		3	3		33	42		8	8		42
Confl. Bikes (#/hr)							1					1
Heavy Vehicles (%)	3%	8%	6%	0%	7%	5%	4%	5%	11%	2%	6%	9%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	38.2	31.2	31.2	32.4	28.3		39.6	34.1		39.6	34.1	
Effective Green, g (s)	36.2	32.2	31.2	30.4	28.3		37.6	34.1		37.6	34.1	
Actuated g/C Ratio	0.40	0.36	0.35	0.34	0.31		0.42	0.38		0.42	0.38	
Clearance Time (s)	3.0	5.0	5.0	3.0	5.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	368	557	461	269	539		275	1125		154	1089	
v/s Ratio Prot	c0.04	c0.22		0.01	0.12		0.02	c0.32		c0.03	0.19	
v/s Ratio Perm	0.21		0.02	0.05			0.12			0.23		
v/c Ratio	0.63	0.61	0.06	0.17	0.38		0.34	0.85		0.64	0.51	
Uniform Delay, d1	21.3	23.7	19.6	20.5	24.0		16.6	25.6		18.6	21.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.5	5.0	0.2	0.3	2.0		0.7	8.2		8.3	1.7	
Delay (s)	24.8	28.7	19.8	20.8	26.0		17.3	33.8		26.9	23.2	
Level of Service	C	C	B	C	C		B	C		C	C	
Approach Delay (s)		26.3			25.1			32.3			23.8	
Approach LOS		C			C			C			C	

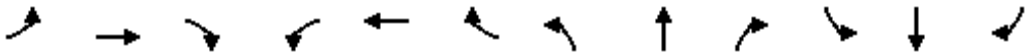
Intersection Summary			
HCM Average Control Delay	27.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	89.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	73.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	44	389	16	18	212	32	35	80	67	62	44	39
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	10	10	10	12	15	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Frpb, ped/bikes		1.00	0.97		1.00	0.97		0.99			0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.95			0.96	
Flt Protected		0.99	1.00		1.00	1.00		0.99			0.98	
Satd. Flow (prot)		1909	1482		1599	1198		1841			1814	
Flt Permitted		0.95	1.00		0.96	1.00		0.94			0.84	
Satd. Flow (perm)		1831	1482		1543	1198		1741			1549	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	46	409	17	19	223	34	37	84	71	65	46	41
RTOR Reduction (vph)	0	0	8	0	0	17	0	33	0	0	20	0
Lane Group Flow (vph)	0	455	9	0	242	17	0	159	0	0	132	0
Confl. Peds. (#/hr)	6		11	11		6	4		8	8		4
Confl. Bikes (#/hr)	1		1	1		1			1	1		
Heavy Vehicles (%)	0%	7%	0%	0%	5%	16%	0%	0%	0%	10%	0%	3%
Turn Type	Perm		Perm	Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Effective Green, g (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Actuated g/C Ratio		0.49	0.49		0.49	0.49		0.42			0.42	
Clearance Time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		901	730		760	590		723			643	
v/s Ratio Prot												
v/s Ratio Perm		c0.25	0.01		0.16	0.01		c0.09			0.08	
v/c Ratio		0.50	0.01		0.32	0.03		0.22			0.20	
Uniform Delay, d1		11.1	8.4		9.9	8.5		12.2			12.1	
Progression Factor		1.00	1.00		2.04	3.30		1.00			1.42	
Incremental Delay, d2		2.0	0.0		1.0	0.1		0.7			0.7	
Delay (s)		13.2	8.5		21.3	28.1		12.9			17.9	
Level of Service		B	A		C	C		B			B	
Approach Delay (s)		13.0			22.1			12.9			17.9	
Approach LOS		B			C			B			B	

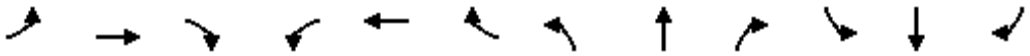
Intersection Summary			
HCM Average Control Delay	16.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	64.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	75	430	24	19	189	8	41	228	73	18	53	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.98		1.00	0.96		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.96	
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		0.99	
Satd. Flow (prot)		1658	1392		1584	1497		1755	1390		1656	
Flt Permitted		0.91	1.00		0.82	1.00		0.95	1.00		0.93	
Satd. Flow (perm)		1527	1392		1304	1497		1677	1390		1559	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	79	453	25	20	199	8	43	240	77	19	56	32
RTOR Reduction (vph)	0	0	10	0	0	5	0	0	39	0	16	0
Lane Group Flow (vph)	0	532	15	0	219	3	0	283	38	0	91	0
Confl. Peds. (#/hr)	11		17	17		11	4		17	17		4
Confl. Bikes (#/hr)	1		1	1		1	1					1
Heavy Vehicles (%)	0%	9%	5%	33%	11%	0%	6%	1%	6%	0%	0%	8%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Effective Green, g (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Actuated g/C Ratio		0.35	0.35		0.35	0.35		0.49	0.49		0.49	
Clearance Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Grp Cap (vph)		540	493		461	530		826	684		768	
v/s Ratio Prot												
v/s Ratio Perm		c0.35	0.01		0.17	0.00		c0.17	0.03		0.06	
v/c Ratio		0.99	0.03		0.48	0.01		0.34	0.06		0.12	
Uniform Delay, d1		20.8	13.7		16.3	13.6		10.1	8.6		8.9	
Progression Factor		1.60	1.95		1.05	1.10		0.30	0.27		1.17	
Incremental Delay, d2		33.7	0.1		3.4	0.0		0.8	0.1		0.3	
Delay (s)		67.0	26.8		20.6	15.0		3.9	2.5		10.7	
Level of Service		E	C		C	B		A	A		B	
Approach Delay (s)		65.2			20.4			3.6			10.7	
Approach LOS		E			C			A			B	

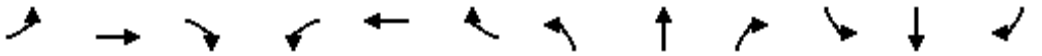
Intersection Summary			
HCM Average Control Delay	34.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	76.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	444	21	31	9	18	15	26	352	19	8	229	169
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.97		0.98			1.00			1.00	0.95
Flpb, ped/bikes		0.98	1.00		1.00			1.00			1.00	1.00
Frt		1.00	0.85		0.95			0.99			1.00	0.85
Flt Protected		0.95	1.00		0.99			1.00			1.00	1.00
Satd. Flow (prot)		1754	1390		1758			1979			1873	1328
Flt Permitted		0.73	1.00		0.90			0.97			0.99	1.00
Satd. Flow (perm)		1338	1390		1608			1932			1852	1328
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	493	23	34	10	20	17	29	391	21	9	254	188
RTOR Reduction (vph)	0	0	15	0	13	0	0	3	0	0	0	95
Lane Group Flow (vph)	0	516	19	0	34	0	0	438	0	0	263	93
Confl. Peds. (#/hr)	49		22	22		49	34		17	17		34
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	9%	0%	7%	0%	0%	0%	0%	2%	0%	0%	9%	9%
Turn Type	pm+pt		Perm	Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		27.0	27.0		17.0			32.0			32.0	32.0
Effective Green, g (s)		27.0	27.0		17.0			32.0			32.0	32.0
Actuated g/C Ratio		0.42	0.42		0.26			0.49			0.49	0.49
Clearance Time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		607	577		421			951			912	654
v/s Ratio Prot		c0.10										
v/s Ratio Perm		0.25	0.01		0.02			c0.23			0.14	0.07
v/c Ratio		0.85	0.03		0.08			0.46			0.29	0.14
Uniform Delay, d1		17.2	11.3		18.1			10.8			9.8	9.0
Progression Factor		1.05	1.62		1.00			0.62			1.00	1.00
Incremental Delay, d2		7.9	0.1		0.4			1.5			0.8	0.5
Delay (s)		25.9	18.3		18.5			8.2			10.6	9.5
Level of Service		C	B		B			A			B	A
Approach Delay (s)		25.4			18.5			8.2			10.1	
Approach LOS		C			B			A			B	

Intersection Summary			
HCM Average Control Delay	15.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	79.5%	ICU Level of Service	D
Analysis Period (min)	15		

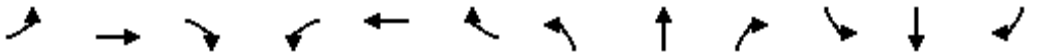
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	889	222	268	1124	0	0	0	0	275	201	376
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	11	8	8	8	11	12	14
Total Lost time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Lane Util. Factor		0.91		1.00	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00		1.00	1.00					1.00	0.99	0.99
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.97		1.00	1.00					1.00	0.94	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.99	1.00
Satd. Flow (prot)		4313		1589	3226					1419	2711	1355
Flt Permitted		1.00		0.18	1.00					0.95	0.99	1.00
Satd. Flow (perm)		4313		309	3226					1419	2711	1355
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	936	234	282	1183	0	0	0	0	289	212	396
RTOR Reduction (vph)	0	42	0	0	0	0	0	0	0	0	56	56
Lane Group Flow (vph)	0	1128	0	282	1183	0	0	0	0	234	397	154
Confl. Peds. (#/hr)	6		4	4		6	2					2
Heavy Vehicles (%)	0%	11%	7%	4%	6%	0%	0%	0%	0%	6%	4%	8%
Turn Type				pm+pt						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Actuated Green, G (s)		41.2		58.9	57.4					20.6	20.6	20.6
Effective Green, g (s)		41.2		58.9	57.4					20.6	20.6	20.6
Actuated g/C Ratio		0.46		0.65	0.64					0.23	0.23	0.23
Clearance Time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Vehicle Extension (s)		7.0		3.5	7.0					3.5	3.5	3.5
Lane Grp Cap (vph)		1974		369	2057					325	621	310
v/s Ratio Prot		0.26		c0.10	0.37							
v/s Ratio Perm				c0.40						c0.16	0.15	0.11
v/c Ratio		0.57		0.76	0.58					0.72	0.64	0.50
Uniform Delay, d1		17.9		18.6	9.3					32.0	31.3	30.2
Progression Factor		1.00		0.71	0.66					1.00	1.00	1.00
Incremental Delay, d2		1.2		5.6	0.7					7.7	2.3	1.5
Delay (s)		19.1		18.7	6.9					39.7	33.6	31.7
Level of Service		B		B	A					D	C	C
Approach Delay (s)		19.1			9.2			0.0			34.8	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	19.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	101.7%	ICU Level of Service	G
Analysis Period (min)	15		

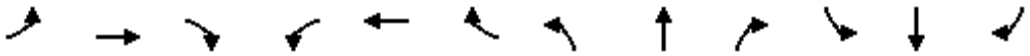
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	311	853	0	0	843	234	549	365	422	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	11	12	12	12	12	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0		6.0				
Lane Util. Factor	0.97	0.95			0.95	1.00		0.91				
Frpb, ped/bikes	1.00	1.00			1.00	0.98		1.00				
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00				
Frt	1.00	1.00			1.00	0.85		0.95				
Flt Protected	0.95	1.00			1.00	1.00		0.98				
Satd. Flow (prot)	2915	3138			3119	1449		4409				
Flt Permitted	0.16	1.00			1.00	1.00		0.98				
Satd. Flow (perm)	489	3138			3119	1449		4409				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	327	898	0	0	887	246	578	384	444	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	138	0	73	0	0	0	0
Lane Group Flow (vph)	327	898	0	0	887	108	0	1333	0	0	0	0
Confl. Peds. (#/hr)	4					4						
Heavy Vehicles (%)	10%	9%	0%	0%	6%	4%	4%	3%	5%	0%	0%	0%
Turn Type	pm+pt					Perm	Perm					
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8					
Actuated Green, G (s)	46.4	46.4			33.4	33.4		31.6				
Effective Green, g (s)	46.4	46.4			33.4	33.4		31.6				
Actuated g/C Ratio	0.52	0.52			0.37	0.37		0.35				
Clearance Time (s)	6.0	6.0			6.0	6.0		6.0				
Vehicle Extension (s)	3.5	7.0			7.0	7.0		5.0				
Lane Grp Cap (vph)	441	1618			1157	538		1548				
v/s Ratio Prot	0.06	c0.29			0.28							
v/s Ratio Perm	c0.32					0.07		0.30				
v/c Ratio	0.74	0.56			0.77	0.20		0.89dl				
Uniform Delay, d1	15.2	14.8			24.9	19.2		27.2				
Progression Factor	1.35	0.59			0.47	0.23		1.00				
Incremental Delay, d2	5.6	1.1			3.8	0.6		5.6				
Delay (s)	26.2	9.9			15.4	5.0		32.8				
Level of Service	C	A			B	A		C				
Approach Delay (s)		14.2			13.2			32.8			0.0	
Approach LOS		B			B			C			A	

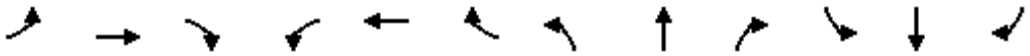
Intersection Summary			
HCM Average Control Delay	20.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	101.7%	ICU Level of Service	G
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	105	581	226	78	784	44	226	178	40	49	111	91
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	11	12	12	10	10	13	10	10	10
Total Lost time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.97		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1565	3061	1293	1603	3232		1447	3009		1544	2784	
Flt Permitted	0.20	1.00	1.00	0.34	1.00		0.51	1.00		0.61	1.00	
Satd. Flow (perm)	328	3061	1293	579	3232		780	3009		990	2784	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	111	612	238	82	825	46	238	187	42	52	117	96
RTOR Reduction (vph)	0	0	114	0	4	0	0	22	0	0	78	0
Lane Group Flow (vph)	111	612	124	82	867	0	238	207	0	52	135	0
Confl. Peds. (#/hr)	3		12	12		3	9		6	6		9
Heavy Vehicles (%)	2%	8%	5%	3%	5%	3%	10%	3%	2%	3%	7%	4%
Parking (#/hr)			0									
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	43.7	34.7	46.8	40.3	33.0		32.5	26.3		19.6	16.9	
Effective Green, g (s)	43.7	34.7	46.8	40.3	33.0		32.5	26.3		19.6	16.9	
Actuated g/C Ratio	0.49	0.39	0.52	0.45	0.37		0.36	0.29		0.22	0.19	
Clearance Time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0		3.0	7.0		3.0	7.0	
Lane Grp Cap (vph)	283	1180	672	342	1185		371	879		232	523	
v/s Ratio Prot	c0.04	0.20	0.02	0.02	c0.27		c0.09	0.07		0.01	0.05	
v/s Ratio Perm	0.15		0.07	0.09			c0.15			0.04		
v/c Ratio	0.39	0.52	0.18	0.24	0.73		0.64	0.24		0.22	0.26	
Uniform Delay, d1	25.0	21.2	11.5	19.5	24.7		22.1	24.2		28.5	31.2	
Progression Factor	0.89	0.54	0.43	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.1	1.2	0.1	0.4	4.0		3.8	0.5		0.5	0.9	
Delay (s)	25.2	12.7	5.0	19.9	28.7		25.8	24.7		29.0	32.1	
Level of Service	C	B	A	B	C		C	C		C	C	
Approach Delay (s)		12.2			27.9			25.3			31.5	
Approach LOS		B			C			C			C	

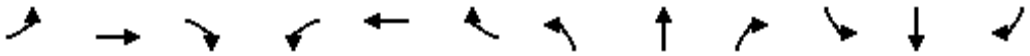
Intersection Summary			
HCM Average Control Delay	22.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.5
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	62	228	286	59	190	102	329	382	75	91	258	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	12	11	12	12	11	13	12	10	11	12
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.92		1.00	0.95		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1635	2871		1463	3032		1589	3245		1549	3135	
Flt Permitted	0.54	1.00		0.32	1.00		0.46	1.00		0.48	1.00	
Satd. Flow (perm)	924	2871		490	3032		772	3245		778	3135	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	65	240	301	62	200	107	346	402	79	96	272	57
RTOR Reduction (vph)	0	206	0	0	64	0	0	15	0	0	17	0
Lane Group Flow (vph)	65	335	0	62	243	0	346	466	0	96	312	0
Confl. Peds. (#/hr)	20					20	1		2	2		1
Heavy Vehicles (%)	4%	5%	6%	13%	6%	5%	4%	6%	5%	3%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	35.7	28.7		35.9	28.8		53.2	41.9		38.6	31.3	
Effective Green, g (s)	35.7	28.7		35.9	28.8		53.2	41.9		38.6	31.3	
Actuated g/C Ratio	0.34	0.27		0.34	0.27		0.51	0.40		0.37	0.30	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.5	7.0		3.5	7.0		3.5	7.0		3.5	7.0	
Lane Grp Cap (vph)	362	785		233	832		530	1295		340	935	
v/s Ratio Prot	0.01	c0.12		c0.02	0.08		c0.11	0.14		0.02	0.10	
v/s Ratio Perm	0.05			0.07			c0.22			0.08		
v/c Ratio	0.18	0.43		0.27	0.29		0.65	0.36		0.28	0.33	
Uniform Delay, d1	23.8	31.4		24.1	30.1		16.6	22.1		22.4	28.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	1.7		0.7	0.9		3.0	0.8		0.5	1.0	
Delay (s)	24.1	33.1		24.8	30.9		19.6	22.9		22.9	29.7	
Level of Service	C	C		C	C		B	C		C	C	
Approach Delay (s)		32.1			29.9			21.5			28.2	
Approach LOS		C			C			C			C	

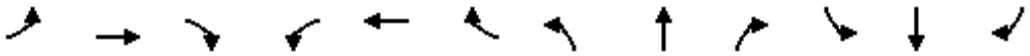
Intersection Summary			
HCM Average Control Delay	27.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	69.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	169	546	81	6	445	125	68	602	7	144	326	105
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	9	11	12	9	9	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.97		1.00	1.00		1.00	0.96	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		2912			2887		1437	3186		1451	2787	
Flt Permitted		0.60			0.95		0.33	1.00		0.25	1.00	
Satd. Flow (perm)		1766			2732		495	3186		389	2787	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	188	607	90	7	494	139	76	669	8	160	362	117
RTOR Reduction (vph)	0	12	0	0	34	0	0	1	0	0	42	0
Lane Group Flow (vph)	0	873	0	0	606	0	76	676	0	160	437	0
Confl. Peds. (#/hr)	9		11	11		9	11		14	14		11
Heavy Vehicles (%)	3%	6%	18%	50%	6%	6%	7%	3%	50%	6%	7%	2%
Turn Type	pm+pt			Perm			pm+pt			pm+pt		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		37.0			29.0		28.0	22.0		24.0	20.0	
Effective Green, g (s)		37.0			29.0		28.0	22.0		24.0	20.0	
Actuated g/C Ratio		0.49			0.39		0.37	0.29		0.32	0.27	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		932			1056		260	935		181	743	
v/s Ratio Prot		c0.05					c0.02	0.21		c0.05	0.16	
v/s Ratio Perm		c0.41			0.22		0.09			c0.24		
v/c Ratio		0.94			0.57		0.29	0.72		0.88	0.59	
Uniform Delay, d1		17.9			18.1		15.9	23.8		22.9	23.9	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		17.7			2.3		2.8	4.8		42.0	3.4	
Delay (s)		35.6			20.4		18.7	28.6		64.9	27.3	
Level of Service		D			C		B	C		E	C	
Approach Delay (s)		35.6			20.4			27.6			36.7	
Approach LOS		D			C			C			D	

Intersection Summary			
HCM Average Control Delay	30.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	81.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	52	225	48	73	159	13	38	661	93	10	378	45
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.99		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1666	1898		1615	1943		1658	3202		1138	3197	
Flt Permitted	0.65	1.00		0.52	1.00		0.50	1.00		0.30	1.00	
Satd. Flow (perm)	1132	1898		891	1943		870	3202		359	3197	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	54	232	49	75	164	13	39	681	96	10	390	46
RTOR Reduction (vph)	0	12	0	0	4	0	0	17	0	0	14	0
Lane Group Flow (vph)	54	269	0	75	173	0	39	760	0	10	422	0
Confl. Peds. (#/hr)	10		16	16		10	4		6	6		4
Confl. Bikes (#/hr)			4	4								
Heavy Vehicles (%)	2%	4%	5%	5%	4%	0%	3%	4%	8%	50%	5%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.48	0.48		0.48	0.48	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	418	701		329	717		415	1527		171	1525	
v/s Ratio Prot		c0.14			0.09			c0.24			0.13	
v/s Ratio Perm	0.05			0.08			0.04			0.03		
v/c Ratio	0.13	0.38		0.23	0.24		0.09	0.50		0.06	0.28	
Uniform Delay, d1	13.6	15.1		14.1	14.2		9.3	11.7		9.1	10.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.6	1.6		1.6	0.8		0.4	1.2		0.7	0.5	
Delay (s)	14.2	16.7		15.7	15.0		9.8	12.8		9.8	10.7	
Level of Service	B	B		B	B		A	B		A	B	
Approach Delay (s)		16.3			15.2			12.7			10.7	
Approach LOS		B			B			B			B	

Intersection Summary					
HCM Average Control Delay	13.2	HCM Level of Service		B	
HCM Volume to Capacity ratio	0.45				
Actuated Cycle Length (s)	65.0	Sum of lost time (s)		10.0	
Intersection Capacity Utilization	62.6%	ICU Level of Service		B	
Analysis Period (min)	15				

c Critical Lane Group



Movement	EBT	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR	SBR2
Lane Configurations												
Volume (vph)	631	194	621	17	3	14	3	47	22	0	2	4
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	12	12	16	12	12	16	12	12
Total Lost time (s)	5.0	4.0	5.0				4.0			4.0		
Lane Util. Factor	0.95	1.00	1.00				1.00			1.00		
Frpb, ped/bikes	1.00	1.00	1.00				1.00			0.99		
Flpb, ped/bikes	1.00	1.00	1.00				1.00			1.00		
Frt	1.00	1.00	1.00				0.91			0.97		
Flt Protected	1.00	0.95	1.00				0.99			0.96		
Satd. Flow (prot)	2956	1477	1580				1732			1897		
Flt Permitted	1.00	0.21	1.00				0.94			0.82		
Satd. Flow (perm)	2956	327	1580				1652			1622		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	664	204	654	18	3	15	3	49	23	0	2	4
RTOR Reduction (vph)	0	0	2	0	0	0	37	0	0	3	0	0
Lane Group Flow (vph)	664	204	670	0	0	0	33	0	0	26	0	0
Confl. Peds. (#/hr)		7		6		3					3	
Confl. Bikes (#/hr)		1										
Heavy Vehicles (%)	8%	8%	6%	0%	0%	8%	0%	5%	0%	0%	0%	0%
Turn Type		pm+pt			Perm	Perm			Perm			
Protected Phases	8	7	4				2			6		
Permitted Phases		4			2	2			6			
Actuated Green, G (s)	15.0	36.0	36.0				15.0			15.0		
Effective Green, g (s)	15.0	36.0	36.0				15.0			15.0		
Actuated g/C Ratio	0.25	0.60	0.60				0.25			0.25		
Clearance Time (s)	5.0	4.0	5.0				4.0			4.0		
Lane Grp Cap (vph)	739	522	948				413			406		
v/s Ratio Prot	c0.22	0.11	0.42									
v/s Ratio Perm		0.12					c0.02			0.02		
v/c Ratio	0.90	0.39	0.71				0.08			0.06		
Uniform Delay, d1	21.8	6.7	8.3				17.2			17.1		
Progression Factor	1.00	1.00	1.00				1.00			1.00		
Incremental Delay, d2	16.0	2.2	4.4				0.4			0.3		
Delay (s)	37.7	8.9	12.8				17.6			17.5		
Level of Service	D	A	B				B			B		
Approach Delay (s)	37.7		11.9				17.6			17.5		
Approach LOS	D		B				B			B		

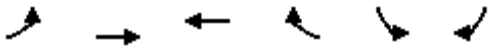
Intersection Summary			
HCM Average Control Delay	26.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	79.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



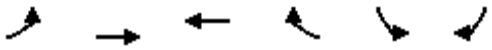
Movement	NER
Lane Configurations	
Volume (vph)	344
Ideal Flow (vphpl)	1800
Lane Width	12
Total Lost time (s)	4.0
Lane Util. Factor	1.00
Frpb, ped/bikes	1.00
Flpb, ped/bikes	1.00
Frt	0.86
Flt Protected	1.00
Satd. Flow (prot)	1428
Flt Permitted	1.00
Satd. Flow (perm)	1428
Peak-hour factor, PHF	0.95
Adj. Flow (vph)	362
RTOR Reduction (vph)	0
Lane Group Flow (vph)	362
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Heavy Vehicles (%)	9%
Turn Type	Over
Protected Phases	7
Permitted Phases	
Actuated Green, G (s)	17.0
Effective Green, g (s)	17.0
Actuated g/C Ratio	0.28
Clearance Time (s)	4.0
Lane Grp Cap (vph)	405
v/s Ratio Prot	c0.25
v/s Ratio Perm	
v/c Ratio	0.89
Uniform Delay, d1	20.6
Progression Factor	1.00
Incremental Delay, d2	24.7
Delay (s)	45.3
Level of Service	D
Approach Delay (s)	
Approach LOS	

Intersection Summary



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	194	917	678	81	101	156
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frt		1.00	0.98		1.00	0.85
Flt Protected		0.99	1.00		0.95	1.00
Satd. Flow (prot)		3229	3205		1629	1457
Flt Permitted		0.63	1.00		0.95	1.00
Satd. Flow (perm)		2062	3205		1629	1457
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	216	1019	753	90	112	173
RTOR Reduction (vph)	0	0	14	0	0	128
Lane Group Flow (vph)	0	1235	829	0	112	45
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		40.0	40.0		17.0	17.0
Effective Green, g (s)		40.0	40.0		17.0	17.0
Actuated g/C Ratio		0.62	0.62		0.26	0.26
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1269	1972		426	381
v/s Ratio Prot			0.26		c0.07	
v/s Ratio Perm		c0.60				0.03
v/c Ratio		0.97	0.42		0.26	0.12
Uniform Delay, d1		12.0	6.5		19.0	18.3
Progression Factor		1.00	0.66		0.92	0.91
Incremental Delay, d2		19.6	0.6		1.5	0.6
Delay (s)		31.6	4.9		19.1	17.3
Level of Service		C	A		B	B
Approach Delay (s)		31.6	4.9		18.0	
Approach LOS		C	A		B	

Intersection Summary			
HCM Average Control Delay	20.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	71.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	53	938	697	217	174	56
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	12	10	11	12	10	10
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frpb, ped/bikes		1.00	0.99		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.96		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2928	2912		1464	1373
Flt Permitted		0.86	1.00		0.95	1.00
Satd. Flow (perm)		2514	2912		1464	1373
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	56	987	734	228	183	59
RTOR Reduction (vph)	0	0	45	0	0	42
Lane Group Flow (vph)	0	1043	917	0	183	17
Confl. Peds. (#/hr)	1			1		
Confl. Bikes (#/hr)	1			1		
Heavy Vehicles (%)	4%	9%	8%	12%	9%	4%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		38.0	38.0		19.0	19.0
Effective Green, g (s)		38.0	38.0		19.0	19.0
Actuated g/C Ratio		0.58	0.58		0.29	0.29
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1470	1702		428	401
v/s Ratio Prot			0.31		c0.12	
v/s Ratio Perm		c0.41				0.01
v/c Ratio		0.71	0.54		0.43	0.04
Uniform Delay, d1		9.6	8.2		18.6	16.5
Progression Factor		0.89	1.00		1.12	1.82
Incremental Delay, d2		1.2	1.2		3.0	0.2
Delay (s)		9.7	9.4		23.9	30.2
Level of Service		A	A		C	C
Approach Delay (s)		9.7	9.4		25.4	
Approach LOS		A	A		C	

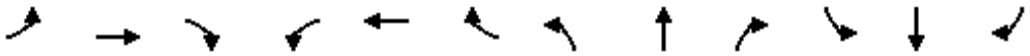
Intersection Summary			
HCM Average Control Delay	11.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	76.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



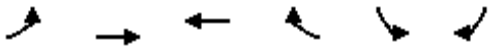
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	964	160	167	672	423	323
Ideal Flow (vphpl)	2300	1800	1800	2300	1800	1800
Lane Width	15	12	14	16	15	12
Total Lost time (s)	5.0		3.0	5.0	5.0	5.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.98		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	2239		1771	2436	1844	1469
Flt Permitted	1.00		0.08	1.00	0.95	1.00
Satd. Flow (perm)	2239		149	2436	1844	1469
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	984	163	170	686	432	330
RTOR Reduction (vph)	7	0	0	0	0	147
Lane Group Flow (vph)	1140	0	170	686	432	183
Confl. Peds. (#/hr)		4	4			8
Heavy Vehicles (%)	11%	7%	3%	7%	2%	2%
Turn Type			pm+pt			Perm
Protected Phases	4		3	8	2	
Permitted Phases			8			2
Actuated Green, G (s)	47.0		56.0	56.0	24.0	24.0
Effective Green, g (s)	47.0		56.0	56.0	24.0	24.0
Actuated g/C Ratio	0.52		0.62	0.62	0.27	0.27
Clearance Time (s)	5.0		3.0	5.0	5.0	5.0
Lane Grp Cap (vph)	1169		201	1516	492	392
v/s Ratio Prot	c0.51		c0.06	0.28	c0.23	
v/s Ratio Perm			0.47			0.12
v/c Ratio	0.98		0.85	0.45	0.88	0.47
Uniform Delay, d1	20.9		22.6	8.9	31.6	27.6
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	21.1		33.2	1.0	19.4	3.9
Delay (s)	42.0		55.8	9.9	51.0	31.6
Level of Service	D		E	A	D	C
Approach Delay (s)	42.0			19.0	42.6	
Approach LOS	D			B	D	

Intersection Summary			
HCM Average Control Delay	35.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	96.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	725	89	258	1167	9	72	0	187	1	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	15	13	11	11	12	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0	4.0	3.0	3.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00		0.95	
Satd. Flow (prot)	1881	3213	1422	1589	3138	1366		1642	1443		969	
Flt Permitted	0.21	1.00	1.00	0.27	1.00	1.00		0.76	1.00		0.70	
Satd. Flow (perm)	422	3213	1422	448	3138	1366		1309	1443		719	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	806	99	287	1297	10	80	0	208	1	0	0
RTOR Reduction (vph)	0	0	46	0	0	2	0	0	182	0	0	0
Lane Group Flow (vph)	1	806	53	287	1297	8	0	80	26	0	1	0
Heavy Vehicles (%)	0%	10%	4%	4%	9%	12%	18%	0%	6%	100%	0%	0%
Turn Type	Perm		Perm	custom		custom	Perm		Perm	Perm		
Protected Phases		4		3	3 8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)	45.6	45.6	45.6	66.4	66.4	66.4		10.6	10.6		10.6	
Effective Green, g (s)	45.6	45.6	45.6	66.4	66.4	66.4		10.6	10.6		10.6	
Actuated g/C Ratio	0.54	0.54	0.54	0.78	0.78	0.78		0.12	0.12		0.12	
Clearance Time (s)	4.0	4.0	4.0	3.0		4.0		4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0		3.0	
Lane Grp Cap (vph)	226	1724	763	589	2451	1067		163	180		90	
v/s Ratio Prot		0.25		0.10	c0.41							
v/s Ratio Perm	0.00		0.04	0.28		0.01		c0.06	0.02		0.00	
v/c Ratio	0.00	0.47	0.07	0.49	0.53	0.01		0.49	0.14		0.01	
Uniform Delay, d1	9.2	12.2	9.5	3.9	3.5	2.0		34.7	33.2		32.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	0.0	0.9	0.2	0.6	0.2	0.0		2.3	0.4		0.0	
Delay (s)	9.2	13.1	9.7	4.6	3.7	2.1		37.0	33.5		32.7	
Level of Service	A	B	A	A	A	A		D	C		C	
Approach Delay (s)		12.7			3.8			34.5			32.7	
Approach LOS		B			A			C			C	

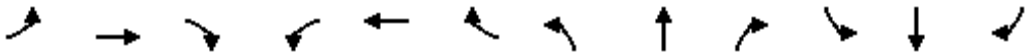
Intersection Summary			
HCM Average Control Delay	9.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	52.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	13	820	856	45	24	11
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	12	10	10
Total Lost time (s)		5.0	5.0		3.0	
Lane Util. Factor		0.95	0.95		1.00	
Frt		1.00	0.99		0.96	
Flt Protected		1.00	1.00		0.97	
Satd. Flow (prot)		3038	3017		1482	
Flt Permitted		0.93	1.00		0.97	
Satd. Flow (perm)		2834	3017		1482	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	14	911	951	50	27	12
RTOR Reduction (vph)	0	0	4	0	11	0
Lane Group Flow (vph)	0	925	997	0	28	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type	Perm					
Protected Phases		4	8 2 11		5	
Permitted Phases	4					
Actuated Green, G (s)		33.0	66.0		7.0	
Effective Green, g (s)		33.0	66.0		7.0	
Actuated g/C Ratio		0.37	0.73		0.08	
Clearance Time (s)		5.0			3.0	
Lane Grp Cap (vph)		1039	2212		115	
v/s Ratio Prot			c0.33		c0.02	
v/s Ratio Perm		c0.33				
v/c Ratio		0.89	0.45		0.24	
Uniform Delay, d1		26.8	4.8		39.0	
Progression Factor		1.00	0.00		1.00	
Incremental Delay, d2		11.4	0.2		4.9	
Delay (s)		38.2	0.2		44.0	
Level of Service		D	A		D	
Approach Delay (s)		38.2	0.2		44.0	
Approach LOS		D	A		D	

Intersection Summary			
HCM Average Control Delay	19.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	23.0
Intersection Capacity Utilization	44.5%	ICU Level of Service	A
Analysis Period (min)	15		

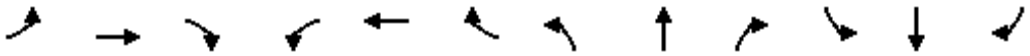
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	88	435	1	27	584	80	0	0	1	45	3	128
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12	12	11	12	11
Total Lost time (s)		4.0			4.0			3.0			3.0	3.0
Lane Util. Factor		1.00			0.95			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			0.92			1.00	0.96
Flpb, ped/bikes		1.00			1.00			1.00			0.98	1.00
Frt		1.00			0.98			0.86			1.00	0.85
Flt Protected		0.99			1.00			1.00			0.95	1.00
Satd. Flow (prot)		1728			3233			1427			1606	1277
Flt Permitted		0.77			0.92			1.00			0.90	1.00
Satd. Flow (perm)		1345			2996			1427			1513	1277
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	98	483	1	30	649	89	0	0	1	50	3	142
RTOR Reduction (vph)	0	0	0	0	11	0	0	1	0	0	0	101
Lane Group Flow (vph)	0	582	0	0	757	0	0	0	0	0	53	41
Confl. Peds. (#/hr)	33		13	13		33	29		13	13		29
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	4%	3%	0%	0%	4%	0%	0%	0%	0%	5%	0%	11%
Turn Type	Perm			Prot			Perm			pm+pt		Perm
Protected Phases		4		3	3 4			1		2	1 2	
Permitted Phases	4				3		1	1		1 2		1 2
Actuated Green, G (s)		44.0			52.0			9.0			23.0	26.0
Effective Green, g (s)		44.0			52.0			9.0			23.0	26.0
Actuated g/C Ratio		0.49			0.58			0.10			0.26	0.29
Clearance Time (s)		4.0						3.0				
Lane Grp Cap (vph)		658			1752			143			401	369
v/s Ratio Prot					c0.04			0.00			c0.02	
v/s Ratio Perm		c0.43			0.21						c0.01	0.03
v/c Ratio		0.88			0.43			0.00			0.13	0.11
Uniform Delay, d1		20.7			10.7			36.5			25.8	23.5
Progression Factor		1.00			0.92			1.00			1.00	1.00
Incremental Delay, d2		16.0			0.2			0.0			0.7	0.6
Delay (s)		36.7			10.1			36.5			26.5	24.1
Level of Service		D			B			D			C	C
Approach Delay (s)		36.7			10.1			36.5			24.8	
Approach LOS		D			B			D			C	

Intersection Summary			
HCM Average Control Delay	22.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	73.6%	ICU Level of Service	D
Analysis Period (min)	15		

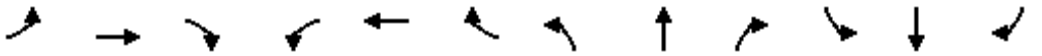
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	598	28	35	1014	58	36	29	48	23	24	87
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	16	10	10	16	8	15	8	8	14	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			0.98	
Flpb, ped/bikes	0.98	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.99			0.94			0.91	
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.99	
Satd. Flow (prot)	1557	3022		1587	3021			1808			1703	
Flt Permitted	0.17	1.00		0.36	1.00			0.89			0.95	
Satd. Flow (perm)	277	3022		604	3021			1636			1627	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	41	629	29	37	1067	61	38	31	51	24	25	92
RTOR Reduction (vph)	0	5	0	0	6	0	0	33	0	0	21	0
Lane Group Flow (vph)	41	653	0	37	1122	0	0	87	0	0	120	0
Confl. Peds. (#/hr)	145		16	16		145	17		19	19		17
Confl. Bikes (#/hr)	5					5			2	2		
Heavy Vehicles (%)	0%	5%	0%	0%	4%	2%	0%	0%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			22.0			22.0	
Effective Green, g (s)	34.0	34.0		34.0	34.0			23.0			23.0	
Actuated g/C Ratio	0.52	0.52		0.52	0.52			0.35			0.35	
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0			5.0	
Lane Grp Cap (vph)	145	1581		316	1580			579			576	
v/s Ratio Prot		0.22			c0.37							
v/s Ratio Perm	0.15			0.06				0.05			c0.07	
v/c Ratio	0.28	0.41		0.12	0.71			0.15			0.21	
Uniform Delay, d1	8.7	9.4		7.9	11.8			14.3			14.6	
Progression Factor	1.00	1.00		0.69	1.41			1.00			1.00	
Incremental Delay, d2	4.8	0.8		0.7	2.4			0.5			0.8	
Delay (s)	13.5	10.2		6.1	19.1			14.9			15.5	
Level of Service	B	B		A	B			B			B	
Approach Delay (s)		10.4			18.7			14.9			15.5	
Approach LOS		B			B			B			B	

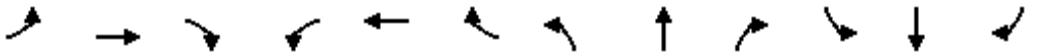
Intersection Summary			
HCM Average Control Delay	15.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	789	5	32	637	56	0	0	0	586	89	379
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00				0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.67				1.00	1.00	0.98
Flpb, ped/bikes	0.93	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	793	3379		1710	3226	514				3285	1731	1481
Flt Permitted	0.40	1.00		0.14	1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	331	3379		248	3226	514				3285	1731	1481
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	26	831	5	34	671	59	0	0	0	617	94	399
RTOR Reduction (vph)	0	0	0	0	0	26	0	0	0	0	0	166
Lane Group Flow (vph)	26	836	0	34	671	33	0	0	0	617	94	233
Confl. Peds. (#/hr)	350		4	4		350	8		6	6		8
Confl. Bikes (#/hr)	7		1	1		7						
Heavy Vehicles (%)	100%	1%	20%	0%	6%	100%	0%	0%	0%	1%	4%	1%
Turn Type	pm+pt			pm+pt		Perm				Split		Perm
Protected Phases	7	4		3	8					6	6	
Permitted Phases	4			8		8						6
Actuated Green, G (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Effective Green, g (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Actuated g/C Ratio	0.33	0.33		0.56	0.56	0.56				0.23	0.23	0.23
Clearance Time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Grp Cap (vph)	159	1118		634	1812	289				758	399	342
v/s Ratio Prot	0.02	c0.25		0.02	c0.21					c0.19	0.05	
v/s Ratio Perm	0.04			0.01		0.06						0.16
v/c Ratio	0.16	0.75		0.05	0.37	0.11				0.81	0.24	0.68
Uniform Delay, d1	31.6	38.7		15.2	15.8	13.4				47.4	40.7	45.6
Progression Factor	0.85	0.86		0.32	0.75	1.68				1.00	1.00	1.00
Incremental Delay, d2	2.1	4.4		0.1	0.4	0.5				9.3	1.4	10.5
Delay (s)	28.9	37.5		5.0	12.1	22.9				56.7	42.1	56.1
Level of Service	C	D		A	B	C				E	D	E
Approach Delay (s)		37.3			12.6			0.0			55.2	
Approach LOS		D			B			A			E	

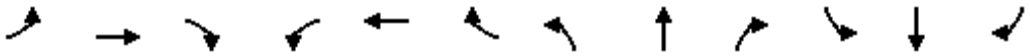
Intersection Summary			
HCM Average Control Delay	37.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	53.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	340	815	220	54	593	287	102	251	55	54	0	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.67		1.00	0.91	1.00		0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.97		1.00	1.00	0.85		1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (prot)	3285	3262		1710	3138	1018		3301	1363	855		738
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (perm)	3285	3262		1710	3138	1018		3301	1363	855		738
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	358	858	232	57	624	302	107	264	58	57	0	32
RTOR Reduction (vph)	0	19	0	0	0	228	0	0	41	0	0	30
Lane Group Flow (vph)	358	1071	0	57	624	74	0	371	17	57	0	2
Confl. Peds. (#/hr)	327		13	13		327	6		60	60		6
Confl. Bikes (#/hr)	6					6						
Heavy Vehicles (%)	1%	1%	0%	0%	9%	1%	0%	3%	2%	100%	0%	100%
Turn Type	Prot			Prot		Perm	Split		Perm	Prot		custom
Protected Phases	7	4		3	8		2	2		6		
Permitted Phases						8			2			6
Actuated Green, G (s)	41.0	65.0		8.0	32.0	32.0		29.0	29.0	10.0		10.0
Effective Green, g (s)	41.0	65.0		8.0	32.0	32.0		29.0	29.0	10.0		10.0
Actuated g/C Ratio	0.32	0.50		0.06	0.25	0.25		0.22	0.22	0.08		0.08
Clearance Time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	1036	1631		105	772	251		736	304	66		57
v/s Ratio Prot	0.11	c0.33		0.03	c0.20			c0.11		c0.07		
v/s Ratio Perm						0.07			0.01			0.00
v/c Ratio	0.35	0.66		0.54	0.81	0.30		0.50	0.06	0.86		0.04
Uniform Delay, d1	34.2	24.2		59.2	46.1	39.8		44.2	39.7	59.3		55.6
Progression Factor	0.94	0.18		1.00	1.00	1.00		0.95	0.99	1.00		1.00
Incremental Delay, d2	0.6	1.3		18.7	8.9	3.0		2.5	0.3	65.1		0.3
Delay (s)	32.7	5.7		77.9	55.0	42.8		44.3	39.7	124.4		55.9
Level of Service	C	A		E	E	D		D	D	F		E
Approach Delay (s)		12.4			52.6			43.7			99.8	
Approach LOS		B			D			D			F	

Intersection Summary			
HCM Average Control Delay	33.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	68.3%	ICU Level of Service	C
Analysis Period (min)	15		

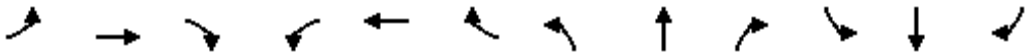
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	893	181	105	839	0	89	0	103	9	18	7
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	11	11	8	12	12	12	14	15	12
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes		0.99		1.00	1.00		1.00		0.98	1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00		0.97		1.00	0.99	1.00	
Frt		0.97		1.00	1.00		1.00		0.85	1.00	0.96	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		2987		1649	3149		1388		1451	1803	1870	
Flt Permitted		1.00		0.17	1.00		0.74		1.00	0.95	1.00	
Satd. Flow (perm)		2987		291	3149		1079		1451	1803	1870	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	992	201	117	932	0	99	0	114	10	20	8
RTOR Reduction (vph)	0	17	0	0	0	0	0	0	77	0	5	0
Lane Group Flow (vph)	0	1176	0	117	932	0	99	0	37	10	23	0
Confl. Peds. (#/hr)	67		19	19		67	38		12	12		38
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	2%	11%	0%	5%	0%	19%	0%	3%	0%	0%	0%
Turn Type				Perm			custom		custom	Perm		
Protected Phases		4			8						6	
Permitted Phases				8			2		2	6		
Actuated Green, G (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Effective Green, g (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Actuated g/C Ratio		0.60		0.60	0.60		0.32		0.32	0.32	0.32	
Clearance Time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)		1792		175	1889		345		464	577	598	
v/s Ratio Prot		0.39			0.30						0.01	
v/s Ratio Perm				c0.40			c0.09		0.03	0.01		
v/c Ratio		0.66		0.67	0.49		0.29		0.08	0.02	0.04	
Uniform Delay, d1		13.2		13.4	11.4		25.5		23.7	23.2	23.4	
Progression Factor		1.00		1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		1.9		18.5	0.9		2.1		0.3	0.1	0.1	
Delay (s)		15.1		31.8	12.3		27.5		24.1	23.3	23.5	
Level of Service		B		C	B		C		C	C	C	
Approach Delay (s)		15.1			14.5			25.7			23.5	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	15.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		

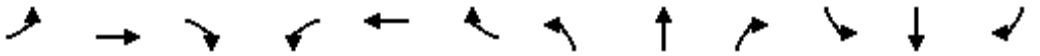
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	300	0	1230	211	670	0	0	789	490
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	12	10	10	12	12	11	12
Total Lost time (s)				4.0		5.0	3.0	4.0			4.0	
Lane Util. Factor				0.95		1.00	1.00	0.91			0.91	
Frpb, ped/bikes				1.00		1.00	1.00	1.00			0.98	
Flpb, ped/bikes				1.00		1.00	1.00	1.00			1.00	
Frt				1.00		0.85	1.00	1.00			0.94	
Flt Protected				0.95		1.00	0.95	1.00			1.00	
Satd. Flow (prot)				1540		1530	1535	4327			4270	
Flt Permitted				0.95		1.00	0.95	1.00			1.00	
Satd. Flow (perm)				1540		1530	1535	4327			4270	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	306	0	1255	215	684	0	0	805	500
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	306	0	1255	215	684	0	0	1305	0
Confl. Peds. (#/hr)	2					2	18		3	3		18
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%	4%	6%	0%	0%	4%	1%
Turn Type				Split		Prot	Prot					
Protected Phases				8	8	8	5	2			6	
Permitted Phases												
Actuated Green, G (s)				30.0		30.0	32.0	66.0			31.0	
Effective Green, g (s)				31.0		30.0	32.0	66.0			31.0	
Actuated g/C Ratio				0.30		0.29	0.30	0.63			0.30	
Clearance Time (s)				5.0		5.0	3.0	4.0			4.0	
Lane Grp Cap (vph)				455		437	468	2720			1261	
v/s Ratio Prot				0.20		c0.82	c0.14	0.16			c0.31	
v/s Ratio Perm												
v/c Ratio				0.67		2.87	0.46	0.25			1.16dr	
Uniform Delay, d1				32.5		37.5	29.5	8.6			37.0	
Progression Factor				1.00		1.00	0.64	2.09			1.00	
Incremental Delay, d2				7.7		848.6	2.7	0.2			34.8	
Delay (s)				40.3		886.1	21.6	18.2			71.8	
Level of Service				D		F	C	B			E	
Approach Delay (s)		0.0			720.3			19.0			71.8	
Approach LOS		A			F			B			E	

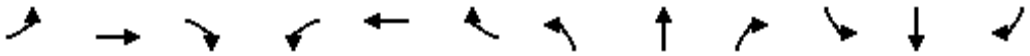
Intersection Summary			
HCM Average Control Delay	328.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.43		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	101.8%	ICU Level of Service	G
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	322	770	145	0	0	0	0	559	408	359	730	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	13	12	12	12	12	12	10	10	8	12	12	12
Total Lost time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Util. Factor	0.91	0.91						0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00						1.00	1.00	1.00	1.00	
Flpb, ped/bikes	0.99	1.00						1.00	1.00	1.00	1.00	
Frt	1.00	0.98						1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1509	3157						4368	2244	1598	4680	
Flt Permitted	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1509	3157						4368	2244	1598	4680	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	332	794	149	0	0	0	0	576	421	370	753	0
RTOR Reduction (vph)	0	14	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	299	962	0	0	0	0	0	576	421	370	753	0
Confl. Peds. (#/hr)	6		1	1		6	6					6
Heavy Vehicles (%)	6%	1%	0%	0%	0%	0%	0%	5%	4%	7%	5%	0%
Turn Type	Perm								Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Actuated Green, G (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Effective Green, g (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Actuated g/C Ratio	0.32	0.32						0.27	0.27	0.30	0.59	
Clearance Time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Grp Cap (vph)	489	1022						1165	598	472	2763	
v/s Ratio Prot								0.13		c0.23	0.16	
v/s Ratio Perm	0.20	0.30							c0.19			
v/c Ratio	0.61	0.94						0.49	0.70	0.78	0.27	
Uniform Delay, d1	29.9	34.5						32.5	34.8	33.9	10.5	
Progression Factor	1.00	1.00						1.17	1.17	0.86	0.22	
Incremental Delay, d2	5.6	17.2						1.3	5.8	4.9	0.1	
Delay (s)	35.5	51.7						39.4	46.4	34.1	2.4	
Level of Service	D	D						D	D	C	A	
Approach Delay (s)		47.9			0.0			42.3			12.9	
Approach LOS		D			A			D			B	

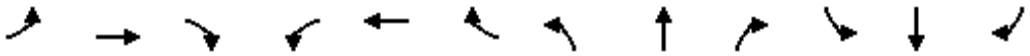
Intersection Summary			
HCM Average Control Delay	34.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	101.8%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	290	25	24	11	158	0	0	147	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	14	12	12	16	12
Total Lost time (s)				4.0	4.0		4.0	4.0			-3.0	
Lane Util. Factor				1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes				1.00	0.99		1.00	1.00			1.00	
Flpb, ped/bikes				1.00	1.00		1.00	1.00			1.00	
Frt				1.00	0.93		1.00	1.00			1.00	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1688	3132		1710	1846			1955	
Flt Permitted				0.95	1.00		0.54	1.00			1.00	
Satd. Flow (perm)				1688	3132		979	1846			1955	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	322	28	27	12	176	0	0	163	6
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	322	37	0	12	176	0	0	168	0
Confl. Peds. (#/hr)	2		2	2		2			6	6		
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	0%	4%	0%	0%	4%	0%
Turn Type				Perm			pm+pt					
Protected Phases					8		7	2			6	
Permitted Phases				8			2					
Actuated Green, G (s)				27.0	27.0		50.0	50.0			40.0	
Effective Green, g (s)				27.0	27.0		50.0	50.0			46.0	
Actuated g/C Ratio				0.32	0.32		0.59	0.59			0.54	
Clearance Time (s)				4.0	4.0		4.0	4.0			3.0	
Lane Grp Cap (vph)				536	995		636	1086			1058	
v/s Ratio Prot					0.01		0.00	c0.10			0.09	
v/s Ratio Perm				c0.19			0.01					
v/c Ratio				0.60	0.04		0.02	0.16			0.16	
Uniform Delay, d1				24.5	20.0		10.5	8.0			9.8	
Progression Factor				1.00	1.00		1.04	1.18			1.00	
Incremental Delay, d2				4.9	0.1		0.1	0.3			0.3	
Delay (s)				29.4	20.1		11.0	9.7			10.1	
Level of Service				C	C		B	A			B	
Approach Delay (s)		0.0			28.0			9.8			10.1	
Approach LOS		A			C			A			B	

Intersection Summary			
HCM Average Control Delay	19.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	37.0%	ICU Level of Service	A
Analysis Period (min)	15		

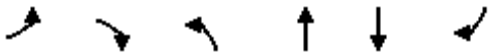
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	12	11	23	5	0	14	0	143	41	46	391	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	16	15	12	8	12	8	12	12	12	10	13	12
Total Lost time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.97			0.98			0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00			1.00		1.00	1.00	
Frt	1.00	0.90			0.90			0.97		1.00	1.00	
Flt Protected	0.95	1.00			0.99			1.00		0.95	1.00	
Satd. Flow (prot)	1935	1735			1565			1720		1590	1860	
Flt Permitted	0.74	1.00			0.97			1.00		0.60	1.00	
Satd. Flow (perm)	1516	1735			1531			1720		1004	1860	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	13	12	24	5	0	15	0	151	43	48	412	0
RTOR Reduction (vph)	0	16	0	0	10	0	0	12	0	0	0	0
Lane Group Flow (vph)	13	20	0	0	10	0	0	182	0	48	412	0
Confl. Peds. (#/hr)	1		11	11		1	1		10	10		1
Confl. Bikes (#/hr)			2	2			1		2	2		1
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Turn Type	Perm			Perm						pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Effective Green, g (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Actuated g/C Ratio	0.32	0.32			0.32			0.47		0.59	0.59	
Clearance Time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Grp Cap (vph)	482	551			486			809		639	1094	
v/s Ratio Prot		c0.01						0.11		0.01	c0.22	
v/s Ratio Perm	0.01				0.01					0.04		
v/c Ratio	0.03	0.04			0.02			0.22		0.08	0.38	
Uniform Delay, d1	20.0	20.0			19.9			13.3		8.6	9.3	
Progression Factor	1.00	1.00			1.00			1.00		0.97	0.86	
Incremental Delay, d2	0.1	0.1			0.1			0.6		0.2	0.9	
Delay (s)	20.1	20.1			20.0			14.0		8.5	8.9	
Level of Service	C	C			B			B		A	A	
Approach Delay (s)		20.1			20.0			14.0			8.8	
Approach LOS		C			B			B			A	

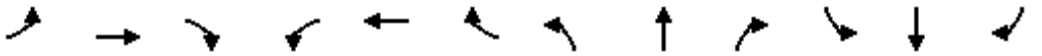
Intersection Summary			
HCM Average Control Delay	11.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	41.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



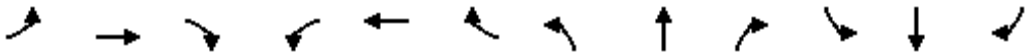
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	48	43	16	193	288	28
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	14	12	13	12	10	12
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.94		1.00	1.00	0.99	
Flt Protected	0.97		0.95	1.00	1.00	
Satd. Flow (prot)	1751		1765	1782	1657	
Flt Permitted	0.97		0.50	1.00	1.00	
Satd. Flow (perm)	1751		937	1782	1657	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	53	48	18	214	320	31
RTOR Reduction (vph)	32	0	0	0	5	0
Lane Group Flow (vph)	69	0	18	214	346	0
Confl. Peds. (#/hr)			2			2
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.0		36.0	36.0	36.0	
Effective Green, g (s)	21.0		36.0	36.0	36.0	
Actuated g/C Ratio	0.32		0.55	0.55	0.55	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	566		519	987	918	
v/s Ratio Prot	c0.04			0.12	c0.21	
v/s Ratio Perm			0.02			
v/c Ratio	0.12		0.03	0.22	0.38	
Uniform Delay, d1	15.5		6.6	7.4	8.2	
Progression Factor	1.00		0.56	0.66	1.40	
Incremental Delay, d2	0.4		0.1	0.5	1.0	
Delay (s)	15.9		3.8	5.4	12.4	
Level of Service	B		A	A	B	
Approach Delay (s)	15.9			5.2	12.4	
Approach LOS	B			A	B	

Intersection Summary			
HCM Average Control Delay	10.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	30.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



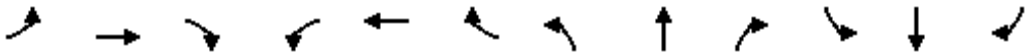
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	31	268	9	258	161	4	0	301	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	14	16	12	12	15	12	12	13	10
Total Lost time (s)					4.0		4.0	4.0			3.0	3.0
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Frt					1.00		1.00	1.00			1.00	0.85
Flt Protected					1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3772		1693	1677			1738	1428
Flt Permitted					1.00		0.45	1.00			1.00	1.00
Satd. Flow (perm)					3772		809	1677			1738	1428
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	34	298	10	287	179	4	0	334	19
RTOR Reduction (vph)	0	0	0	0	3	0	0	1	0	0	0	11
Lane Group Flow (vph)	0	0	0	0	339	0	287	182	0	0	334	8
Confl. Peds. (#/hr)	1					1			5	5		
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	1%	18%	0%	0%	7%	0%
Turn Type				Split			pm+pt					Perm
Protected Phases				8	8		7	2			6	
Permitted Phases							2					6
Actuated Green, G (s)					26.0		51.0	51.0			38.0	38.0
Effective Green, g (s)					26.0		51.0	51.0			38.0	38.0
Actuated g/C Ratio					0.31		0.60	0.60			0.45	0.45
Clearance Time (s)					4.0		4.0	4.0			3.0	3.0
Lane Grp Cap (vph)					1154		589	1006			777	638
v/s Ratio Prot					c0.09		c0.06	0.11			0.19	
v/s Ratio Perm							c0.23					0.01
v/c Ratio					0.29		0.49	0.18			0.43	0.01
Uniform Delay, d1					22.5		14.4	7.6			16.1	13.1
Progression Factor					1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2					0.6		2.9	0.4			1.7	0.0
Delay (s)					23.1		17.2	8.0			17.8	13.1
Level of Service					C		B	A			B	B
Approach Delay (s)		0.0			23.1			13.7			17.6	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM Average Control Delay	17.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	96	94	38	133	217	30	59	704	44
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	15	12	12	12	12	12	13	12
Total Lost time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.98		1.00	0.98		1.00	0.99	
Flt Protected					0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1896		1710	3290		1707	3467	
Flt Permitted					0.98		0.25	1.00		0.58	1.00	
Satd. Flow (perm)					1896		446	3290		1048	3467	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	107	104	42	148	241	33	66	782	49
RTOR Reduction (vph)	0	0	0	0	10	0	0	14	0	0	6	0
Lane Group Flow (vph)	0	0	0	0	243	0	148	260	0	66	825	0
Confl. Peds. (#/hr)							5		5	5		5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	1%	0%
Turn Type				Split			pm+pt			pm+pt		
Protected Phases				8	8		5	2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)					23.0		41.0	34.0		41.0	34.0	
Effective Green, g (s)					23.0		41.0	34.0		41.0	34.0	
Actuated g/C Ratio					0.31		0.55	0.45		0.55	0.45	
Clearance Time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Grp Cap (vph)					581		362	1491		634	1572	
v/s Ratio Prot					c0.13		c0.04	0.08		0.01	c0.24	
v/s Ratio Perm							0.19			0.05		
v/c Ratio					0.42		0.41	0.17		0.10	0.52	
Uniform Delay, d1					20.7		16.4	12.2		8.2	14.7	
Progression Factor					1.00		0.83	0.82		1.00	1.00	
Incremental Delay, d2					2.2		3.4	0.3		0.3	1.3	
Delay (s)					22.9		17.0	10.3		8.6	16.0	
Level of Service					C		B	B		A	B	
Approach Delay (s)		0.0			22.9			12.6			15.4	
Approach LOS		A			C			B			B	

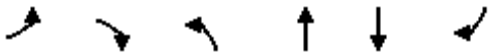
Intersection Summary			
HCM Average Control Delay	15.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	53.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	32	49	13	9	63	63	7	285	24	159	591	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	16	12	12	10	11	12	12	11	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.94		1.00	0.99		1.00	0.99	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1964			1655		1595	3174		1704	3231	
Flt Permitted		0.89			0.99		0.36	1.00		0.56	1.00	
Satd. Flow (perm)		1775			1637		598	3174		996	3231	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	34	52	14	9	66	66	7	300	25	167	622	53
RTOR Reduction (vph)	0	8	0	0	42	0	0	8	0	0	8	0
Lane Group Flow (vph)	0	92	0	0	99	0	7	317	0	167	667	0
Confl. Peds. (#/hr)	2					2	1		6	6		1
Confl. Bikes (#/hr)			1	1			3					3
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	0%	3%	0%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Effective Green, g (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Actuated g/C Ratio		0.33			0.33		0.56	0.56		0.56	0.56	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		592			546		335	1777		558	1809	
v/s Ratio Prot								0.10			c0.21	
v/s Ratio Perm		0.05			c0.06		0.01			0.17		
v/c Ratio		0.16			0.18		0.02	0.18		0.30	0.37	
Uniform Delay, d1		17.6			17.7		7.3	8.1		8.7	9.1	
Progression Factor		1.00			1.00		1.00	1.00		0.27	0.25	
Incremental Delay, d2		0.6			0.7		0.1	0.2		1.2	0.5	
Delay (s)		18.1			18.5		7.5	8.3		3.6	2.8	
Level of Service		B			B		A	A		A	A	
Approach Delay (s)		18.1			18.5			8.3			3.0	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	6.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	48.4%	ICU Level of Service	A
Analysis Period (min)	15		

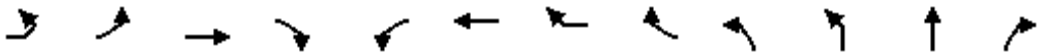
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	37	192	67	261	589	81
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	41	213	74	290	654	90

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	254	171	193	436	308
Volume Left (vph)	41	74	0	0	0
Volume Right (vph)	213	0	0	0	90
Hadj (s)	-0.42	0.27	0.05	0.05	-0.15
Departure Headway (s)	5.8	6.6	6.3	5.9	5.7
Degree Utilization, x	0.41	0.31	0.34	0.71	0.49
Capacity (veh/h)	589	528	546	601	620
Control Delay (s)	12.7	11.3	11.4	21.0	12.8
Approach Delay (s)	12.7	11.3		17.6	
Approach LOS	B	B		C	

Intersection Summary			
Delay	15.0		
HCM Level of Service	C		
Intersection Capacity Utilization	54.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	32	35	373	18	20	393	70	78	55	68	354	32
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	0.95	
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.93			1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Frt		1.00	1.00	0.85	1.00	1.00	0.85			1.00	0.99	
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	
Satd. Flow (prot)		1611	1731	1530	1710	1731	1421			1710	3251	
Flt Permitted		0.14	1.00	1.00	0.52	1.00	1.00			0.14	1.00	
Satd. Flow (perm)		238	1731	1530	936	1731	1421			257	3251	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	36	39	414	20	22	437	78	87	61	76	393	36
RTOR Reduction (vph)	0	0	0	12	0	0	38	0	0	0	7	0
Lane Group Flow (vph)	0	75	414	8	22	437	127	0	0	137	422	0
Confl. Peds. (#/hr)		25					25					3
Heavy Vehicles (%)	6%	6%	4%	0%	0%	4%	0%	0%	0%	0%	4%	0%
Turn Type	Perm	pm+pt		Perm	Perm		Perm		Perm	Perm		
Protected Phases		7	4			8					2	
Permitted Phases	4	4		4	8		8		2	2		
Actuated Green, G (s)		44.0	44.0	44.0	25.0	25.0	25.0			28.0	28.0	
Effective Green, g (s)		44.0	44.0	44.0	25.0	25.0	25.0			28.0	28.0	
Actuated g/C Ratio		0.42	0.42	0.42	0.24	0.24	0.24			0.27	0.27	
Clearance Time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Grp Cap (vph)		302	725	641	223	412	338			69	867	
v/s Ratio Prot		0.04	c0.24			c0.25					0.13	
v/s Ratio Perm		0.07		0.01	0.02		0.09			c0.53		
v/c Ratio		0.25	0.57	0.01	0.10	1.06	0.38			1.99	0.49	
Uniform Delay, d1		21.6	23.3	17.8	31.2	40.0	33.5			38.5	32.4	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Incremental Delay, d2		2.0	3.3	0.0	0.9	61.3	3.2			491.0	2.0	
Delay (s)		23.5	26.5	17.9	32.1	101.3	36.6			529.5	34.4	
Level of Service		C	C	B	C	F	D			F	C	
Approach Delay (s)			25.8			81.8					154.2	
Approach LOS			C			F					F	

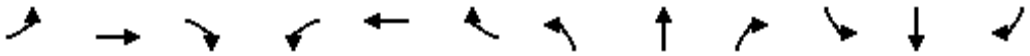
Intersection Summary			
HCM Average Control Delay	146.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.43		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	103.0%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations								
Volume (vph)	107	571	82	103	4	113	607	197
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5				4.5	4.5	
Lane Util. Factor	1.00	0.95				1.00	0.88	
Frpb, ped/bikes	1.00	1.00				1.00	1.00	
Flpb, ped/bikes	1.00	1.00				1.00	1.00	
Frt	1.00	0.96				1.00	0.85	
Flt Protected	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1705	3246				1710	2633	
Flt Permitted	0.37	1.00				0.95	1.00	
Satd. Flow (perm)	670	3246				1710	2633	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	119	634	91	114	4	126	674	219
RTOR Reduction (vph)	0	12	0	0	0	0	26	0
Lane Group Flow (vph)	119	827	0	0	0	130	867	0
Confl. Peds. (#/hr)	3							
Heavy Vehicles (%)	0%	2%	0%	0%	0%	0%	3%	0%
Turn Type	Perm				Split		Perm	
Protected Phases		6			9	9		
Permitted Phases	6						9	
Actuated Green, G (s)	27.5	27.5				20.5	20.5	
Effective Green, g (s)	27.5	27.5				20.5	20.5	
Actuated g/C Ratio	0.26	0.26				0.20	0.20	
Clearance Time (s)	4.5	4.5				4.5	4.5	
Lane Grp Cap (vph)	175	850				334	514	
v/s Ratio Prot		0.25				0.08		
v/s Ratio Perm	0.18						c0.33	
v/c Ratio	0.68	0.97				0.39	1.69	
Uniform Delay, d1	34.8	38.4				36.8	42.2	
Progression Factor	1.00	1.00				1.00	1.00	
Incremental Delay, d2	19.3	25.0				3.4	317.6	
Delay (s)	54.1	63.4				40.2	359.9	
Level of Service	D	E				D	F	
Approach Delay (s)		62.2				319.3		
Approach LOS		E				F		

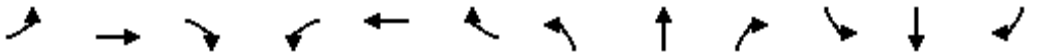
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	65	596	0	0	469	56	85	52	19	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	11	11	16	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.99			0.98				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		1681			1952			1841				
Flt Permitted		0.91			1.00			0.97				
Satd. Flow (perm)		1530			1952			1841				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	72	662	0	0	521	62	94	58	21	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	734	0	0	583	0	0	173	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		40.0			40.0			17.0				
Effective Green, g (s)		40.0			40.0			17.0				
Actuated g/C Ratio		0.62			0.62			0.26				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		942			1201			481				
v/s Ratio Prot					0.30							
v/s Ratio Perm		c0.48						0.09				
v/c Ratio		0.78			0.49			0.36				
Uniform Delay, d1		9.2			6.9			19.6				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		6.3			1.4			2.1				
Delay (s)		15.6			8.3			21.7				
Level of Service		B			A			C				
Approach Delay (s)		15.6			8.3			21.7			0.0	
Approach LOS		B			A			C			A	

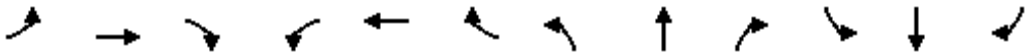
Intersection Summary			
HCM Average Control Delay	13.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	85.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	71	334	152	129	331	135	105	639	86	140	759	94
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	9	9	10	9
Total Lost time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.97	1.00	1.00	0.94	1.00	1.00	0.93
Flpb, ped/bikes		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1981	1443		1949	1457	1547	3040	1285	1506	3069	1239
Flt Permitted		0.65	1.00		0.73	1.00	0.19	1.00	1.00	0.22	1.00	1.00
Satd. Flow (perm)		1292	1443		1439	1457	305	3040	1285	347	3069	1239
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	75	352	160	136	348	142	111	673	91	147	799	99
RTOR Reduction (vph)	0	0	79	0	0	81	0	0	55	0	0	50
Lane Group Flow (vph)	0	427	81	0	484	61	111	673	36	147	799	49
Confl. Peds. (#/hr)	24		45	45		24	36		24	24		36
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	2%	2%	2%	2%	3%	2%	3%	5%	1%	2%	4%	3%
Turn Type	pm+pt		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		53.0	53.0		45.0	45.0	39.0	33.0	33.0	43.0	35.0	35.0
Effective Green, g (s)		53.0	53.0		45.0	45.0	39.0	33.0	33.0	43.0	35.0	35.0
Actuated g/C Ratio		0.50	0.50		0.43	0.43	0.37	0.31	0.31	0.41	0.33	0.33
Clearance Time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		685	728		617	624	184	955	404	230	1023	413
v/s Ratio Prot		c0.03					0.03	0.22		c0.05	c0.26	
v/s Ratio Perm		0.29	0.06		c0.34	0.04	0.19		0.03	0.21		0.04
v/c Ratio		0.62	0.11		0.78	0.10	0.60	0.70	0.09	0.64	0.78	0.12
Uniform Delay, d1		18.8	13.6		25.8	17.9	23.7	31.7	25.4	21.8	31.5	24.3
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.51	1.35	2.10
Incremental Delay, d2		4.2	0.3		9.7	0.3	5.5	4.4	0.4	5.5	5.7	0.6
Delay (s)		23.0	13.9		35.5	18.2	29.2	36.1	25.8	38.5	48.2	51.5
Level of Service		C	B		D	B	C	D	C	D	D	D
Approach Delay (s)		20.6			31.6			34.1			47.1	
Approach LOS		C			C			C			D	

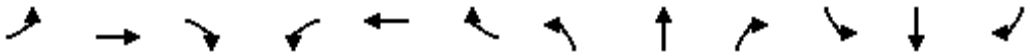
Intersection Summary			
HCM Average Control Delay	35.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	90.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	85	412	85	105	490	94	51	61	72	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		0.98			0.98			0.95				
Flt Protected		0.99			0.99			0.99				
Satd. Flow (prot)		1644			1646			1796				
Flt Permitted		0.83			0.84			0.99				
Satd. Flow (perm)		1375			1390			1796				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	94	458	94	117	544	104	57	68	80	0	0	0
RTOR Reduction (vph)	0	10	0	0	9	0	0	35	0	0	0	0
Lane Group Flow (vph)	0	636	0	0	756	0	0	170	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		40.0			40.0			17.0				
Effective Green, g (s)		40.0			40.0			17.0				
Actuated g/C Ratio		0.62			0.62			0.26				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		846			855			470				
v/s Ratio Prot												
v/s Ratio Perm		0.46			c0.54			0.09				
v/c Ratio		0.75			0.88			0.36				
Uniform Delay, d1		9.0			10.5			19.6				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		6.1			12.9			2.1				
Delay (s)		15.1			23.5			21.7				
Level of Service		B			C			C				
Approach Delay (s)		15.1			23.5			21.7			0.0	
Approach LOS		B			C			C			A	

Intersection Summary			
HCM Average Control Delay	19.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	71.1%	ICU Level of Service	C
Analysis Period (min)	15		

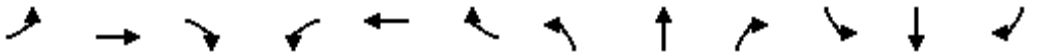
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	21	455	73	84	568	45	37	76	74	56	238	47
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	11	12	12	15	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.96		1.00	0.96		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		0.99	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.98	
Flt Protected		1.00	1.00		0.99	1.00		0.98	1.00		0.99	
Satd. Flow (prot)		1687	1382		1712	1417		1686	1455		1886	
Flt Permitted		0.96	1.00		0.88	1.00		0.83	1.00		0.93	
Satd. Flow (perm)		1630	1382		1519	1417		1430	1455		1775	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	22	479	77	88	598	47	39	80	78	59	251	49
RTOR Reduction (vph)	0	0	33	0	0	13	0	0	53	0	7	0
Lane Group Flow (vph)	0	501	44	0	686	34	0	119	25	0	352	0
Confl. Peds. (#/hr)	25		19	19		25	36		30	30		36
Confl. Bikes (#/hr)	1		2	2		1	3					3
Heavy Vehicles (%)	0%	3%	3%	0%	1%	0%	0%	1%	1%	0%	1%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Effective Green, g (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.32	0.32		0.32	
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Grp Cap (vph)		935	792		871	812		458	466		568	
v/s Ratio Prot												
v/s Ratio Perm		0.31	0.03		c0.45	0.02		0.08	0.02		c0.20	
v/c Ratio		0.54	0.06		0.79	0.04		0.26	0.05		0.62	
Uniform Delay, d1		9.9	7.1		12.4	7.0		18.9	17.6		21.6	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		2.2	0.1		7.1	0.1		1.4	0.2		5.0	
Delay (s)		12.1	7.2		19.6	7.1		20.3	17.9		26.6	
Level of Service		B	A		B	A		C	B		C	
Approach Delay (s)		11.4			18.8			19.3			26.6	
Approach LOS		B			B			B			C	

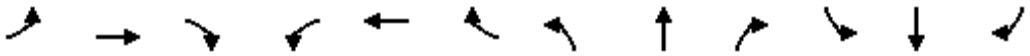
Intersection Summary			
HCM Average Control Delay	18.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	99.6%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	57	463	30	53	598	58	44	165	57	124	210	32
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	11	16	8	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	0.98	1.00		1.00	1.00		0.99	1.00	1.00	0.99	1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1537	3068		1652	3732		1585	1663	1370	1568	1680	1397
Flt Permitted	0.31	1.00		0.41	1.00		0.57	1.00	1.00	0.63	1.00	1.00
Satd. Flow (perm)	505	3068		716	3732		953	1663	1370	1043	1680	1397
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	63	514	33	59	664	64	49	183	63	138	233	36
RTOR Reduction (vph)	0	7	0	0	11	0	0	0	38	0	0	22
Lane Group Flow (vph)	63	540	0	59	717	0	49	183	25	138	233	14
Confl. Peds. (#/hr)	51		3	3		51	13		13	13		13
Heavy Vehicles (%)	2%	3%	3%	0%	2%	0%	0%	1%	2%	1%	0%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Effective Green, g (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	241	1463		341	1780		381	665	548	417	672	559
v/s Ratio Prot		0.18			c0.19			0.11			c0.14	
v/s Ratio Perm	0.12			0.08			0.05		0.02	0.13		0.01
v/c Ratio	0.26	0.37		0.17	0.40		0.13	0.28	0.05	0.33	0.35	0.03
Uniform Delay, d1	10.2	10.8		9.7	11.0		12.3	13.1	11.9	13.5	13.6	11.8
Progression Factor	1.00	1.00		1.00	1.00		0.82	0.89	0.70	0.58	0.59	0.26
Incremental Delay, d2	2.6	0.7		1.1	0.7		0.7	1.0	0.2	2.0	1.4	0.1
Delay (s)	12.8	11.5		10.8	11.7		10.8	12.7	8.6	9.9	9.3	3.1
Level of Service	B	B		B	B		B	B	A	A	A	A
Approach Delay (s)		11.6			11.6			11.5			9.0	
Approach LOS		B			B			B			A	

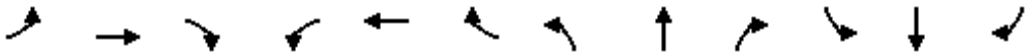
Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	73	389	71	73	387	77	55	197	64	135	272	162
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	11	10	11	11	10	11	11	10	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	0.97	1.00		0.95	1.00		0.99	1.00		0.96	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.96		1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1329	3142		1515	3108		1583	2928		1453	2920	
Flt Permitted	0.44	1.00		0.44	1.00		0.44	1.00		0.58	1.00	
Satd. Flow (perm)	617	3142		708	3108		741	2928		892	2920	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	77	409	75	77	407	81	58	207	67	142	286	171
RTOR Reduction (vph)	0	0	0	0	0	0	0	39	0	0	100	0
Lane Group Flow (vph)	77	484	0	77	488	0	58	235	0	142	357	0
Confl. Peds. (#/hr)	112		99	99		112	23		53	53		23
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	16%	1%	0%	0%	1%	9%	0%	8%	2%	5%	5%	7%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.41	0.41		0.41	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	296	1508		340	1492		306	1210		369	1207	
v/s Ratio Prot		0.15			c0.16			0.08			0.12	
v/s Ratio Perm	0.12			0.11			0.08			c0.16		
v/c Ratio	0.26	0.32		0.23	0.33		0.19	0.19		0.38	0.30	
Uniform Delay, d1	11.6	12.0		11.4	12.0		14.0	14.0		15.3	14.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.1	0.6		1.5	0.6		1.4	0.4		3.0	0.6	
Delay (s)	13.7	12.5		12.9	12.6		15.4	14.4		18.4	15.3	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		12.7			12.7			14.6			16.0	
Approach LOS		B			B			B			B	

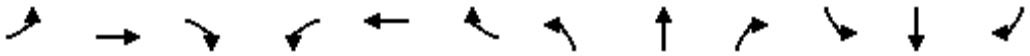
Intersection Summary			
HCM Average Control Delay	14.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	108	453	62	32	523	48	86	203	60	76	473	111
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	8	16	12	9	10	10	9	10	10
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1595	1653		1371	1973		1534	2998		1535	3011	
Flt Permitted	0.24	1.00		0.30	1.00		0.28	1.00		0.58	1.00	
Satd. Flow (perm)	402	1653		427	1973		450	2998		939	3011	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	114	477	65	34	551	51	91	214	63	80	498	117
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	114	542	0	34	602	0	91	277	0	80	615	0
Confl. Peds. (#/hr)	21		95	95		21	36		8	8		36
Confl. Bikes (#/hr)	2		3	3		2	2					2
Heavy Vehicles (%)	0%	2%	0%	7%	2%	0%	0%	3%	0%	0%	2%	1%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	43.9	39.3		40.7	37.7		26.7	21.8		26.7	21.8	
Effective Green, g (s)	43.9	37.3		40.7	35.7		26.7	19.8		26.7	19.8	
Actuated g/C Ratio	0.52	0.44		0.48	0.42		0.31	0.23		0.31	0.23	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	272	725		238	829		204	698		329	701	
v/s Ratio Prot	c0.02	c0.33		0.01	0.31		c0.03	0.09		0.01	c0.20	
v/s Ratio Perm	0.19			0.06			0.11			0.06		
v/c Ratio	0.42	0.75		0.14	0.73		0.45	0.40		0.24	0.88	
Uniform Delay, d1	24.1	19.9		20.7	20.6		29.2	27.6		21.9	31.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.0	6.9		0.3	5.5		1.6	1.7		0.4	14.5	
Delay (s)	25.2	26.8		21.0	26.1		30.8	29.2		22.2	46.0	
Level of Service	C	C		C	C		C	C		C	D	
Approach Delay (s)		26.6			25.8			29.6			43.2	
Approach LOS		C			C			C			D	

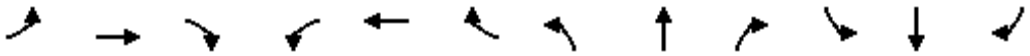
Intersection Summary			
HCM Average Control Delay	31.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	80.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	85	389	65	117	509	118	67	158	58	127	367	83
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	11	11	11	11	12	12	10	10	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		0.99	1.00	
Frt		0.98			0.98		1.00	0.96		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3680			3131		1652	3237		1549	3026	
Flt Permitted		0.68			0.72		0.42	1.00		0.60	1.00	
Satd. Flow (perm)		2535			2275		736	3237		983	3026	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	94	432	72	130	566	131	74	176	64	141	408	92
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	598	0	0	827	0	74	240	0	141	500	0
Confl. Peds. (#/hr)	23		30	30		23	1		20	20		1
Confl. Bikes (#/hr)	3					3						
Heavy Vehicles (%)	0%	3%	0%	2%	2%	0%	0%	1%	0%	2%	2%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.0			33.0		32.0	32.0		32.0	32.0	
Effective Green, g (s)		34.0			34.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio		0.45			0.45		0.44	0.44		0.44	0.44	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		1149			1031		324	1424		433	1331	
v/s Ratio Prot								0.07			c0.17	
v/s Ratio Perm		0.24			c0.36		0.10			0.14		
v/c Ratio		0.52			0.80		0.23	0.17		0.33	0.38	
Uniform Delay, d1		14.7			17.6		13.1	12.7		13.7	14.1	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.7			6.6		1.6	0.3		2.0	0.8	
Delay (s)		16.4			24.2		14.7	13.0		15.7	14.9	
Level of Service		B			C		B	B		B	B	
Approach Delay (s)		16.4			24.2			13.4			15.1	
Approach LOS		B			C			B			B	

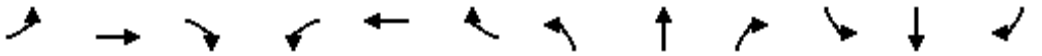
Intersection Summary			
HCM Average Control Delay	18.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	98	875	6	20	584	249	1	1	9	213	1	80
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	12	12	12	12	12	13	13	13
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	1.00		1.00	1.00	0.85		0.89			0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00		1.00			0.97	
Satd. Flow (prot)	1605	3206		1660	3320	1485		1545			3176	
Flt Permitted	0.38	1.00		0.25	1.00	1.00		0.98			0.77	
Satd. Flow (perm)	648	3206		433	3320	1485		1519			2533	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	109	972	7	22	649	277	1	1	10	237	1	89
RTOR Reduction (vph)	0	0	0	0	0	103	0	7	0	0	52	0
Lane Group Flow (vph)	109	979	0	22	649	174	0	5	0	0	275	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	46.1	46.1		46.1	46.1	46.1		19.5			19.5	
Effective Green, g (s)	46.1	46.1		46.1	46.1	46.1		19.5			19.5	
Actuated g/C Ratio	0.63	0.63		0.63	0.63	0.63		0.26			0.26	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		8.0			8.0	
Lane Grp Cap (vph)	406	2008		271	2080	930		402			671	
v/s Ratio Prot		c0.31			0.20							
v/s Ratio Perm	0.17			0.05		0.12		0.00			c0.11	
v/c Ratio	0.27	0.49		0.08	0.31	0.19		0.01			0.41	
Uniform Delay, d1	6.2	7.4		5.4	6.4	5.8		19.9			22.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	1.6	0.8		0.6	0.4	0.4		0.0			1.7	
Delay (s)	7.8	8.2		6.0	6.8	6.3		20.0			24.0	
Level of Service	A	A		A	A	A		B			C	
Approach Delay (s)		8.2			6.6			20.0			24.0	
Approach LOS		A			A			B			C	

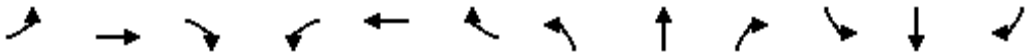
Intersection Summary			
HCM Average Control Delay	9.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	73.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	131	228	125	94	163	57	148	907	90	129	825	100
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	9	12	10	10	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.95		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1560	1504		1563	1584		1493	3069	1337	1523	3099	1318
Flt Permitted	0.45	1.00		0.20	1.00		0.20	1.00	1.00	0.16	1.00	1.00
Satd. Flow (perm)	740	1504		337	1584		317	3069	1337	263	3099	1318
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	138	240	132	99	172	60	156	955	95	136	868	105
RTOR Reduction (vph)	0	23	0	0	15	0	0	0	40	0	0	49
Lane Group Flow (vph)	138	349	0	99	217	0	156	955	55	136	868	56
Confl. Peds. (#/hr)	10		13	13		10	18		7	7		18
Confl. Bikes (#/hr)	2					2	2		1	1		2
Heavy Vehicles (%)	2%	1%	1%	2%	1%	2%	3%	4%	0%	1%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	28.0	21.0		28.0	21.0		42.0	35.0	35.0	42.0	35.0	35.0
Effective Green, g (s)	26.0	22.0		26.0	22.0		40.0	35.0	35.0	40.0	35.0	35.0
Actuated g/C Ratio	0.31	0.26		0.31	0.26		0.47	0.41	0.41	0.47	0.41	0.41
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	284	389		190	410		232	1264	551	213	1276	543
v/s Ratio Prot	0.03	c0.23		c0.04	0.14		c0.05	c0.31		0.05	0.28	
v/s Ratio Perm	0.11			0.12			0.27		0.04	0.26		0.04
v/c Ratio	0.49	0.90		0.52	0.53		0.67	0.76	0.10	0.64	0.68	0.10
Uniform Delay, d1	22.7	30.4		22.9	27.1		14.7	21.3	15.3	15.0	20.4	15.4
Progression Factor	1.00	1.00		1.00	1.00		0.67	0.82	0.55	1.00	1.00	1.00
Incremental Delay, d2	5.8	25.9		9.9	4.8		13.2	3.8	0.3	13.8	2.9	0.4
Delay (s)	28.5	56.3		32.7	31.9		23.0	21.2	8.7	28.8	23.4	15.7
Level of Service	C	E		C	C		C	C	A	C	C	B
Approach Delay (s)		48.8			32.1			20.5			23.3	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM Average Control Delay	27.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	74.0%	ICU Level of Service	D
Analysis Period (min)	15		

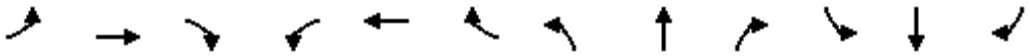
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	22	181	38	20	173	22	43	149	40	45	255	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	14	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.99			1.00			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.99			0.98			0.98	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1835			1848			1937			1975	
Flt Permitted		0.97			0.96			0.90			0.94	
Satd. Flow (perm)		1781			1790			1755			1869	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	23	187	39	21	178	23	44	154	41	46	263	52
RTOR Reduction (vph)	0	11	0	0	6	0	0	11	0	0	9	0
Lane Group Flow (vph)	0	238	0	0	216	0	0	228	0	0	352	0
Confl. Peds. (#/hr)	18		34	34		18	16		19	19		16
Confl. Bikes (#/hr)			6	6			1		4	4		1
Heavy Vehicles (%)	0%	1%	0%	5%	1%	0%	0%	2%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.42			0.42			0.46			0.46	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		740			744			810			863	
v/s Ratio Prot												
v/s Ratio Perm		c0.13			0.12			0.13			c0.19	
v/c Ratio		0.32			0.29			0.28			0.41	
Uniform Delay, d1		12.8			12.6			10.8			11.6	
Progression Factor		1.00			0.73			1.27			1.00	
Incremental Delay, d2		1.2			1.0			0.8			1.4	
Delay (s)		14.0			10.2			14.5			13.0	
Level of Service		B			B			B			B	
Approach Delay (s)		14.0			10.2			14.5			13.0	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	49.8%	ICU Level of Service	A
Analysis Period (min)	15		

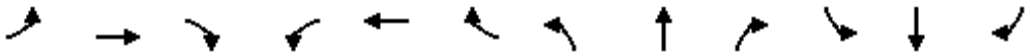
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	193	39	25	180	20	53	200	31	47	214	39
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.97	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.99		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1496	3057		1577	3116		1518	3119		1550	3076	
Flt Permitted	0.61	1.00		0.59	1.00		0.58	1.00		0.59	1.00	
Satd. Flow (perm)	965	3057		984	3116		926	3119		968	3076	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	214	43	28	200	22	59	222	34	52	238	43
RTOR Reduction (vph)	0	26	0	0	13	0	0	14	0	0	18	0
Lane Group Flow (vph)	27	231	0	28	209	0	59	242	0	52	263	0
Confl. Peds. (#/hr)	20		17	17		20	2					2
Confl. Bikes (#/hr)	32		36	36		32	22		25	25		22
Heavy Vehicles (%)	4%	1%	0%	0%	0%	0%	5%	0%	0%	3%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0		39.0	39.0		39.0	39.0	
Effective Green, g (s)	19.0	19.0		19.0	19.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.58	0.58		0.58	0.58	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	282	894		288	911		541	1823		566	1798	
v/s Ratio Prot		c0.08			0.07			0.08			c0.09	
v/s Ratio Perm	0.03			0.03			0.06			0.05		
v/c Ratio	0.10	0.26		0.10	0.23		0.11	0.13		0.09	0.15	
Uniform Delay, d1	16.7	17.6		16.8	17.4		6.0	6.1		5.9	6.1	
Progression Factor	0.93	0.96		0.74	0.73		1.40	1.44		0.39	0.34	
Incremental Delay, d2	0.6	0.7		0.7	0.6		0.4	0.1		0.3	0.2	
Delay (s)	16.3	17.6		13.0	13.3		8.8	8.9		2.7	2.3	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		17.5			13.3			8.9			2.3	
Approach LOS		B			B			A			A	

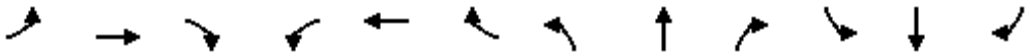
Intersection Summary			
HCM Average Control Delay	10.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.18		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



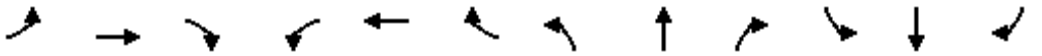
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	67	168	42	25	159	38	27	262	16	42	337	33
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	9	9	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.97		1.00	0.97			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1555	3056		1525	2937			1923			1939	
Flt Permitted	0.61	1.00		0.61	1.00			0.94			0.94	
Satd. Flow (perm)	1007	3056		973	2937			1825			1832	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	74	187	47	28	177	42	30	291	18	47	374	37
RTOR Reduction (vph)	0	28	0	0	25	0	0	3	0	0	5	0
Lane Group Flow (vph)	74	206	0	28	194	0	0	336	0	0	453	0
Confl. Peds. (#/hr)	11		17	17		11	26		7	7		26
Heavy Vehicles (%)	2%	1%	0%	0%	1%	3%	4%	5%	0%	0%	4%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Effective Green, g (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40			0.48			0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	403	1222		389	1175			870			874	
v/s Ratio Prot		0.07			0.07							
v/s Ratio Perm	c0.07			0.03				0.18			c0.25	
v/c Ratio	0.18	0.17		0.07	0.16			0.39			0.52	
Uniform Delay, d1	12.6	12.5		12.0	12.5			10.9			11.8	
Progression Factor	1.03	0.98		0.80	0.80			1.12			1.00	
Incremental Delay, d2	1.0	0.3		0.3	0.3			1.2			2.2	
Delay (s)	14.1	12.6		10.0	10.3			13.3			14.0	
Level of Service	B	B		B	B			B			B	
Approach Delay (s)		13.0			10.3			13.3			14.0	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	12.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



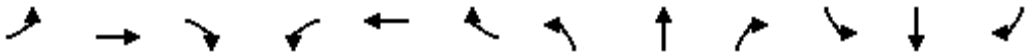
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	47	111	30	20	161	27	45	235	11	33	364	57
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	16	12	10	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.97		1.00	0.98			0.99			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			1.00	
Satd. Flow (prot)	1652	1966		1584	1975			1981			1979	
Flt Permitted	0.57	1.00		0.65	1.00			0.89			0.96	
Satd. Flow (perm)	986	1966		1082	1975			1774			1911	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	52	123	33	22	179	30	50	261	12	37	404	63
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	52	156	0	22	209	0	0	323	0	0	504	0
Confl. Peds. (#/hr)	1		10	10		1	2		5	5		2
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	2%	0%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Effective Green, g (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Actuated g/C Ratio	0.31	0.31		0.31	0.31			0.57			0.57	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	303	605		333	608			1010			1088	
v/s Ratio Prot		0.08			c0.11							
v/s Ratio Perm	0.05			0.02				0.18			c0.26	
v/c Ratio	0.17	0.26		0.07	0.34			0.32			0.46	
Uniform Delay, d1	16.4	16.9		15.9	17.4			7.4			8.2	
Progression Factor	0.84	0.81		0.84	0.88			0.80			1.00	
Incremental Delay, d2	1.2	1.0		0.4	1.5			0.8			1.4	
Delay (s)	15.0	14.8		13.8	16.8			6.7			9.6	
Level of Service	B	B		B	B			A			A	
Approach Delay (s)		14.8			16.5			6.7			9.6	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



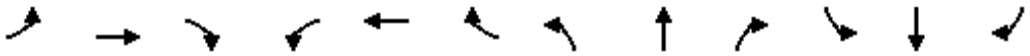
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	54	13	97	2	5	10	62	235	5	5	466	76
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	10	11	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98		1.00	0.98		1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.87		1.00	0.90		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1695	1727		1702	1808		1594	1647	1428	1653	2000	1496
Flt Permitted	0.75	1.00		0.68	1.00		0.39	1.00	1.00	0.59	1.00	1.00
Satd. Flow (perm)	1332	1727		1216	1808		660	1647	1428	1030	2000	1496
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	60	14	108	2	6	11	69	261	6	6	518	84
RTOR Reduction (vph)	0	78	0	0	8	0	0	0	2	0	0	28
Lane Group Flow (vph)	60	44	0	2	9	0	69	261	4	6	518	56
Confl. Peds. (#/hr)	5		5	5		5	3					3
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	0%	2%	0%	0%	2%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	17.0	17.0		17.0	17.0		39.0	39.0	39.0	39.0	39.0	39.0
Effective Green, g (s)	18.0	18.0		18.0	18.0		39.0	39.0	39.0	39.0	39.0	39.0
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.60	0.60	0.60	0.60	0.60	0.60
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	369	478		337	501		396	988	857	618	1200	898
v/s Ratio Prot		0.03			0.01			0.16			c0.26	
v/s Ratio Perm	c0.05			0.00			0.10		0.00	0.01		0.04
v/c Ratio	0.16	0.09		0.01	0.02		0.17	0.26	0.00	0.01	0.43	0.06
Uniform Delay, d1	17.8	17.4		17.0	17.1		5.8	6.2	5.2	5.2	7.0	5.4
Progression Factor	1.39	2.72		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.9	0.4		0.0	0.1		1.0	0.7	0.0	0.0	1.1	0.1
Delay (s)	25.7	47.8		17.1	17.1		6.8	6.8	5.2	5.3	8.2	5.5
Level of Service	C	D		B	B		A	A	A	A	A	A
Approach Delay (s)		40.5			17.1			6.8			7.8	
Approach LOS		D			B			A			A	

Intersection Summary			
HCM Average Control Delay	12.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	253	163	170	204	0	0	0	0	110	470	377
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)		4.0		3.0	3.0					5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	
Frpb, ped/bikes		0.99		1.00	1.00					1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Frt		0.94		1.00	1.00					1.00	0.93	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		2905		1693	3288					1503	3021	
Flt Permitted		1.00		0.41	1.00					0.95	1.00	
Satd. Flow (perm)		2905		722	3288					1503	3021	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	266	172	179	215	0	0	0	0	116	495	397
RTOR Reduction (vph)	0	103	0	0	0	0	0	0	0	0	141	0
Lane Group Flow (vph)	0	335	0	179	215	0	0	0	0	116	751	0
Confl. Peds. (#/hr)	18		3	3		18	1					1
Heavy Vehicles (%)	0%	4%	1%	1%	4%	0%	0%	0%	0%	10%	2%	1%
Turn Type				D.P+P						Split		
Protected Phases		8		7	7 8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		33.0		53.0	56.0					37.0	37.0	
Effective Green, g (s)		33.0		53.0	56.0					37.0	37.0	
Actuated g/C Ratio		0.32		0.52	0.55					0.36	0.36	
Clearance Time (s)		4.0		3.0						5.0	5.0	
Lane Grp Cap (vph)		940		566	1805					545	1096	
v/s Ratio Prot		c0.12		c0.06	0.07					0.08	c0.25	
v/s Ratio Perm				0.10								
v/c Ratio		0.36		0.32	0.12					0.21	0.68	
Uniform Delay, d1		26.4		13.4	11.1					22.4	27.6	
Progression Factor		1.00		2.18	2.12					1.00	1.00	
Incremental Delay, d2		1.1		1.3	0.1					0.9	3.5	
Delay (s)		27.4		30.5	23.6					23.3	31.0	
Level of Service		C		C	C					C	C	
Approach Delay (s)		27.4			26.7			0.0			30.2	
Approach LOS		C			C			A			C	

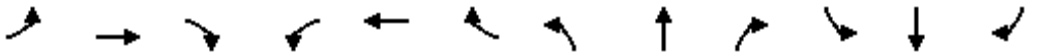
Intersection Summary			
HCM Average Control Delay	28.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	102.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	141	222	0	0	297	113	77	539	231	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	9	12	13	12	13	12	12	12
Total Lost time (s)	4.0	4.0			4.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.96		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1674	3196			2847		1767	1782	1560			
Flt Permitted	0.37	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	645	3196			2847		1767	1782	1560			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	148	234	0	0	313	119	81	567	243	0	0	0
RTOR Reduction (vph)	0	0	0	0	39	0	0	0	167	0	0	0
Lane Group Flow (vph)	148	234	0	0	393	0	81	567	76	0	0	0
Confl. Peds. (#/hr)	9		13	13		9			1	1		
Confl. Bikes (#/hr)	3					3						
Heavy Vehicles (%)	2%	7%	0%	0%	3%	1%	0%	1%	0%	0%	0%	0%
Turn Type	pm+pt						custom		Perm			
Protected Phases	4	1 4			1		2	2				
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	59.0	63.0			26.0		30.0	30.0	30.0			
Effective Green, g (s)	59.0	63.0			26.0		30.0	30.0	30.0			
Actuated g/C Ratio	0.58	0.62			0.25		0.29	0.29	0.29			
Clearance Time (s)	4.0				4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	706	1974			726		520	524	459			
v/s Ratio Prot	c0.07	0.07			c0.14		0.05	c0.32				
v/s Ratio Perm	0.05								0.05			
v/c Ratio	0.21	0.12			0.54		0.16	1.08	0.17			
Uniform Delay, d1	10.2	8.0			32.8		26.6	36.0	26.7			
Progression Factor	0.42	0.43			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.6	0.1			2.9		0.6	63.3	0.8			
Delay (s)	4.9	3.6			35.7		27.3	99.3	27.5			
Level of Service	A	A			D		C	F	C			
Approach Delay (s)		4.1			35.7			73.2			0.0	
Approach LOS		A			D			E			A	

Intersection Summary			
HCM Average Control Delay	48.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	102.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	62.4%	ICU Level of Service	B
Analysis Period (min)	15		

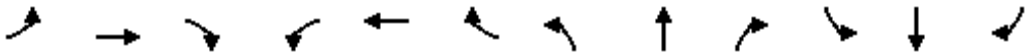
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	512	479	81	534	0	0	0	0	11	434	277
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	11	12	12	12	12	10	10	12
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	1.00
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.93		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3098		1710	3306					1596	3192	1530
Flt Permitted		1.00		0.11	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3098		200	3306					1596	3192	1530
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	533	499	84	556	0	0	0	0	11	452	289
RTOR Reduction (vph)	0	170	0	0	0	0	0	0	0	0	0	191
Lane Group Flow (vph)	0	862	0	84	556	0	0	0	0	11	452	98
Confl. Peds. (#/hr)	8		8	8		8	3					3
Confl. Bikes (#/hr)	9					9			61	61		
Heavy Vehicles (%)	0%	1%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type				pm+pt						Split		Prot
Protected Phases		8		7	7 8					6	6	6
Permitted Phases				7 8								
Actuated Green, G (s)		36.0		54.0	58.0					34.0	34.0	34.0
Effective Green, g (s)		36.0		54.0	58.0					34.0	34.0	34.0
Actuated g/C Ratio		0.36		0.54	0.58					0.34	0.34	0.34
Clearance Time (s)		4.0		4.0						4.0	4.0	4.0
Lane Grp Cap (vph)		1115		380	1917					543	1085	520
v/s Ratio Prot		c0.28		0.04	c0.17					0.01	c0.14	0.06
v/s Ratio Perm				0.08								
v/c Ratio		0.77		0.22	0.29					0.02	0.42	0.19
Uniform Delay, d1		28.4		14.4	10.6					21.9	25.4	23.3
Progression Factor		1.00		1.01	1.19					1.00	1.00	1.00
Incremental Delay, d2		5.2		0.9	0.3					0.1	1.2	0.8
Delay (s)		33.6		15.5	12.9					22.0	26.6	24.1
Level of Service		C		B	B					C	C	C
Approach Delay (s)		33.6			13.2			0.0			25.5	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM Average Control Delay	25.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	91.9%	ICU Level of Service	F
Analysis Period (min)	15		

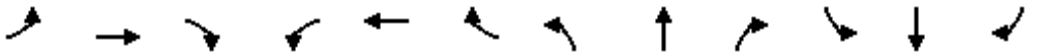
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	417	106	0	0	150	6	465	480	58	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	10	12	11	11	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	0.91	0.91			0.95		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.99		1.00	1.00	0.85			
Flt Protected	0.95	0.97			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1469	3110			3170		1555	1653	1530			
Flt Permitted	0.64	0.71			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	992	2291			3170		1555	1653	1530			
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	430	109	0	0	155	6	479	495	60	0	0	0
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	38	0	0	0
Lane Group Flow (vph)	215	324	0	0	158	0	479	495	22	0	0	0
Confl. Peds. (#/hr)	13		6	6		13			8	8		
Confl. Bikes (#/hr)	1					1			2	2		
Heavy Vehicles (%)	2%	1%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%
Turn Type	pm+pt						custom		custom			
Protected Phases	4	1 4			1		2	2	2			
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Effective Green, g (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Actuated g/C Ratio	0.51	0.51			0.15		0.37	0.37	0.37			
Clearance Time (s)	4.0				4.0		4.0	4.0	4.0			
Lane Grp Cap (vph)	678	1463			476		575	612	566			
v/s Ratio Prot	c0.11	0.08			c0.05		c0.31	0.30	0.01			
v/s Ratio Perm	0.05	0.03										
v/c Ratio	0.32	0.22			0.33		0.83	0.81	0.04			
Uniform Delay, d1	14.1	13.5			38.0		28.7	28.3	20.1			
Progression Factor	0.24	0.25			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.7	0.2			1.9		13.3	11.0	0.1			
Delay (s)	4.2	3.6			39.9		42.0	39.3	20.3			
Level of Service	A	A			D		D	D	C			
Approach Delay (s)		3.8			39.9			39.5			0.0	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM Average Control Delay	28.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	91.9%	ICU Level of Service	F
Analysis Period (min)	15		

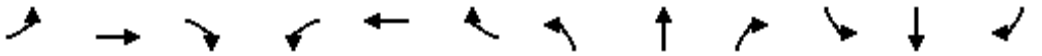
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	78	218	103	121	265	125	84	699	79	103	884	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	9	10	9	9	10	9
Total Lost time (s)		4.0			4.0		4.0	3.5	4.0	4.0	3.5	4.0
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		0.99			0.99		1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.96			0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		2939			2922		1508	3069	1309	1508	3099	1298
Flt Permitted		0.74			0.75		0.16	1.00	1.00	0.25	1.00	1.00
Satd. Flow (perm)		2182			2204		254	3069	1309	401	3099	1298
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	81	227	107	126	276	130	88	728	82	107	921	68
RTOR Reduction (vph)	0	41	0	0	37	0	0	0	50	0	0	33
Lane Group Flow (vph)	0	374	0	0	495	0	88	728	32	107	921	35
Confl. Peds. (#/hr)	35		30	30		35	34		8	8		34
Confl. Bikes (#/hr)	1					1	1					1
Heavy Vehicles (%)	1%	4%	0%	1%	3%	3%	2%	4%	2%	2%	3%	2%
Turn Type	pm+pt			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		35.0			27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)		36.0			28.0		36.0	33.5	33.0	36.0	33.5	33.0
Actuated g/C Ratio		0.42			0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)		5.0			5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)		978			726		167	1210	508	222	1221	504
v/s Ratio Prot		c0.03					c0.02	0.24		0.02	c0.30	
v/s Ratio Perm		0.14			c0.22		0.20		0.02	0.18		0.03
v/c Ratio		0.38			0.68		0.53	0.60	0.06	0.48	0.75	0.07
Uniform Delay, d1		16.9			24.6		16.7	20.5	16.3	16.0	22.2	16.3
Progression Factor		1.00			1.00		1.32	0.69	0.61	1.11	1.16	1.74
Incremental Delay, d2		1.1			5.1		10.4	2.0	0.2	5.3	3.1	0.2
Delay (s)		18.0			29.8		32.4	16.2	10.1	23.0	29.0	28.6
Level of Service		B			C		C	B	B	C	C	C
Approach Delay (s)		18.0			29.8			17.2			28.4	
Approach LOS		B			C			B			C	

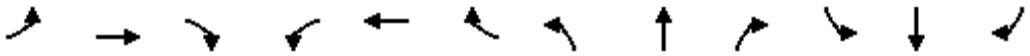
Intersection Summary			
HCM Average Control Delay	23.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	73.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	76	318	0	0	389	103	53	44	37	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.97			0.96				
Flt Protected		0.99			1.00			0.98				
Satd. Flow (prot)		1731			1698			1650				
Flt Permitted		0.83			1.00			0.98				
Satd. Flow (perm)		1458			1698			1650				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	84	353	0	0	432	114	59	49	41	0	0	0
RTOR Reduction (vph)	0	0	0	0	15	0	0	21	0	0	0	0
Lane Group Flow (vph)	0	437	0	0	531	0	0	128	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		38.0			38.0			19.0				
Effective Green, g (s)		38.0			38.0			19.0				
Actuated g/C Ratio		0.58			0.58			0.29				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		852			993			482				
v/s Ratio Prot					c0.31							
v/s Ratio Perm		0.30						0.08				
v/c Ratio		0.51			0.54			0.27				
Uniform Delay, d1		8.0			8.2			17.6				
Progression Factor		1.00			0.99			1.00				
Incremental Delay, d2		2.2			1.6			1.3				
Delay (s)		10.2			9.7			19.0				
Level of Service		B			A			B				
Approach Delay (s)		10.2			9.7			19.0			0.0	
Approach LOS		B			A			B			A	

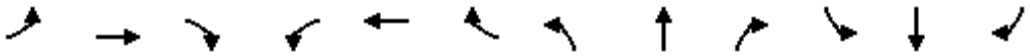
Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	19	306	27	53	416	70	28	118	42	57	150	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	10	12	12	10	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			0.98	
Flpb, ped/bikes		1.00			1.00			0.99			1.00	
Frt		0.99			0.98			0.97			0.97	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1957			1933			2959			2985	
Flt Permitted		0.96			0.93			0.89			0.85	
Satd. Flow (perm)		1887			1810			2658			2572	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	21	340	30	59	462	78	31	131	47	63	167	47
RTOR Reduction (vph)	0	5	0	0	8	0	0	27	0	0	26	0
Lane Group Flow (vph)	0	386	0	0	591	0	0	182	0	0	251	0
Confl. Peds. (#/hr)	32		25	25		32	59		24	24		59
Confl. Bikes (#/hr)	3		2	2		3	4		2	2		4
Heavy Vehicles (%)	0%	3%	0%	3%	3%	0%	0%	0%	7%	4%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0			27.0			27.0	
Effective Green, g (s)		30.0			30.0			27.0			27.0	
Actuated g/C Ratio		0.46			0.46			0.42			0.42	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		871			835			1104			1068	
v/s Ratio Prot												
v/s Ratio Perm		0.20			c0.33			0.07			c0.10	
v/c Ratio		0.44			0.71			0.16			0.23	
Uniform Delay, d1		11.8			14.0			11.9			12.3	
Progression Factor		0.57			0.37			1.24			0.46	
Incremental Delay, d2		1.4			4.1			0.3			0.5	
Delay (s)		8.2			9.3			15.1			6.1	
Level of Service		A			A			B			A	
Approach Delay (s)		8.2			9.3			15.1			6.1	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM Average Control Delay	9.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	83.9%	ICU Level of Service	E
Analysis Period (min)	15		

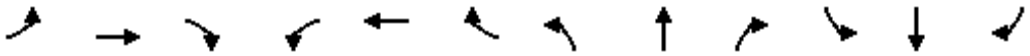
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	41	279	39	85	551	100	43	219	99	86	227	62
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	9	10	10	9	10	10	12	10	10	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00		0.99	1.00		0.99	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.95		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1512	3039		1570	3078		1587	2961		1585	3075	
Flt Permitted	0.25	1.00		0.52	1.00		0.56	1.00		0.54	1.00	
Satd. Flow (perm)	395	3039		854	3078		931	2961		902	3075	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	46	310	43	94	612	111	48	243	110	96	252	69
RTOR Reduction (vph)	0	17	0	0	22	0	0	51	0	0	32	0
Lane Group Flow (vph)	46	336	0	94	701	0	48	302	0	96	289	0
Confl. Peds. (#/hr)	20		31	31		20	16		20	20		16
Confl. Bikes (#/hr)							1		3	3		1
Heavy Vehicles (%)	5%	3%	0%	0%	1%	0%	0%	2%	2%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	134	1029		289	1042		501	1594		486	1656	
v/s Ratio Prot		0.11			c0.23			0.10			0.09	
v/s Ratio Perm	0.12			0.11			0.05			c0.11		
v/c Ratio	0.34	0.33		0.33	0.67		0.10	0.19		0.20	0.17	
Uniform Delay, d1	16.1	16.0		16.0	18.4		7.3	7.7		7.7	7.6	
Progression Factor	0.81	0.76		1.16	1.18		1.11	1.24		1.08	1.08	
Incremental Delay, d2	6.4	0.8		2.9	3.4		0.4	0.3		0.9	0.2	
Delay (s)	19.5	13.0		21.4	25.1		8.5	9.8		9.3	8.5	
Level of Service	B	B		C	C		A	A		A	A	
Approach Delay (s)		13.7			24.6			9.7			8.6	
Approach LOS		B			C			A			A	

Intersection Summary			
HCM Average Control Delay	16.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.8%	ICU Level of Service	A
Analysis Period (min)	15		

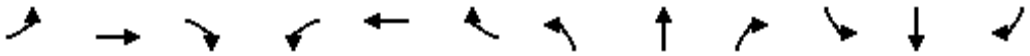
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	55	287	96	107	401	50	165	250	131	46	295	64
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	9	10	9	9	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99			0.99			0.98	
Flpb, ped/bikes	0.98	1.00		0.99	1.00			0.98			1.00	
Frt	1.00	0.96		1.00	0.98			0.96			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1508	2988		1430	3720			3405			3530	
Flt Permitted	0.46	1.00		0.51	1.00			0.69			0.85	
Satd. Flow (perm)	726	2988		761	3720			2401			3027	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	58	302	101	113	422	53	174	263	138	48	311	67
RTOR Reduction (vph)	0	50	0	0	15	0	0	46	0	0	23	0
Lane Group Flow (vph)	58	353	0	113	460	0	0	529	0	0	403	0
Confl. Peds. (#/hr)	38		17	17		38	125		53	53		125
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	3%	0%	7%	2%	0%	0%	6%	10%	2%	5%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Effective Green, g (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48			0.40			0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	346	1425		363	1774			960			1211	
v/s Ratio Prot		0.12			0.12							
v/s Ratio Perm	0.08			c0.15				c0.22			0.13	
v/c Ratio	0.17	0.25		0.31	0.26			0.55			0.33	
Uniform Delay, d1	9.7	10.1		10.4	10.1			15.0			13.5	
Progression Factor	1.54	1.77		1.09	1.06			1.00			0.76	
Incremental Delay, d2	1.0	0.4		2.0	0.3			2.3			0.7	
Delay (s)	15.9	18.3		13.4	11.1			17.3			10.9	
Level of Service	B	B		B	B			B			B	
Approach Delay (s)		18.0			11.5			17.3			10.9	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	14.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	64.0%	ICU Level of Service	C
Analysis Period (min)	15		

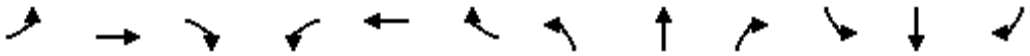
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	86	311	86	92	297	92	119	82	47	47	82	119
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	16	12	12	16	12
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		0.95			1.00			1.00	
Frt		1.00	0.85		0.97			0.97			0.94	
Flt Protected		0.99	1.00		0.99			0.98			0.99	
Satd. Flow (prot)		1671	1436		3088			1885			1835	
Flt Permitted		0.80	1.00		0.78			0.68			0.90	
Satd. Flow (perm)		1346	1436		2425			1305			1674	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	96	346	96	102	330	102	132	91	52	52	91	132
RTOR Reduction (vph)	0	0	46	0	31	0	0	13	0	0	51	0
Lane Group Flow (vph)	0	442	50	0	503	0	0	262	0	0	224	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		34.0	34.0		34.0			21.0			21.0	
Effective Green, g (s)		34.0	34.0		34.0			21.0			21.0	
Actuated g/C Ratio		0.52	0.52		0.52			0.32			0.32	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Grp Cap (vph)		704	751		1268			422			541	
v/s Ratio Prot												
v/s Ratio Perm		c0.33	0.03		0.21			c0.20			0.13	
v/c Ratio		0.63	0.07		0.40			0.62			0.41	
Uniform Delay, d1		11.0	7.7		9.3			18.6			17.2	
Progression Factor		1.41	3.19		0.53			1.00			1.00	
Incremental Delay, d2		4.0	0.2		0.9			6.7			2.3	
Delay (s)		19.6	24.6		5.9			25.4			19.5	
Level of Service		B	C		A			C			B	
Approach Delay (s)		20.5			5.9			25.4			19.5	
Approach LOS		C			A			C			B	

Intersection Summary			
HCM Average Control Delay	16.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	80.7%	ICU Level of Service	D
Analysis Period (min)	15		

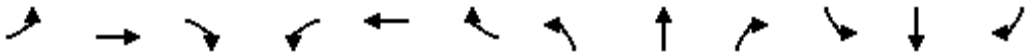
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	291	32	26	328	60	27	133	47	62	146	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	15	8	16	8	8	16	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.98		1.00	0.98			0.97			0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1444	3021		1566	3019			3583			3595	
Flt Permitted	0.48	1.00		0.54	1.00			0.90			0.84	
Satd. Flow (perm)	735	3021		883	3019			3230			3066	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	66	323	36	29	364	67	30	148	52	69	162	72
RTOR Reduction (vph)	0	13	0	0	23	0	0	30	0	0	42	0
Lane Group Flow (vph)	66	346	0	29	408	0	0	200	0	0	261	0
Confl. Peds. (#/hr)	24		47	47		24	9		36	36		9
Confl. Bikes (#/hr)			4	4			1					1
Heavy Vehicles (%)	9%	4%	0%	0%	3%	0%	0%	1%	10%	0%	0%	8%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	30.0	30.0		30.0	30.0			27.0			27.0	
Effective Green, g (s)	30.0	30.0		30.0	30.0			27.0			27.0	
Actuated g/C Ratio	0.46	0.46		0.46	0.46			0.42			0.42	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	339	1394		408	1393			1342			1274	
v/s Ratio Prot		0.11			c0.14							
v/s Ratio Perm	0.09			0.03				0.06			c0.09	
v/c Ratio	0.19	0.25		0.07	0.29			0.15			0.20	
Uniform Delay, d1	10.4	10.6		9.7	10.9			11.8			12.1	
Progression Factor	0.65	0.64		1.00	1.00			0.93			0.41	
Incremental Delay, d2	1.0	0.3		0.3	0.5			0.2			0.3	
Delay (s)	7.7	7.2		10.1	11.4			11.3			5.3	
Level of Service	A	A		B	B			B			A	
Approach Delay (s)		7.3			11.3			11.3			5.3	
Approach LOS		A			B			B			A	

Intersection Summary			
HCM Average Control Delay	8.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.8%	ICU Level of Service	B
Analysis Period (min)	15		

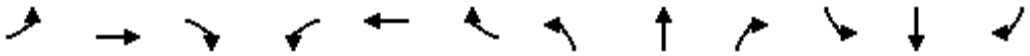
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	47	456	30	86	507	222	25	124	115	340	261	82
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.99			0.96			0.93			0.98	
Flt Protected		1.00			0.99			1.00			0.98	
Satd. Flow (prot)		3278			3168			3089			3181	
Flt Permitted		0.75			0.77			0.87			0.69	
Satd. Flow (perm)		2472			2447			2703			2253	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	52	507	33	96	563	247	28	138	128	378	290	91
RTOR Reduction (vph)	0	5	0	0	49	0	0	67	0	0	13	0
Lane Group Flow (vph)	0	587	0	0	857	0	0	227	0	0	746	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		32.0			32.0			38.0			30.0	
Effective Green, g (s)		32.0			32.0			38.0			30.0	
Actuated g/C Ratio		0.40			0.40			0.48			0.38	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		989			979			1308			845	
v/s Ratio Prot								c0.01				
v/s Ratio Perm		0.24			c0.35			0.07			c0.33	
v/c Ratio		0.59			0.88			0.17			0.97dl	
Uniform Delay, d1		18.9			22.2			12.0			23.4	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		2.6			10.9			0.3			12.9	
Delay (s)		21.5			33.0			12.3			36.2	
Level of Service		C			C			B			D	
Approach Delay (s)		21.5			33.0			12.3			36.2	
Approach LOS		C			C			B			D	

Intersection Summary			
HCM Average Control Delay	28.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	86.4%	ICU Level of Service	E
Analysis Period (min)	15		

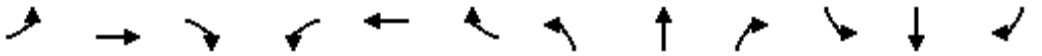
dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	899	138	48	794	0	82	0	36	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	10	10	12	12	12	12	12	12	12
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			1.00				
Frt		0.98			1.00			0.96				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		3037			3090			1619				
Flt Permitted		1.00			0.80			0.79				
Satd. Flow (perm)		3037			2483			1328				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	999	153	53	882	0	91	0	40	0	0	0
RTOR Reduction (vph)	0	17	0	0	0	0	0	18	0	0	0	0
Lane Group Flow (vph)	0	1135	0	0	935	0	0	113	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	custom			Perm			Perm			Perm		
Protected Phases		4 5 6 11			8			2			2	
Permitted Phases	4 6 11			8			2			2		
Actuated Green, G (s)		67.0			33.0			14.0				
Effective Green, g (s)		60.0			33.0			14.0				
Actuated g/C Ratio		0.67			0.37			0.16				
Clearance Time (s)					5.0			5.0				
Lane Grp Cap (vph)		2025			910			207				
v/s Ratio Prot		c0.37										
v/s Ratio Perm					c0.38			c0.09				
v/c Ratio		0.56			1.03			0.55				
Uniform Delay, d1		8.0			28.5			35.1				
Progression Factor		0.20			1.35			1.00				
Incremental Delay, d2		0.1			35.8			10.0				
Delay (s)		1.7			74.3			45.1				
Level of Service		A			E			D				
Approach Delay (s)		1.7			74.3			45.1			0.0	
Approach LOS		A			E			D			A	

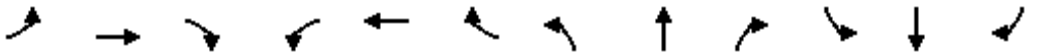
Intersection Summary			
HCM Average Control Delay	34.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	75.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	224	642	24	112	614	185	61	4	107	212	10	213
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	10	12	12	12	12	16	12	12	12	12
Total Lost time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85		0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (prot)	1550	3192		1660	3320	1485		1782		1660	1748	1485
Flt Permitted	0.29	1.00		0.33	1.00	1.00		0.88		0.44	1.00	1.00
Satd. Flow (perm)	471	3192		583	3320	1485		1592		763	1748	1485
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	249	713	27	124	682	206	68	4	119	236	11	237
RTOR Reduction (vph)	0	2	0	0	0	96	0	90	0	0	0	135
Lane Group Flow (vph)	249	738	0	124	682	110	0	101	0	236	11	102
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	54.9	42.5		47.6	38.2	48.2		12.1		25.1	25.1	38.8
Effective Green, g (s)	54.9	42.5		47.6	38.2	48.2		12.1		25.1	25.1	38.8
Actuated g/C Ratio	0.61	0.47		0.53	0.42	0.54		0.13		0.28	0.28	0.43
Clearance Time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Vehicle Extension (s)	4.0	3.0		4.0	3.0	3.0		4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	452	1507		421	1409	795		214		312	487	640
v/s Ratio Prot	c0.08	0.23		0.03	0.21	0.02				c0.08	0.01	0.02
v/s Ratio Perm	c0.25			0.13		0.06		0.06		c0.13		0.04
v/c Ratio	0.55	0.49		0.29	0.48	0.14		0.47		0.76	0.02	0.16
Uniform Delay, d1	9.2	16.3		10.9	18.8	10.5		36.0		28.6	23.5	15.6
Progression Factor	2.70	2.08		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	1.6	1.0		0.5	1.2	0.1		2.2		10.0	0.0	0.2
Delay (s)	26.5	34.8		11.4	20.0	10.6		38.2		38.6	23.6	15.8
Level of Service	C	C		B	B	B		D		D	C	B
Approach Delay (s)		32.7			17.0			38.2			27.1	
Approach LOS		C			B			D			C	

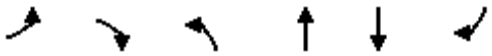
Intersection Summary			
HCM Average Control Delay	26.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	61.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	518	443	2	333	0	0	0	0	19	0	578
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	576	492	2	370	0	0	0	0	21	0	642
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		498										
pX, platoon unblocked												
vC, conflicting volume	370			576			765	950	288	662	950	185
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	370			576			765	950	288	662	950	185
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	94	100	22
cM capacity (veh/h)	1178			987			64	256	706	345	256	823

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	288	288	492	126	247	21	642
Volume Left	0	0	0	2	0	21	0
Volume Right	0	0	492	0	0	0	642
cSH	1700	1700	1700	987	1700	345	823
Volume to Capacity	0.17	0.17	0.29	0.00	0.15	0.06	0.78
Queue Length 95th (ft)	0	0	0	0	0	5	198
Control Delay (s)	0.0	0.0	0.0	0.2	0.0	16.1	23.1
Lane LOS				A		C	C
Approach Delay (s)	0.0			0.1		22.8	
Approach LOS						C	

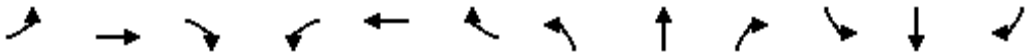
Intersection Summary				
Average Delay	7.2			
Intersection Capacity Utilization	54.2%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	537	0	335	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	597	0	372	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	298	298	372
Volume Left (vph)	298	298	372
Volume Right (vph)	0	0	0
Hadj (s)	0.55	0.55	0.25
Departure Headway (s)	6.2	6.2	5.6
Degree Utilization, x	0.51	0.51	0.58
Capacity (veh/h)	568	570	619
Control Delay (s)	14.3	14.3	16.0
Approach Delay (s)	14.3		16.0
Approach LOS	B		C

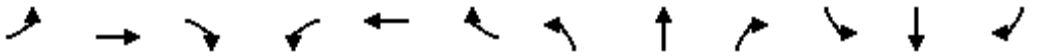
Intersection Summary			
Delay	14.9		
HCM Level of Service	B		
Intersection Capacity Utilization	42.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	483	64	212	535	0	0	0	0	101	21	58
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)		3.0		4.0	4.0						5.0	
Lane Util. Factor		0.95		1.00	0.95						0.95	
Frt		0.98		1.00	1.00						0.95	
Flt Protected		1.00		0.95	1.00						0.97	
Satd. Flow (prot)		3153		1605	3210						3074	
Flt Permitted		1.00		0.34	1.00						0.97	
Satd. Flow (perm)		3153		574	3210						3074	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	537	71	236	594	0	0	0	0	112	23	64
RTOR Reduction (vph)	0	12	0	0	0	0	0	0	0	0	44	0
Lane Group Flow (vph)	0	596	0	236	594	0	0	0	0	0	155	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type				pm+pt						Split		
Protected Phases		4		3	8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		36.0		49.0	49.0						27.0	
Effective Green, g (s)		36.0		49.0	49.0						27.0	
Actuated g/C Ratio		0.42		0.58	0.58						0.32	
Clearance Time (s)		3.0		4.0	4.0						5.0	
Lane Grp Cap (vph)		1335		452	1850						976	
v/s Ratio Prot		0.19		c0.06	0.19						c0.05	
v/s Ratio Perm				c0.24								
v/c Ratio		0.45		0.52	0.32						0.16	
Uniform Delay, d1		17.4		16.7	9.4						20.8	
Progression Factor		1.00		0.36	0.17						1.00	
Incremental Delay, d2		1.1		3.3	0.3						0.3	
Delay (s)		18.5		9.3	1.9						21.2	
Level of Service		B		A	A						C	
Approach Delay (s)		18.5			4.0			0.0			21.2	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	46.2%	ICU Level of Service	A
Analysis Period (min)	15		

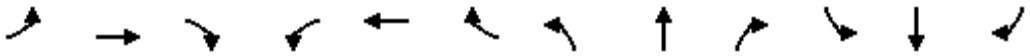
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	95	489	0	0	684	129	63	90	63	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	11	11	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0			3.0			5.0				
Lane Util. Factor	1.00	0.95			0.95			0.91				
Frt	1.00	1.00			0.98			0.96				
Flt Protected	0.95	1.00			1.00			0.99				
Satd. Flow (prot)	1660	3320			3133			4497				
Flt Permitted	0.19	1.00			1.00			0.99				
Satd. Flow (perm)	335	3320			3133			4497				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	106	543	0	0	760	143	70	100	70	0	0	0
RTOR Reduction (vph)	0	0	0	0	18	0	0	48	0	0	0	0
Lane Group Flow (vph)	106	543	0	0	885	0	0	192	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt						Split					
Protected Phases	7	4			8		2	2				
Permitted Phases	4											
Actuated Green, G (s)	48.0	48.0			35.0			27.0				
Effective Green, g (s)	48.0	48.0			35.0			27.0				
Actuated g/C Ratio	0.56	0.56			0.41			0.32				
Clearance Time (s)	5.0	5.0			3.0			5.0				
Lane Grp Cap (vph)	345	1875			1290			1428				
v/s Ratio Prot	0.04	c0.16			c0.28			c0.04				
v/s Ratio Perm	0.14											
v/c Ratio	0.31	0.29			0.69			0.13				
Uniform Delay, d1	19.6	9.6			20.5			20.7				
Progression Factor	0.46	0.31			1.00			1.00				
Incremental Delay, d2	2.1	0.4			3.0			0.2				
Delay (s)	11.1	3.3			23.5			20.9				
Level of Service	B	A			C			C				
Approach Delay (s)		4.6			23.5			20.9			0.0	
Approach LOS		A			C			C			A	

Intersection Summary			
HCM Average Control Delay	16.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.2%	ICU Level of Service	A
Analysis Period (min)	15		

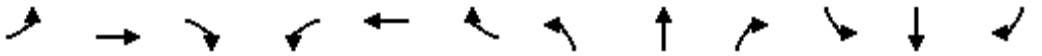
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	114	358	114	119	426	89	129	78	37	32	87	144
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	12	15	12	12	15	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		0.97			0.98			0.98			0.93	
Flt Protected		0.99			0.99			0.97			0.99	
Satd. Flow (prot)		2979			3005			1835			1770	
Flt Permitted		0.62			0.65			0.72			0.94	
Satd. Flow (perm)		1874			1968			1361			1676	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	127	398	127	132	473	99	143	87	41	36	97	160
RTOR Reduction (vph)	0	32	0	0	20	0	0	10	0	0	67	0
Lane Group Flow (vph)	0	620	0	0	684	0	0	261	0	0	226	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		23.0			23.0			32.0			32.0	
Effective Green, g (s)		23.0			23.0			32.0			32.0	
Actuated g/C Ratio		0.35			0.35			0.49			0.49	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		663			696			670			825	
v/s Ratio Prot												
v/s Ratio Perm		0.33			c0.35			c0.19			0.14	
v/c Ratio		0.93			0.98			0.39			0.27	
Uniform Delay, d1		20.3			20.8			10.4			9.7	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		22.2			30.2			1.7			0.8	
Delay (s)		42.4			51.0			12.1			10.5	
Level of Service		D			D			B			B	
Approach Delay (s)		42.4			51.0			12.1			10.5	
Approach LOS		D			D			B			B	

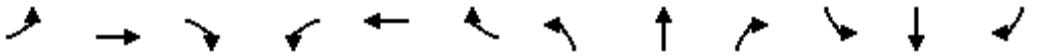
Intersection Summary			
HCM Average Control Delay	36.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	83.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	106	229	88	199	420	125	124	539	77	110	940	146
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	12	10	16	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.96		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1562	2993		1574	3644		1508	3069	1333	1520	3099	1336
Flt Permitted	0.31	1.00		0.50	1.00		0.13	1.00	1.00	0.34	1.00	1.00
Satd. Flow (perm)	510	2993		836	3644		212	3069	1333	545	3099	1336
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	112	241	93	209	442	132	131	567	81	116	989	154
RTOR Reduction (vph)	0	48	0	0	33	0	0	0	51	0	0	98
Lane Group Flow (vph)	112	286	0	209	541	0	131	567	30	116	989	56
Confl. Peds. (#/hr)	19		16	16		19	22		25	25		22
Heavy Vehicles (%)	2%	2%	0%	1%	2%	2%	2%	4%	0%	1%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	32.0	27.0		32.0	27.0		38.0	31.0	31.0	38.0	31.0	31.0
Effective Green, g (s)	30.0	28.0		30.0	28.0		36.0	31.0	31.0	36.0	31.0	31.0
Actuated g/C Ratio	0.35	0.33		0.35	0.33		0.42	0.36	0.36	0.42	0.36	0.36
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	230	986		330	1200		181	1119	486	300	1130	487
v/s Ratio Prot	0.02	0.10		c0.03	0.15		c0.05	0.18		0.03	c0.32	
v/s Ratio Perm	0.15			c0.19			0.26		0.02	0.14		0.04
v/c Ratio	0.49	0.29		0.63	0.45		0.72	0.51	0.06	0.39	0.88	0.12
Uniform Delay, d1	19.9	21.1		22.2	22.4		18.0	21.0	17.5	15.6	25.2	17.9
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.40	1.05	2.37
Incremental Delay, d2	7.2	0.7		8.9	1.2		22.1	1.6	0.2	2.8	7.4	0.4
Delay (s)	27.1	21.9		31.2	23.7		40.1	22.7	17.8	24.6	33.8	42.7
Level of Service	C	C		C	C		D	C	B	C	C	D
Approach Delay (s)		23.2			25.7			25.1			34.1	
Approach LOS		C			C			C			C	

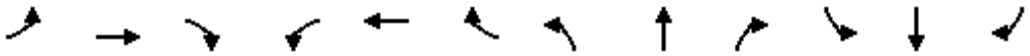
Intersection Summary			
HCM Average Control Delay	28.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	73.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	48	348	30	83	601	84	33	100	53	51	124	64
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	16	12	12	16	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00	0.98		1.00	0.99
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected		0.99	1.00		0.99	1.00		0.99	1.00		0.99	1.00
Satd. Flow (prot)		1965	1466		1990	1480		2015	1506		1995	1511
Flt Permitted		0.60	1.00		0.87	1.00		0.91	1.00		0.89	1.00
Satd. Flow (perm)		1184	1466		1750	1480		1857	1506		1809	1511
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	51	366	32	87	633	88	35	105	56	54	131	67
RTOR Reduction (vph)	0	0	17	0	0	47	0	0	33	0	0	39
Lane Group Flow (vph)	0	417	15	0	720	41	0	140	23	0	185	28
Confl. Peds. (#/hr)	11		20	20		11	1		4	4		1
Confl. Bikes (#/hr)	1		1	1		1			1	1		
Heavy Vehicles (%)	4%	3%	0%	0%	2%	0%	0%	0%	0%	0%	1%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Effective Green, g (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Actuated g/C Ratio		0.46	0.46		0.46	0.46		0.42	0.42		0.42	0.42
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		546	677		808	683		771	626		751	628
v/s Ratio Prot												
v/s Ratio Perm		0.35	0.01		c0.41	0.03		0.08	0.02		c0.10	0.02
v/c Ratio		0.76	0.02		0.89	0.06		0.18	0.04		0.25	0.04
Uniform Delay, d1		14.6	9.5		16.0	9.7		12.0	11.3		12.4	11.3
Progression Factor		1.00	1.00		0.44	0.05		1.05	1.21		1.03	0.89
Incremental Delay, d2		9.8	0.1		12.2	0.1		0.5	0.1		0.7	0.1
Delay (s)		24.3	9.6		19.2	0.7		13.1	13.7		13.5	10.2
Level of Service		C	A		B	A		B	B		B	B
Approach Delay (s)		23.3			17.2			13.3			12.6	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM Average Control Delay	17.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	100.4%	ICU Level of Service	G
Analysis Period (min)	15		

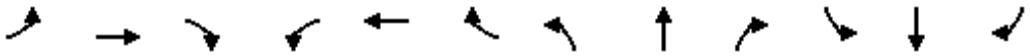
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	75	385	20	51	566	91	10	109	23	125	214	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.98		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1550	3076		1550	3035		1550	3017		1550	2991	
Flt Permitted	0.95	1.00		0.49	1.00		0.55	1.00		0.66	1.00	
Satd. Flow (perm)	1550	3076		802	3035		892	3017		1074	2991	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	83	428	22	57	629	101	11	121	26	139	238	72
RTOR Reduction (vph)	0	6	0	0	20	0	0	15	0	0	42	0
Lane Group Flow (vph)	83	444	0	57	710	0	11	132	0	139	268	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Prot			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Effective Green, g (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.11	0.49		0.34	0.34		0.42	0.42		0.42	0.42	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	167	1514		271	1027		371	1253		446	1242	
v/s Ratio Prot	c0.05	0.14			c0.23			0.04			0.09	
v/s Ratio Perm				0.07			0.01			c0.13		
v/c Ratio	0.50	0.29		0.21	0.69		0.03	0.11		0.31	0.22	
Uniform Delay, d1	27.3	9.8		15.3	18.6		11.2	11.6		12.8	12.2	
Progression Factor	1.16	0.56		1.00	1.00		1.00	1.00		1.11	1.10	
Incremental Delay, d2	8.6	0.4		1.8	3.8		0.1	0.2		1.8	0.4	
Delay (s)	40.3	5.9		17.1	22.4		11.4	11.8		15.9	13.8	
Level of Service	D	A		B	C		B	B		B	B	
Approach Delay (s)		11.2			22.0			11.8			14.4	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM Average Control Delay	16.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	49.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

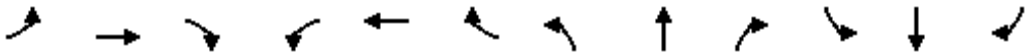


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	64	267	166	247	330	63	412	300	189	55	295	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.94		1.00	0.98			0.97			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.99	
Satd. Flow (prot)	1550	2921		1550	3025			3144			3236	
Flt Permitted	0.50	1.00		0.95	1.00			0.63			0.71	
Satd. Flow (perm)	813	2921		1550	3025			2030			2306	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	71	297	184	274	367	70	458	333	210	61	328	56
RTOR Reduction (vph)	0	107	0	0	18	0	0	27	0	0	13	0
Lane Group Flow (vph)	71	374	0	274	419	0	0	974	0	0	432	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Prot			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4						2			6		
Actuated Green, G (s)	15.0	15.0		17.0	35.0			44.0			44.0	
Effective Green, g (s)	15.0	15.0		17.0	35.0			44.0			44.0	
Actuated g/C Ratio	0.17	0.17		0.19	0.39			0.49			0.49	
Clearance Time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	136	487		293	1176			992			1127	
v/s Ratio Prot		c0.13		c0.18	0.14							
v/s Ratio Perm	0.09							c0.48			0.19	
v/c Ratio	0.52	0.77		0.94	0.36			1.09dl			0.38	
Uniform Delay, d1	34.2	35.8		36.0	19.5			22.6			14.5	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	13.6	11.1		38.3	0.8			24.6			1.0	
Delay (s)	47.8	46.9		74.3	20.4			47.2			15.5	
Level of Service	D	D		E	C			D			B	
Approach Delay (s)		47.1			41.1			47.2			15.5	
Approach LOS		D			D			D			B	

Intersection Summary			
HCM Average Control Delay	40.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	80.9%	ICU Level of Service	D
Analysis Period (min)	15		

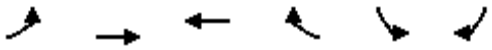
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	26	454	16	75	647	75	55	110	165	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	14	12	10	15	10
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			0.95				
Frt		1.00			0.99			0.93				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		1620			1603			3249				
Flt Permitted		0.94			0.91			0.99				
Satd. Flow (perm)		1529			1466			3249				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	29	504	18	83	719	83	61	122	183	0	0	0
RTOR Reduction (vph)	0	1	0	0	5	0	0	139	0	0	0	0
Lane Group Flow (vph)	0	550	0	0	880	0	0	227	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		41.5			41.5			15.5				
Effective Green, g (s)		41.5			41.5			15.5				
Actuated g/C Ratio		0.64			0.64			0.24				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		3.0			3.0			8.0				
Lane Grp Cap (vph)		976			936			775				
v/s Ratio Prot												
v/s Ratio Perm		0.36			c0.60			0.07				
v/c Ratio		0.56			0.94			0.29				
Uniform Delay, d1		6.6			10.6			20.3				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		2.3			18.1			0.9				
Delay (s)		9.0			28.8			21.2				
Level of Service		A			C			C				
Approach Delay (s)		9.0			28.8			21.2			0.0	
Approach LOS		A			C			C			A	

Intersection Summary			
HCM Average Control Delay	21.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	85.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	133	474	615	39	119	174
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	140	499	647	41	125	183
Pedestrians		5	6		17	
Lane Width (ft)		16.0	16.0		10.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		1	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1319	491			
pX, platoon unblocked	0.94				0.94	0.94
vC, conflicting volume	705				1220	366
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	571				1116	212
tC, single (s)	4.2				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	85				22	75
cM capacity (veh/h)	912				161	742

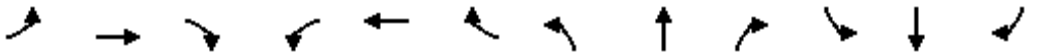
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	SB 2
Volume Total	306	333	432	257	125	183
Volume Left	140	0	0	0	125	0
Volume Right	0	0	0	41	0	183
cSH	912	1700	1700	1700	161	742
Volume to Capacity	0.15	0.20	0.25	0.15	0.78	0.25
Queue Length 95th (ft)	14	0	0	0	125	24
Control Delay (s)	5.3	0.0	0.0	0.0	79.4	11.4
Lane LOS	A				F	B
Approach Delay (s)	2.5		0.0		39.1	
Approach LOS					E	

Intersection Summary			
Average Delay	8.4		
Intersection Capacity Utilization	55.2%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	710	0	1	626	3	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frt	1.00			1.00	0.88	
Flt Protected	1.00			1.00	1.00	
Satd. Flow (prot)	1748			1747	1525	
Flt Permitted	1.00			1.00	1.00	
Satd. Flow (perm)	1748			1747	1525	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	789	0	1	696	3	32
RTOR Reduction (vph)	0	0	0	0	28	0
Lane Group Flow (vph)	789	0	0	697	7	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type			Perm			
Protected Phases	1 2 4			4	3	
Permitted Phases			4			
Actuated Green, G (s)	70.0			40.0	12.0	
Effective Green, g (s)	66.0			40.0	12.0	
Actuated g/C Ratio	0.73			0.44	0.13	
Clearance Time (s)				4.0	4.0	
Lane Grp Cap (vph)	1282			776	203	
v/s Ratio Prot	c0.45				c0.00	
v/s Ratio Perm				0.40		
v/c Ratio	0.62			0.90	0.04	
Uniform Delay, d1	5.8			23.1	34.0	
Progression Factor	0.05			1.00	1.00	
Incremental Delay, d2	0.9			15.3	0.3	
Delay (s)	1.2			38.5	34.3	
Level of Service	A			D	C	
Approach Delay (s)	1.2			38.5	34.3	
Approach LOS	A			D	C	

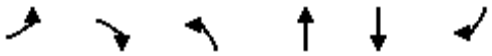
Intersection Summary			
HCM Average Control Delay	19.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	49.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	253	616	32	410	0	0	0	0	17	6	252
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	281	684	36	456	0	0	0	0	19	7	280
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	456			281			1153	1150	483	667	808	456
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	456			281			1153	1150	483	667	808	456
tC, single (s)	4.1			4.2			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			100	100	100	94	98	49
cM capacity (veh/h)	1116			1264			73	194	535	341	308	552

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	187	778	491	26	280
Volume Left	0	0	36	19	0
Volume Right	0	684	0	0	280
cSH	1700	1700	1264	332	552
Volume to Capacity	0.11	0.46	0.03	0.08	0.51
Queue Length 95th (ft)	0	0	2	6	71
Control Delay (s)	0.0	0.0	0.9	16.8	18.1
Lane LOS			A	C	C
Approach Delay (s)	0.0		0.9	17.9	
Approach LOS				C	

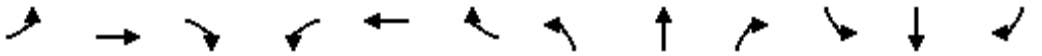
Intersection Summary				
Average Delay	3.4			
Intersection Capacity Utilization	60.6%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	270	0	442	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	300	0	491	0	0	0

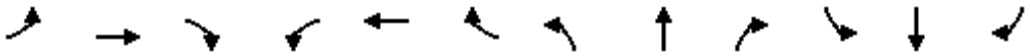
Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	150	150	491
Volume Left (vph)	150	150	491
Volume Right (vph)	0	0	0
Hadj (s)	0.55	0.55	0.25
Departure Headway (s)	6.4	6.4	5.0
Degree Utilization, x	0.27	0.27	0.68
Capacity (veh/h)	536	536	697
Control Delay (s)	10.5	10.5	18.1
Approach Delay (s)	10.5		18.1
Approach LOS	B		C

Intersection Summary			
Delay	15.2		
HCM Level of Service	C		
Intersection Capacity Utilization	40.6%	ICU Level of Service	A
Analysis Period (min)	15		



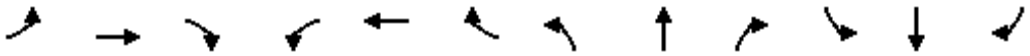
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	501	345	273	661	0	0	0	0	279	269	372
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	13	12	12	12	12	10	10	11
Total Lost time (s)		6.0	6.0		6.0					6.0	6.0	6.0
Lane Util. Factor		0.95	1.00		0.95					0.86	0.81	0.86
Frpb, ped/bikes		1.00	0.98		1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	0.95	0.85
Flt Protected		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (prot)		3179	1232		3425					1359	3806	1133
Flt Permitted		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (perm)		3179	1232		3425					1359	3806	1133
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	527	363	287	696	0	0	0	0	294	283	392
RTOR Reduction (vph)	0	0	230	0	0	0	0	0	0	0	53	113
Lane Group Flow (vph)	0	527	133	0	983	0	0	0	0	162	558	83
Confl. Peds. (#/hr)	4		6	6		4						
Heavy Vehicles (%)	0%	4%	6%	1%	2%	0%	0%	0%	0%	1%	1%	1%
Parking (#/hr)			0									0
Turn Type			Perm	Split						Split		custom
Protected Phases		2		10 12 14	10 12 14					4	4	
Permitted Phases			2									4 2
Actuated Green, G (s)		39.0	39.0		68.1					23.0	23.0	68.0
Effective Green, g (s)		39.0	39.0		68.1					23.0	23.0	68.0
Actuated g/C Ratio		0.24	0.24		0.43					0.14	0.14	0.42
Clearance Time (s)		6.0	6.0							6.0	6.0	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		775	300		1458					195	547	482
v/s Ratio Prot		c0.17			c0.29					0.12	c0.15	
v/s Ratio Perm			0.11									0.07
v/c Ratio		0.68	0.44		0.67					0.83	1.02	0.17
Uniform Delay, d1		54.8	51.3		37.0					66.6	68.5	28.5
Progression Factor		1.00	1.00		0.06					1.00	1.00	1.00
Incremental Delay, d2		4.8	4.7		0.1					24.9	43.6	0.2
Delay (s)		59.6	56.0		2.3					91.5	112.1	28.7
Level of Service		E	E		A					F	F	C
Approach Delay (s)		58.1			2.3			0.0			91.8	
Approach LOS		E			A			A			F	

Intersection Summary			
HCM Average Control Delay	50.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	31.9
Intersection Capacity Utilization	76.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



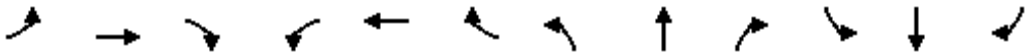
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	292	488	0	0	602	144	332	214	196	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	13	12	12	11	12	13	13	14	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0				
Lane Util. Factor	1.00	0.95			0.95	1.00	0.91	0.91				
Frt	1.00	1.00			1.00	0.85	1.00	0.94				
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (prot)	1605	3431			3210	1485	1561	3064				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (perm)	1605	3431			3210	1485	1561	3064				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	324	542	0	0	669	160	369	238	218	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	82	0	60	0	0	0	0
Lane Group Flow (vph)	324	542	0	0	669	78	280	485	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Split					Perm	Split					
Protected Phases	2 4 8	2 4 8			10		12	12				
Permitted Phases						10						
Actuated Green, G (s)	83.9	83.9			37.1	37.1	12.0	12.0				
Effective Green, g (s)	83.9	83.9			37.1	37.1	12.0	12.0				
Actuated g/C Ratio	0.52	0.52			0.23	0.23	0.08	0.08				
Clearance Time (s)					6.0	6.0	6.0	6.0				
Vehicle Extension (s)					3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	842	1799			744	344	117	230				
v/s Ratio Prot	c0.20	0.16			c0.21		c0.18	0.16				
v/s Ratio Perm						0.05						
v/c Ratio	0.38	0.30			0.90	0.23	2.39	2.11				
Uniform Delay, d1	22.7	21.5			59.6	49.8	74.0	74.0				
Progression Factor	0.06	0.06			1.00	1.00	1.00	1.00				
Incremental Delay, d2	0.2	0.1			13.7	0.3	652.3	513.1				
Delay (s)	1.4	1.3			73.3	50.2	726.3	587.1				
Level of Service	A	A			E	D	F	F				
Approach Delay (s)		1.4			68.8			634.4			0.0	
Approach LOS		A			E			F			A	

Intersection Summary			
HCM Average Control Delay	230.8	HCM Level of Service	F
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	29.0
Intersection Capacity Utilization	65.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	140	273	136	129	270	107	108	522	80	106	803	120
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	14	12	10	10	12	9	10	12
Total Lost time (s)	4.0	4.0	5.0	4.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1576	1600	1372	1594	1766		1578	3009		1537	3001	
Flt Permitted	0.26	1.00	1.00	0.41	1.00		0.13	1.00		0.33	1.00	
Satd. Flow (perm)	438	1600	1372	683	1766		216	3009		527	3001	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	147	287	143	136	284	113	114	549	84	112	845	126
RTOR Reduction (vph)	0	0	100	0	16	0	0	13	0	0	13	0
Lane Group Flow (vph)	147	287	43	136	381	0	114	620	0	112	958	0
Confl. Peds. (#/hr)	28		8	8		28	59		11	11		59
Confl. Bikes (#/hr)	3					3	1		2	2		1
Heavy Vehicles (%)	1%	5%	2%	0%	4%	0%	1%	4%	0%	0%	3%	3%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	34.0	27.0	27.0	34.0	27.0		43.0	36.0		40.2	34.6	
Effective Green, g (s)	32.0	28.0	27.0	32.0	27.0		41.0	36.0		38.2	34.6	
Actuated g/C Ratio	0.35	0.31	0.30	0.35	0.30		0.45	0.40		0.42	0.38	
Clearance Time (s)	3.0	5.0	5.0	3.0	5.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	230	494	409	302	526		188	1196		273	1146	
v/s Ratio Prot	c0.04	0.18		0.03	c0.22		c0.04	0.21		0.02	c0.32	
v/s Ratio Perm	0.18		0.03	0.13			0.23			0.15		
v/c Ratio	0.64	0.58	0.10	0.45	0.72		0.61	0.52		0.41	0.84	
Uniform Delay, d1	22.1	26.4	23.0	21.1	28.5		17.4	20.7		16.7	25.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	5.7	4.9	0.5	1.1	8.4		5.4	1.6		1.0	7.3	
Delay (s)	27.8	31.3	23.5	22.2	36.9		22.8	22.3		17.7	32.7	
Level of Service	C	C	C	C	D		C	C		B	C	
Approach Delay (s)		28.5			33.1			22.4			31.2	
Approach LOS		C			C			C			C	

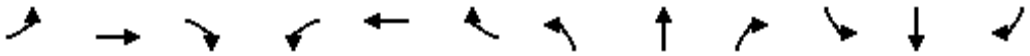
Intersection Summary			
HCM Average Control Delay	28.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	90.6	Sum of lost time (s)	17.0
Intersection Capacity Utilization	79.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	348	61	73	437	82	37	59	34	36	91	70
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	10	10	10	12	15	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.97		0.99			0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.96			0.95	
Flt Protected		0.99	1.00		0.99	1.00		0.99			0.99	
Satd. Flow (prot)		1970	1467		1624	1381		1868			1875	
Flt Permitted		0.93	1.00		0.90	1.00		0.90			0.94	
Satd. Flow (perm)		1833	1467		1470	1381		1700			1781	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	41	366	64	77	460	86	39	62	36	38	96	74
RTOR Reduction (vph)	0	0	32	0	0	36	0	20	0	0	30	0
Lane Group Flow (vph)	0	407	32	0	537	50	0	117	0	0	178	0
Confl. Peds. (#/hr)	12		20	20		12	8		2	2		8
Confl. Bikes (#/hr)	1		2	2		1			1	1		
Heavy Vehicles (%)	3%	3%	0%	0%	3%	0%	0%	0%	0%	0%	1%	3%
Turn Type	Perm		Perm	Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Effective Green, g (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Actuated g/C Ratio		0.49	0.49		0.49	0.49		0.42			0.42	
Clearance Time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		902	722		724	680		706			740	
v/s Ratio Prot												
v/s Ratio Perm		0.22	0.02		c0.37	0.04		0.07			c0.10	
v/c Ratio		0.45	0.04		0.74	0.07		0.17			0.24	
Uniform Delay, d1		10.8	8.6		13.2	8.7		11.9			12.3	
Progression Factor		1.00	1.00		1.00	1.00		1.00			1.46	
Incremental Delay, d2		1.6	0.1		6.7	0.2		0.5			0.7	
Delay (s)		12.4	8.7		19.9	8.9		12.4			18.7	
Level of Service		B	A		B	A		B			B	
Approach Delay (s)		11.9			18.4			12.4			18.7	
Approach LOS		B			B			B			B	

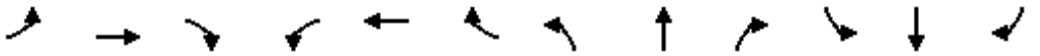
Intersection Summary			
HCM Average Control Delay	15.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	74.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	259	41	71	472	20	36	114	34	17	184	70
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.95		1.00	0.98		1.00	0.97		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.97	
Flt Protected		0.99	1.00		0.99	1.00		0.99	1.00		1.00	
Satd. Flow (prot)		1753	1459		1725	1493		1712	1482		1711	
Flt Permitted		0.84	1.00		0.91	1.00		0.89	1.00		0.97	
Satd. Flow (perm)		1479	1459		1584	1493		1543	1482		1672	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	62	273	43	75	497	21	38	120	36	18	194	74
RTOR Reduction (vph)	0	0	22	0	0	11	0	0	26	0	28	0
Lane Group Flow (vph)	0	335	21	0	572	10	0	158	10	0	258	0
Confl. Peds. (#/hr)	19		25	25		19	3		6	6		3
Confl. Bikes (#/hr)	1		2	2		1			1	1		
Heavy Vehicles (%)	0%	2%	0%	0%	4%	0%	0%	5%	0%	0%	0%	2%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		22.0	22.0		22.0	22.0		13.0	13.0		13.0	
Effective Green, g (s)		22.0	22.0		22.0	22.0		13.0	13.0		13.0	
Actuated g/C Ratio		0.49	0.49		0.49	0.49		0.29	0.29		0.29	
Clearance Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Grp Cap (vph)		723	713		774	730		446	428		483	
v/s Ratio Prot												
v/s Ratio Perm		0.23	0.01		c0.36	0.01		0.10	0.01		c0.15	
v/c Ratio		0.46	0.03		0.74	0.01		0.35	0.02		0.53	
Uniform Delay, d1		7.6	6.0		9.2	5.9		12.7	11.5		13.5	
Progression Factor		1.00	1.00		1.00	1.00		1.14	1.46		1.00	
Incremental Delay, d2		2.1	0.1		6.3	0.0		1.2	0.1		4.2	
Delay (s)		9.7	6.0		15.5	6.0		15.7	16.8		17.7	
Level of Service		A	A		B	A		B	B		B	
Approach Delay (s)		9.3			15.1			15.9			17.7	
Approach LOS		A			B			B			B	

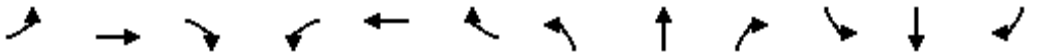
Intersection Summary			
HCM Average Control Delay	14.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	83.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	229	35	76	8	14	11	38	256	8	31	556	531
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.95		0.98			1.00			1.00	0.94
Flpb, ped/bikes		0.98	1.00		0.99			1.00			1.00	1.00
Frt		1.00	0.85		0.96			1.00			1.00	0.85
Flt Protected		0.96	1.00		0.99			0.99			1.00	1.00
Satd. Flow (prot)		1860	1440		1765			1996			1975	1382
Flt Permitted		0.76	1.00		0.93			0.81			0.97	1.00
Satd. Flow (perm)		1468	1440		1657			1631			1928	1382
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	254	39	84	9	16	12	42	284	9	34	618	590
RTOR Reduction (vph)	0	0	49	0	9	0	0	2	0	0	0	201
Lane Group Flow (vph)	0	293	35	0	28	0	0	333	0	0	652	389
Confl. Peds. (#/hr)	37		53	53		37	39		54	54		39
Confl. Bikes (#/hr)							2					2
Heavy Vehicles (%)	4%	0%	1%	0%	0%	0%	0%	1%	0%	0%	3%	4%
Turn Type	pm+pt		Perm	Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		27.0	27.0		17.0			32.0			32.0	32.0
Effective Green, g (s)		27.0	27.0		17.0			32.0			32.0	32.0
Actuated g/C Ratio		0.42	0.42		0.26			0.49			0.49	0.49
Clearance Time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		658	598		433			803			949	680
v/s Ratio Prot		c0.05										
v/s Ratio Perm		0.13	0.02		0.02			0.20			c0.34	0.28
v/c Ratio		0.45	0.06		0.06			0.42			0.69	0.57
Uniform Delay, d1		13.6	11.4		18.0			10.5			12.7	11.7
Progression Factor		1.00	1.00		1.00			0.51			1.00	1.00
Incremental Delay, d2		2.2	0.2		0.3			1.1			4.0	3.5
Delay (s)		15.8	11.6		18.3			6.5			16.7	15.2
Level of Service		B	B		B			A			B	B
Approach Delay (s)		14.9			18.3			6.5			16.0	
Approach LOS		B			B			A			B	

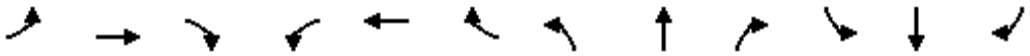
Intersection Summary			
HCM Average Control Delay	14.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	78.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



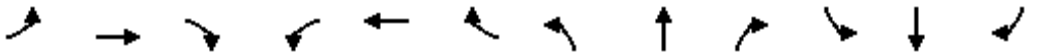
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	894	289	375	1072	0	0	0	0	513	284	334
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	11	8	8	8	11	12	14
Total Lost time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Lane Util. Factor		0.91		1.00	0.95					0.91	0.86	0.91
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.96		1.00	1.00					1.00	0.98	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.98	1.00
Satd. Flow (prot)		4573		1621	3320					1489	2913	1442
Flt Permitted		1.00		0.11	1.00					0.95	0.98	1.00
Satd. Flow (perm)		4573		190	3320					1489	2913	1442
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	941	304	395	1128	0	0	0	0	540	299	352
RTOR Reduction (vph)	0	45	0	0	0	0	0	0	0	0	9	76
Lane Group Flow (vph)	0	1200	0	395	1128	0	0	0	0	308	603	195
Confl. Peds. (#/hr)	15		11	11		15						
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	0%	3%	3%	2%	3%	0%	0%	0%	0%	1%	3%	3%
Turn Type				pm+pt						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Actuated Green, G (s)		43.5		74.9	74.9					28.1	28.1	28.1
Effective Green, g (s)		43.5		74.9	74.9					28.1	28.1	28.1
Actuated g/C Ratio		0.38		0.65	0.65					0.24	0.24	0.24
Clearance Time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Vehicle Extension (s)		7.0		3.5	7.0					3.5	3.5	3.5
Lane Grp Cap (vph)		1730		458	2162					364	712	352
v/s Ratio Prot		0.26		c0.20	0.34							
v/s Ratio Perm				c0.36						0.21	0.21	0.14
v/c Ratio		0.69		0.86	0.52					0.85	0.85	0.55
Uniform Delay, d1		30.1		29.1	10.6					41.4	41.4	38.0
Progression Factor		1.00		0.86	1.69					1.00	1.00	1.00
Incremental Delay, d2		2.3		10.4	0.6					16.7	9.4	2.1
Delay (s)		32.4		35.5	18.5					58.1	50.8	40.0
Level of Service		C		D	B					E	D	D
Approach Delay (s)		32.4			22.9			0.0			50.2	
Approach LOS		C			C			A			D	

Intersection Summary			
HCM Average Control Delay	34.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	105.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	341	1066	0	0	1017	271	430	351	318	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	11	12	12	12	12	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0		6.0				
Lane Util. Factor	0.97	0.95			0.95	1.00		0.91				
Frpb, ped/bikes	1.00	1.00			1.00	0.98		1.00				
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00				
Frt	1.00	1.00			1.00	0.85		0.96				
Flt Protected	0.95	1.00			1.00	1.00		0.98				
Satd. Flow (prot)	3144	3353			3241	1489		4521				
Flt Permitted	0.14	1.00			1.00	1.00		0.98				
Satd. Flow (perm)	460	3353			3241	1489		4521				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	359	1122	0	0	1071	285	453	369	335	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	85	0	62	0	0	0	0
Lane Group Flow (vph)	359	1122	0	0	1071	200	0	1095	0	0	0	0
Confl. Peds. (#/hr)	7		5	5		7						
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	2%	2%	0%	0%	2%	1%	2%	1%	3%	0%	0%	0%
Turn Type	pm+pt					Perm	Perm					
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8					
Actuated Green, G (s)	71.2	71.2			53.0	53.0		31.8				
Effective Green, g (s)	71.2	71.2			53.0	53.0		31.8				
Actuated g/C Ratio	0.62	0.62			0.46	0.46		0.28				
Clearance Time (s)	6.0	6.0			6.0	6.0		6.0				
Vehicle Extension (s)	3.5	7.0			7.0	7.0		5.0				
Lane Grp Cap (vph)	570	2076			1494	686		1250				
v/s Ratio Prot	0.07	c0.33			c0.33							
v/s Ratio Perm	0.32					0.13		0.24				
v/c Ratio	0.63	0.54			0.72	0.29		0.88				
Uniform Delay, d1	15.3	12.5			25.0	19.3		39.7				
Progression Factor	1.32	0.17			0.98	1.25		1.00				
Incremental Delay, d2	1.5	0.7			2.2	0.8		7.7				
Delay (s)	21.6	2.8			26.6	25.0		47.4				
Level of Service	C	A			C	C		D				
Approach Delay (s)		7.4			26.3			47.4			0.0	
Approach LOS		A			C			D			A	

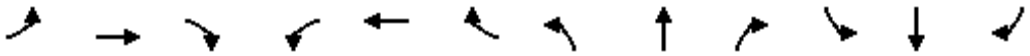
Intersection Summary			
HCM Average Control Delay	25.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	105.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	135	671	408	104	779	67	227	179	66	77	162	121
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	11	12	12	10	10	13	10	10	10
Total Lost time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		0.99	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.96		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1565	3273	1313	1601	3282		1578	3002		1540	2941	
Flt Permitted	0.11	1.00	1.00	0.38	1.00		0.39	1.00		0.59	1.00	
Satd. Flow (perm)	174	3273	1313	646	3282		652	3002		961	2941	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	142	706	429	109	820	71	239	188	69	81	171	127
RTOR Reduction (vph)	0	0	173	0	6	0	0	38	0	0	107	0
Lane Group Flow (vph)	142	706	256	109	885	0	239	219	0	81	191	0
Confl. Peds. (#/hr)	11		23	23		11	8		12	12		8
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	2%	1%	3%	3%	3%	0%	1%	1%	2%	3%	0%	1%
Parking (#/hr)			0									
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	64.9	52.3	68.7	43.4	34.3		38.1	26.6		26.2	18.2	
Effective Green, g (s)	64.9	52.3	68.7	43.4	34.3		38.1	26.6		26.2	18.2	
Actuated g/C Ratio	0.56	0.45	0.60	0.38	0.30		0.33	0.23		0.23	0.16	
Clearance Time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0		3.0	7.0		3.0	7.0	
Lane Grp Cap (vph)	426	1489	784	319	979		348	694		259	465	
v/s Ratio Prot	c0.08	c0.22	0.05	0.03	c0.27		c0.10	0.07		0.02	0.06	
v/s Ratio Perm	0.11		0.15	0.10			c0.13			0.05		
v/c Ratio	0.33	0.47	0.33	0.34	0.90		0.69	0.32		0.31	0.41	
Uniform Delay, d1	15.9	21.8	11.6	23.9	38.8		30.6	36.7		36.2	43.6	
Progression Factor	0.81	0.81	2.26	1.00	1.00		0.98	1.02		1.00	1.00	
Incremental Delay, d2	1.7	0.9	0.2	0.6	13.3		5.3	0.9		0.7	2.1	
Delay (s)	14.5	18.5	26.4	24.6	52.1		35.3	38.2		36.9	45.7	
Level of Service	B	B	C	C	D		D	D		D	D	
Approach Delay (s)		20.7			49.1			36.8			43.8	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM Average Control Delay	35.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	75.6%	ICU Level of Service	D
Analysis Period (min)	15		

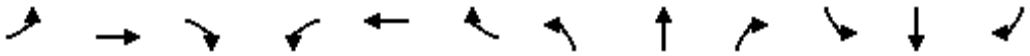
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	46	221	367	86	324	113	362	340	81	206	408	56
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	12	11	12	12	11	13	12	10	11	12
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.91		1.00	0.96		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1706	2910		1653	3235		1620	3405		1580	3183	
Flt Permitted	0.44	1.00		0.24	1.00		0.32	1.00		0.50	1.00	
Satd. Flow (perm)	794	2910		417	3235		544	3405		824	3183	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	48	233	386	91	341	119	381	358	85	217	429	59
RTOR Reduction (vph)	0	242	0	0	28	0	0	18	0	0	9	0
Lane Group Flow (vph)	48	377	0	91	432	0	381	425	0	217	479	0
Confl. Peds. (#/hr)	12		3	3		12	5					5
Heavy Vehicles (%)	0%	2%	2%	0%	1%	1%	2%	1%	0%	1%	2%	0%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	39.6	32.9		46.0	36.1		56.2	44.2		40.1	32.1	
Effective Green, g (s)	39.6	32.9		46.0	36.1		56.2	44.2		40.1	32.1	
Actuated g/C Ratio	0.34	0.29		0.40	0.31		0.49	0.38		0.35	0.28	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.5	7.0		3.5	7.0		3.5	7.0		3.5	7.0	
Lane Grp Cap (vph)	327	833		273	1016		454	1309		340	888	
v/s Ratio Prot	0.01	0.13		c0.03	c0.13		c0.15	0.12		0.04	0.15	
v/s Ratio Perm	0.04			0.10			c0.26			0.18		
v/c Ratio	0.15	0.45		0.33	0.43		0.84	0.32		0.64	0.54	
Uniform Delay, d1	25.5	33.7		23.1	31.2		20.8	24.9		28.8	35.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.98	0.97	
Incremental Delay, d2	0.2	1.8		0.9	1.3		13.1	0.7		3.8	2.2	
Delay (s)	25.7	35.4		23.9	32.5		33.9	25.6		32.1	36.2	
Level of Service	C	D		C	C		C	C		C	D	
Approach Delay (s)		34.7			31.1			29.4			34.9	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	32.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.9%	ICU Level of Service	D
Analysis Period (min)	15		

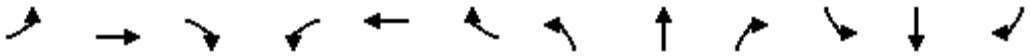
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	105	644	141	10	543	135	104	287	9	215	609	183
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	9	11	12	9	9	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.97		1.00	1.00		1.00	0.97	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3034			3004		1452	3227		1523	2871	
Flt Permitted		0.65			0.94		0.17	1.00		0.47	1.00	
Satd. Flow (perm)		1996			2820		255	3227		751	2871	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	117	716	157	11	603	150	116	319	10	239	677	203
RTOR Reduction (vph)	0	19	0	0	27	0	0	3	0	0	35	0
Lane Group Flow (vph)	0	971	0	0	737	0	116	326	0	239	845	0
Confl. Peds. (#/hr)	4		2	2		4	8		4	4		8
Confl. Bikes (#/hr)							2					2
Heavy Vehicles (%)	1%	2%	2%	0%	2%	6%	6%	2%	0%	1%	3%	3%
Turn Type	pm+pt			Perm			pm+pt			pm+pt		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		39.0			31.0		27.0	24.0		31.0	26.0	
Effective Green, g (s)		39.0			31.0		27.0	24.0		31.0	26.0	
Actuated g/C Ratio		0.49			0.39		0.34	0.30		0.39	0.32	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		1025			1093		131	968		339	933	
v/s Ratio Prot		c0.05					0.03	0.10		c0.04	c0.29	
v/s Ratio Perm		c0.41			0.26		0.27			0.23		
v/c Ratio		0.95			0.67		0.89	0.34		0.71	0.91	
Uniform Delay, d1		19.5			20.3		24.5	21.8		20.0	25.8	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		17.9			3.3		52.6	0.9		11.7	13.9	
Delay (s)		37.4			23.6		77.1	22.7		31.7	39.8	
Level of Service		D			C		E	C		C	D	
Approach Delay (s)		37.4			23.6			36.9			38.0	
Approach LOS		D			C			D			D	

Intersection Summary			
HCM Average Control Delay	34.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	91.1%	ICU Level of Service	F
Analysis Period (min)	15		

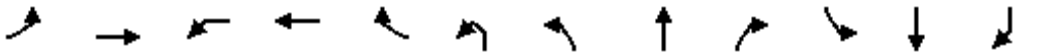
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	67	229	136	123	292	28	72	462	83	35	698	70
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.94		1.00	0.99		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1708	1899		1600	2011		1676	3218		1435	3274	
Flt Permitted	0.46	1.00		0.41	1.00		0.29	1.00		0.42	1.00	
Satd. Flow (perm)	832	1899		686	2011		516	3218		630	3274	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	69	236	140	127	301	29	74	476	86	36	720	72
RTOR Reduction (vph)	0	33	0	0	5	0	0	22	0	0	12	0
Lane Group Flow (vph)	69	343	0	127	325	0	74	540	0	36	780	0
Confl. Peds. (#/hr)	3		20	20		3	2		3	3		2
Confl. Bikes (#/hr)			1	1			2		2	2		2
Heavy Vehicles (%)	0%	0%	1%	6%	0%	0%	2%	3%	6%	19%	3%	2%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.48	0.48		0.48	0.48	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	307	701		253	743		246	1535		300	1561	
v/s Ratio Prot		0.18			0.16			0.17			c0.24	
v/s Ratio Perm	0.08			c0.19			0.14			0.06		
v/c Ratio	0.22	0.49		0.50	0.44		0.30	0.35		0.12	0.50	
Uniform Delay, d1	14.1	15.8		15.9	15.4		10.4	10.7		9.4	11.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.7	2.4		7.0	1.9		3.1	0.6		0.8	1.1	
Delay (s)	15.8	18.2		22.8	17.3		13.5	11.3		10.2	12.8	
Level of Service	B	B		C	B		B	B		B	B	
Approach Delay (s)		17.8			18.8			11.6			12.7	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	14.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	73.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	843	366	786	32	3	10	9	47	12	0	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	10	10	10	12	12	16	12	12	16	12
Total Lost time (s)		5.0	4.0	5.0				4.0			4.0	
Lane Util. Factor		0.95	1.00	1.00				1.00			1.00	
Frpb, ped/bikes		1.00	1.00	1.00				0.99			0.99	
Flpb, ped/bikes		1.00	1.00	1.00				1.00			1.00	
Frt		1.00	1.00	0.99				0.91			0.95	
Flt Protected		1.00	0.95	1.00				0.99			0.97	
Satd. Flow (prot)		3160	1565	1649				1811			1847	
Flt Permitted		0.95	0.17	1.00				0.96			0.87	
Satd. Flow (perm)		3013	274	1649				1751			1656	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	2	887	385	827	34	3	11	9	49	13	0	3
RTOR Reduction (vph)	0	0	0	2	0	0	0	38	0	0	4	0
Lane Group Flow (vph)	0	889	385	859	0	0	0	34	0	0	17	0
Confl. Peds. (#/hr)	7		4		7		7		2	2		7
Confl. Bikes (#/hr)							2		2	2		2
Heavy Vehicles (%)	0%	1%	2%	1%	6%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Perm		pm+pt			Perm	Perm			Perm		
Protected Phases		8	7	4				2			6	
Permitted Phases	8		4			2	2			6		
Actuated Green, G (s)		20.0	37.0	37.0				14.0			14.0	
Effective Green, g (s)		20.0	37.0	37.0				14.0			14.0	
Actuated g/C Ratio		0.33	0.62	0.62				0.23			0.23	
Clearance Time (s)		5.0	4.0	5.0				4.0			4.0	
Lane Grp Cap (vph)		1004	449	1017				409			386	
v/s Ratio Prot			0.19	c0.52								
v/s Ratio Perm		0.30	c0.34					c0.02			0.01	
v/c Ratio		0.89	0.86	0.84				0.08			0.04	
Uniform Delay, d1		18.9	12.7	9.2				18.0			17.8	
Progression Factor		1.00	1.00	1.00				1.00			1.00	
Incremental Delay, d2		11.4	18.7	8.6				0.4			0.2	
Delay (s)		30.3	31.4	17.8				18.4			18.0	
Level of Service		C	C	B				B			B	
Approach Delay (s)		30.3		22.0				18.4			18.0	
Approach LOS		C		C				B			B	

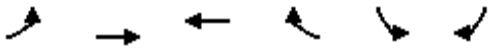
Intersection Summary			
HCM Average Control Delay	27.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	95.4%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBR2	NER
Lane Configurations		
Volume (vph)	5	276
Ideal Flow (vphpl)	1800	1800
Lane Width	12	12
Total Lost time (s)		4.0
Lane Util. Factor		1.00
Frpb, ped/bikes		1.00
Flpb, ped/bikes		1.00
Frt		0.86
Flt Protected		1.00
Satd. Flow (prot)		1557
Flt Permitted		1.00
Satd. Flow (perm)		1557
Peak-hour factor, PHF	0.95	0.95
Adj. Flow (vph)	5	291
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	0	291
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Heavy Vehicles (%)	0%	0%
Turn Type		Over
Protected Phases		7
Permitted Phases		
Actuated Green, G (s)		13.0
Effective Green, g (s)		13.0
Actuated g/C Ratio		0.22
Clearance Time (s)		4.0
Lane Grp Cap (vph)		337
v/s Ratio Prot		0.19
v/s Ratio Perm		
v/c Ratio		0.86
Uniform Delay, d1		22.6
Progression Factor		1.00
Incremental Delay, d2		24.2
Delay (s)		46.9
Level of Service		D
Approach Delay (s)		
Approach LOS		

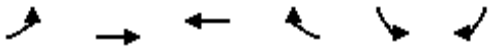
Intersection Summary



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	264	887	958	132	113	234
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frt		1.00	0.98		1.00	0.85
Flt Protected		0.99	1.00		0.95	1.00
Satd. Flow (prot)		3283	3260		1660	1485
Flt Permitted		0.53	1.00		0.95	1.00
Satd. Flow (perm)		1774	3260		1660	1485
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	293	986	1064	147	126	260
RTOR Reduction (vph)	0	0	12	0	0	139
Lane Group Flow (vph)	0	1279	1199	0	126	121
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		67.0	67.0		15.0	15.0
Effective Green, g (s)		67.0	67.0		15.0	15.0
Actuated g/C Ratio		0.74	0.74		0.17	0.17
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1321	2427		277	248
v/s Ratio Prot			0.37		0.08	
v/s Ratio Perm		c0.72				c0.08
v/c Ratio		1.11dl	0.49		0.45	0.49
Uniform Delay, d1		10.5	4.6		33.8	34.0
Progression Factor		1.00	1.00		0.99	1.05
Incremental Delay, d2		18.2	0.7		4.9	6.2
Delay (s)		28.8	5.4		38.4	41.9
Level of Service		C	A		D	D
Approach Delay (s)		28.8	5.4		40.8	
Approach LOS		C	A		D	

Intersection Summary			
HCM Average Control Delay	20.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	83.0%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	81	922	1006	195	287	88
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	12	10	11	12	10	10
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frpb, ped/bikes		1.00	1.00		1.00	0.99
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.98		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3119	3112		1506	1343
Flt Permitted		0.68	1.00		0.95	1.00
Satd. Flow (perm)		2145	3112		1506	1343
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	85	971	1059	205	302	93
RTOR Reduction (vph)	0	0	25	0	0	47
Lane Group Flow (vph)	0	1056	1239	0	302	46
Confl. Peds. (#/hr)	2			2		1
Heavy Vehicles (%)	1%	2%	2%	10%	6%	5%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		34.0	34.0		23.0	23.0
Effective Green, g (s)		34.0	34.0		23.0	23.0
Actuated g/C Ratio		0.52	0.52		0.35	0.35
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1122	1628		533	475
v/s Ratio Prot			0.40		c0.20	
v/s Ratio Perm		c0.49				0.03
v/c Ratio		0.94	0.76		0.57	0.10
Uniform Delay, d1		14.6	12.3		17.0	14.0
Progression Factor		1.00	1.00		1.81	3.00
Incremental Delay, d2		16.0	3.4		3.4	0.3
Delay (s)		30.6	15.7		34.1	42.4
Level of Service		C	B		C	D
Approach Delay (s)		30.6	15.7		36.0	
Approach LOS		C	B		D	

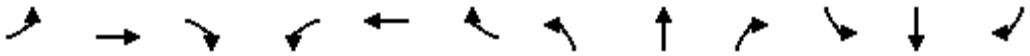
Intersection Summary			
HCM Average Control Delay	24.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	92.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	808	261	399	1090	205	127
Ideal Flow (vphpl)	2300	1800	1800	2300	1800	1800
Lane Width	15	12	14	16	15	12
Total Lost time (s)	5.0		3.0	5.0	5.0	5.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.97		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	2399		1788	2506	1758	1509
Flt Permitted	1.00		0.09	1.00	0.95	1.00
Satd. Flow (perm)	2399		163	2506	1758	1509
Peak-hour factor, PHF	0.98	0.98	0.90	0.90	0.98	0.98
Adj. Flow (vph)	824	266	443	1211	209	130
RTOR Reduction (vph)	11	0	0	0	0	107
Lane Group Flow (vph)	1079	0	443	1211	209	23
Confl. Peds. (#/hr)						1
Heavy Vehicles (%)	2%	2%	2%	4%	7%	0%
Turn Type			pm+pt			Perm
Protected Phases	4		3	8	2	
Permitted Phases			8			2
Actuated Green, G (s)	43.1		66.1	66.1	16.1	16.1
Effective Green, g (s)	43.1		66.1	66.1	16.1	16.1
Actuated g/C Ratio	0.47		0.72	0.72	0.17	0.17
Clearance Time (s)	5.0		3.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1121		469	1797	307	264
v/s Ratio Prot	0.45		c0.20	0.48	c0.12	
v/s Ratio Perm			c0.47			0.02
v/c Ratio	0.96		0.94	0.67	0.68	0.09
Uniform Delay, d1	23.8		28.5	7.1	35.6	31.9
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	18.5		27.9	1.0	6.1	0.1
Delay (s)	42.3		56.4	8.2	41.7	32.0
Level of Service	D		E	A	D	C
Approach Delay (s)	42.3			21.1	38.0	
Approach LOS	D			C	D	

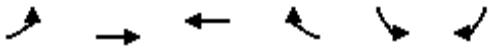
Intersection Summary			
HCM Average Control Delay	30.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	92.2	Sum of lost time (s)	8.0
Intersection Capacity Utilization	95.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	1620	38	112	861	1	62	0	157	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	15	13	11	11	12	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0	4.0	3.0	3.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00			
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1881	3431	1479	1589	3320	1530		1938	1500			
Flt Permitted	0.30	1.00	1.00	0.08	1.00	1.00		0.76	1.00			
Satd. Flow (perm)	592	3431	1479	126	3320	1530		1545	1500			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	1800	42	124	957	1	69	0	174	0	0	0
RTOR Reduction (vph)	0	0	12	0	0	0	0	0	142	0	0	0
Lane Group Flow (vph)	1	1800	30	124	957	1	0	69	32	0	0	0
Heavy Vehicles (%)	0%	3%	0%	4%	3%	0%	0%	0%	2%	0%	0%	0%
Turn Type	Perm		Perm	custom		custom	Perm		Perm	Perm		
Protected Phases		4		3	3 8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)	50.1	50.1	50.1	67.7	67.7	67.7		9.3	9.3			
Effective Green, g (s)	50.1	50.1	50.1	67.7	67.7	67.7		9.3	9.3			
Actuated g/C Ratio	0.59	0.59	0.59	0.80	0.80	0.80		0.11	0.11			
Clearance Time (s)	4.0	4.0	4.0	3.0		4.0		4.0	4.0			
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0			
Lane Grp Cap (vph)	349	2022	872	352	2644	1219		169	164			
v/s Ratio Prot		c0.52		0.06	c0.29							
v/s Ratio Perm	0.00		0.02	0.22		0.00		c0.04	0.02			
v/c Ratio	0.00	0.89	0.03	0.35	0.36	0.00		0.41	0.19			
Uniform Delay, d1	7.2	15.1	7.3	13.6	2.5	1.8		35.3	34.4			
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00			
Incremental Delay, d2	0.0	6.4	0.1	0.6	0.1	0.0		1.6	0.6			
Delay (s)	7.2	21.5	7.4	14.2	2.6	1.8		36.9	35.0			
Level of Service	A	C	A	B	A	A		D	D			
Approach Delay (s)		21.1			3.9			35.5			0.0	
Approach LOS		C			A			D			A	

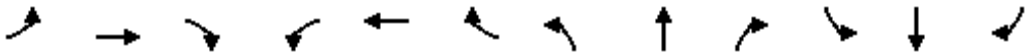
Intersection Summary			
HCM Average Control Delay	16.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	68.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	11	966	846	30	71	14
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10
Total Lost time (s)		5.0	5.0		3.0	
Lane Util. Factor		0.95	0.95		1.00	
Frt		1.00	0.99		0.98	
Flt Protected		1.00	1.00		0.96	
Satd. Flow (prot)		3097	3083		1530	
Flt Permitted		0.94	1.00		0.96	
Satd. Flow (perm)		2912	3083		1530	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	12	1073	940	33	79	16
RTOR Reduction (vph)	0	0	3	0	8	0
Lane Group Flow (vph)	0	1085	970	0	87	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Perm					
Protected Phases		4	8 2 11		5	
Permitted Phases	4					
Actuated Green, G (s)		33.0	61.0		4.0	
Effective Green, g (s)		33.0	61.0		4.0	
Actuated g/C Ratio		0.37	0.68		0.04	
Clearance Time (s)		5.0			3.0	
Lane Grp Cap (vph)		1068	2090		68	
v/s Ratio Prot			c0.31		c0.06	
v/s Ratio Perm		c0.37				
v/c Ratio		1.02	0.46		1.28	
Uniform Delay, d1		28.5	6.8		43.0	
Progression Factor		1.00	0.01		1.00	
Incremental Delay, d2		31.6	0.2		203.3	
Delay (s)		60.1	0.2		246.3	
Level of Service		E	A		F	
Approach Delay (s)		60.1	0.2		246.3	
Approach LOS		E	A		F	

Intersection Summary			
HCM Average Control Delay	41.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	31.0
Intersection Capacity Utilization	48.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	98	520	0	1	589	39	3	2	28	202	0	148
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12	12	11	12	11
Total Lost time (s)		4.0			4.0			3.0			3.0	3.0
Lane Util. Factor		1.00			0.95			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			0.94			1.00	0.97
Flpb, ped/bikes		1.00			1.00			1.00			0.98	1.00
Frt		1.00			0.99			0.88			1.00	0.85
Flt Protected		0.99			1.00			1.00			0.95	1.00
Satd. Flow (prot)		1767			3342			1463			1667	1346
Flt Permitted		0.79			0.95			0.77			0.86	1.00
Satd. Flow (perm)		1410			3192			1132			1515	1346
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	109	578	0	1	654	43	3	2	31	224	0	164
RTOR Reduction (vph)	0	0	0	0	5	0	0	28	0	0	0	117
Lane Group Flow (vph)	0	687	0	0	693	0	0	8	0	0	224	47
Confl. Peds. (#/hr)	60		44	44		60	14		10	10		14
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	0%	1%	0%	0%	1%	3%	20%	0%	0%	1%	0%	7%
Turn Type	Perm			Prot			Perm			pm+pt		Perm
Protected Phases		4		3	3 4			1		2	1 2	
Permitted Phases	4				3		1	1		1 2		1 2
Actuated Green, G (s)		40.0			52.0			9.0			23.0	26.0
Effective Green, g (s)		40.0			52.0			9.0			23.0	26.0
Actuated g/C Ratio		0.44			0.58			0.10			0.26	0.29
Clearance Time (s)		4.0						3.0				
Lane Grp Cap (vph)		627			1864			113			411	389
v/s Ratio Prot					c0.05						c0.08	
v/s Ratio Perm		c0.49			0.17			0.01			c0.05	0.04
v/c Ratio		1.10			0.37			0.07			0.55	0.12
Uniform Delay, d1		25.0			10.2			36.7			29.0	23.6
Progression Factor		1.00			0.89			1.00			1.00	1.00
Incremental Delay, d2		64.9			0.2			1.2			5.1	0.6
Delay (s)		89.9			9.4			37.9			34.1	24.2
Level of Service		F			A			D			C	C
Approach Delay (s)		89.9			9.4			37.9			29.9	
Approach LOS		F			A			D			C	

Intersection Summary			
HCM Average Control Delay	44.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	81.9%	ICU Level of Service	D
Analysis Period (min)	15		

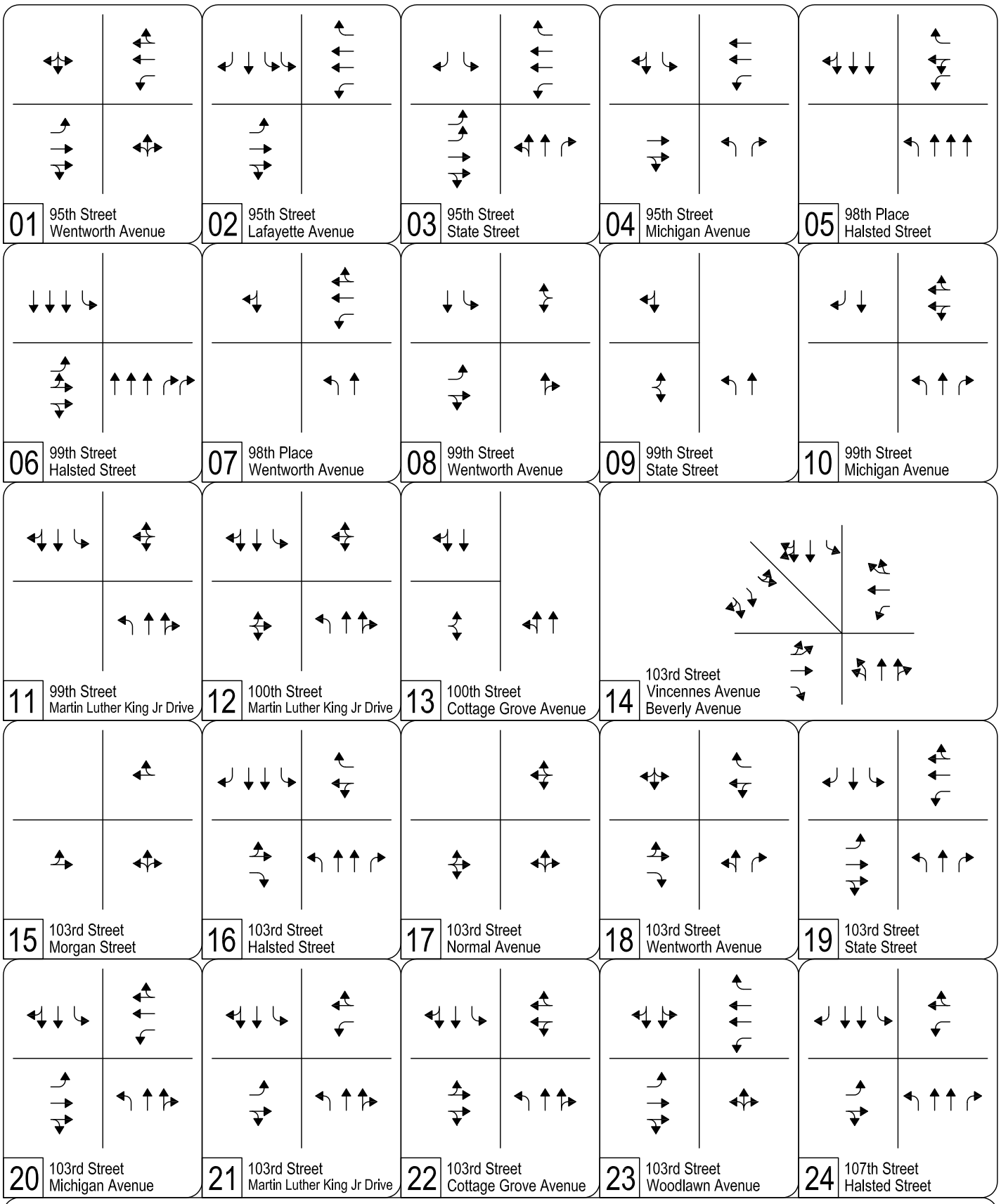
c Critical Lane Group

Appendix D
Union Pacific Railroad (UPRR) Rail Alternative - Right-of-Way Option

UPRR Right-of-Way Option Alternative Project Traffic Estimates

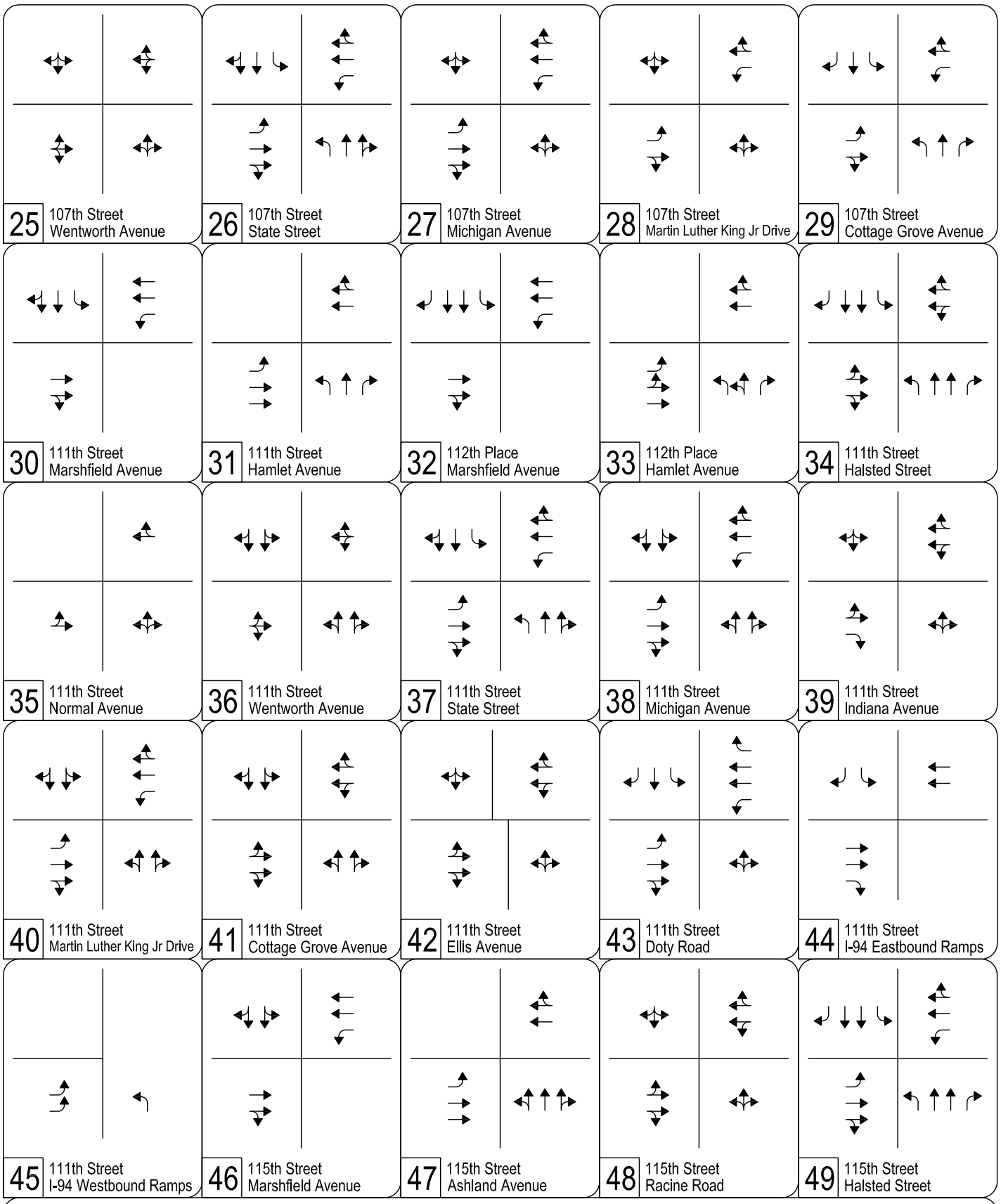
ITE Land Use	Unit	Trip Generation Rate			Peak Hour Direction			
		Daily	AM Peak Hour	PM Peak Hour	AM In	AM Out	PM In	PM Out
Light Rail with Park and Ride	Parking Spaces	2.51	1.07	1.24	80%	20%	20%	80%

UPRR ROW Alternative Park and Ride Facilities		Estimated Project Traffic						
Location	Parking Spaces	Daily	AM In	AM Out	AM Total	PM In	PM Out	PM Total
103rd Street	200	502	171	43	214	50	198	248
111th Street	200	502	171	43	214	50	198	248
Michigan Avenue	1,000	2,510	856	214	1,070	248	992	1,240
130th Street	2,300	5,773	1,969	492	2,461	570	2,282	2,852
Total	**3,700**	**9,287**	**3,167**	**792**	**3,959**	**918**	**3,670**	**4,588**



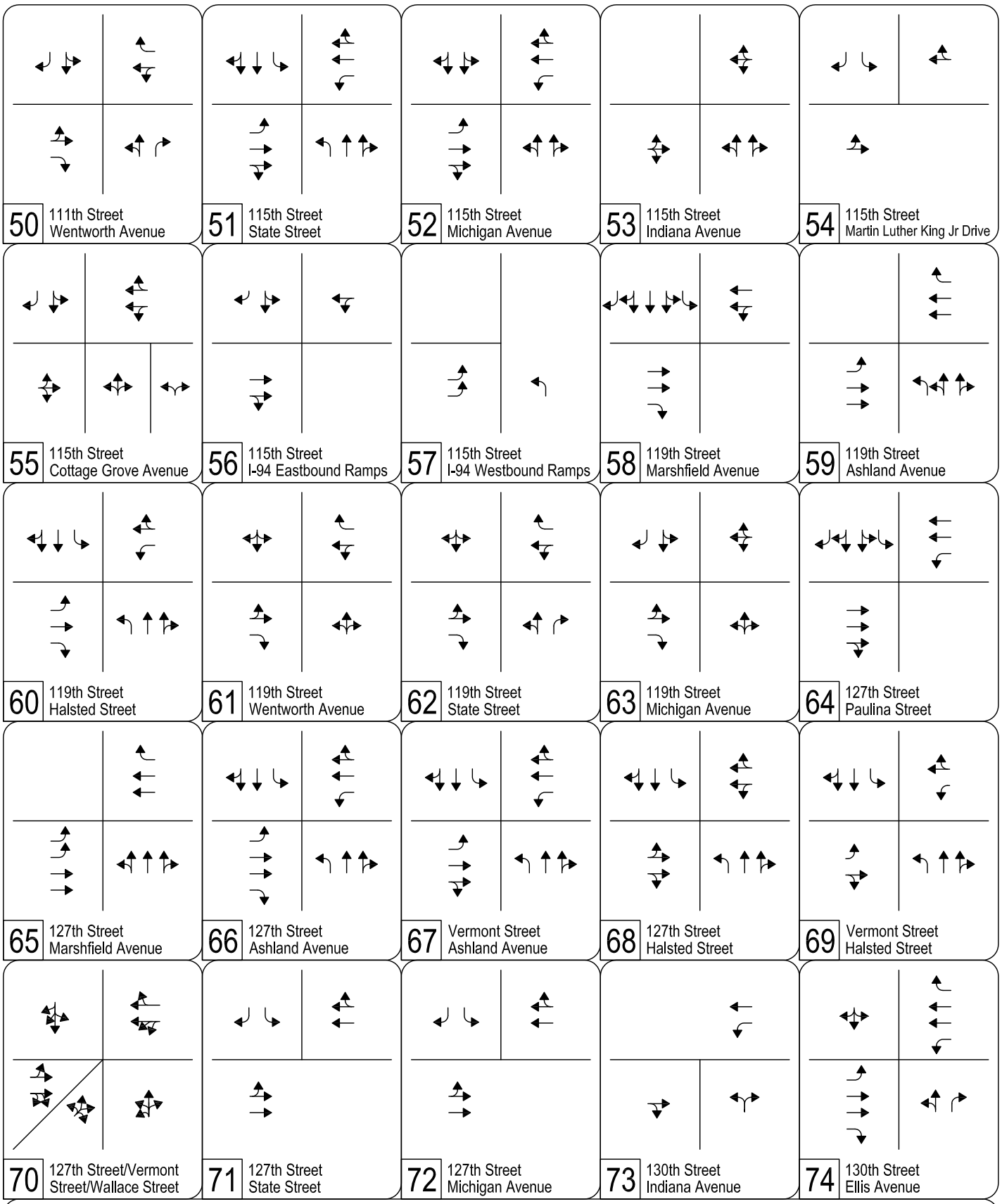
UPRR ROW Option Alternative (2026) Intersection Lane Geometry

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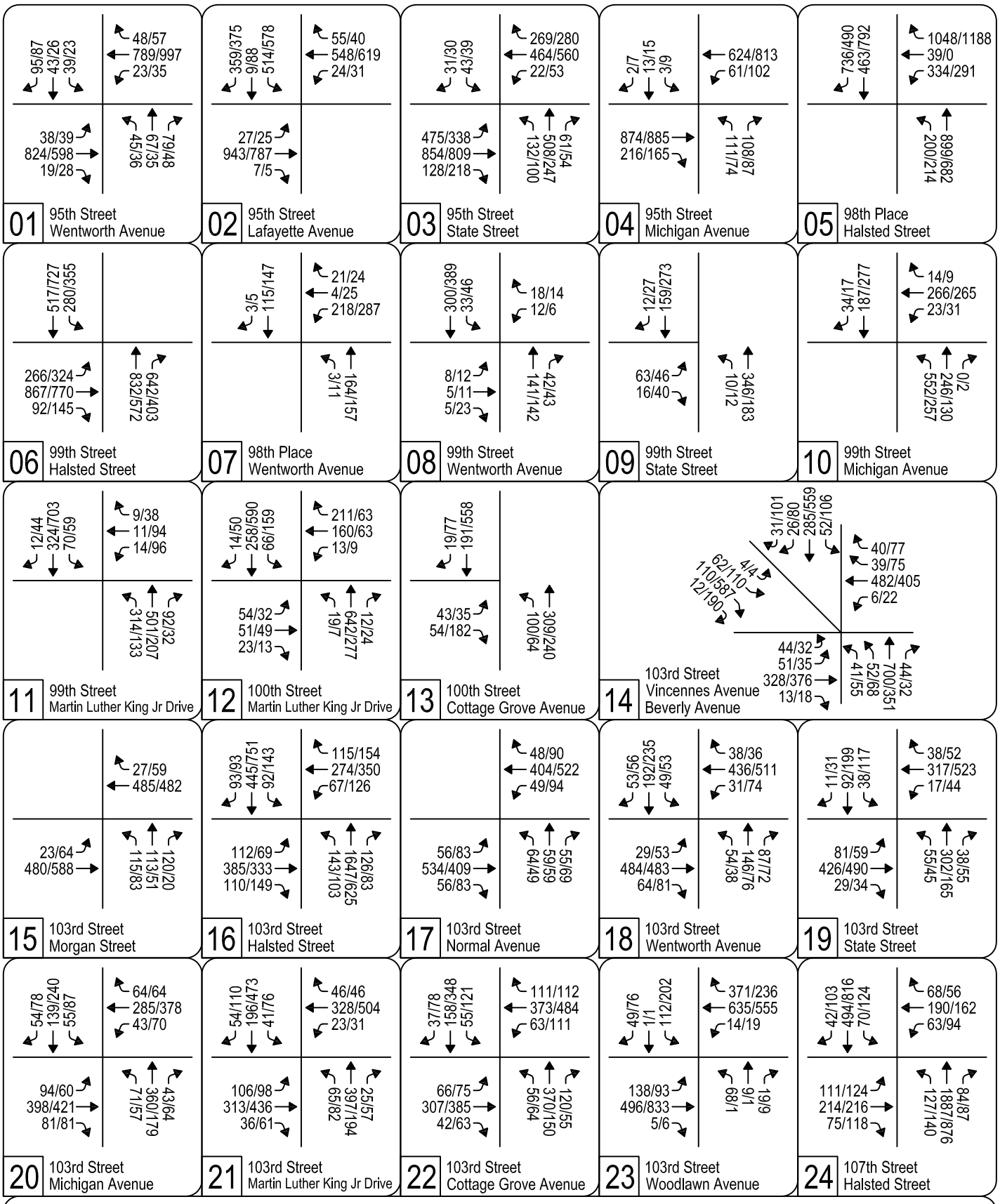
UPRR ROW Option Alternative (2026) Intersection Lane Geometry

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UPRR ROW Option Alternative (2026) Intersection Lane Geometry

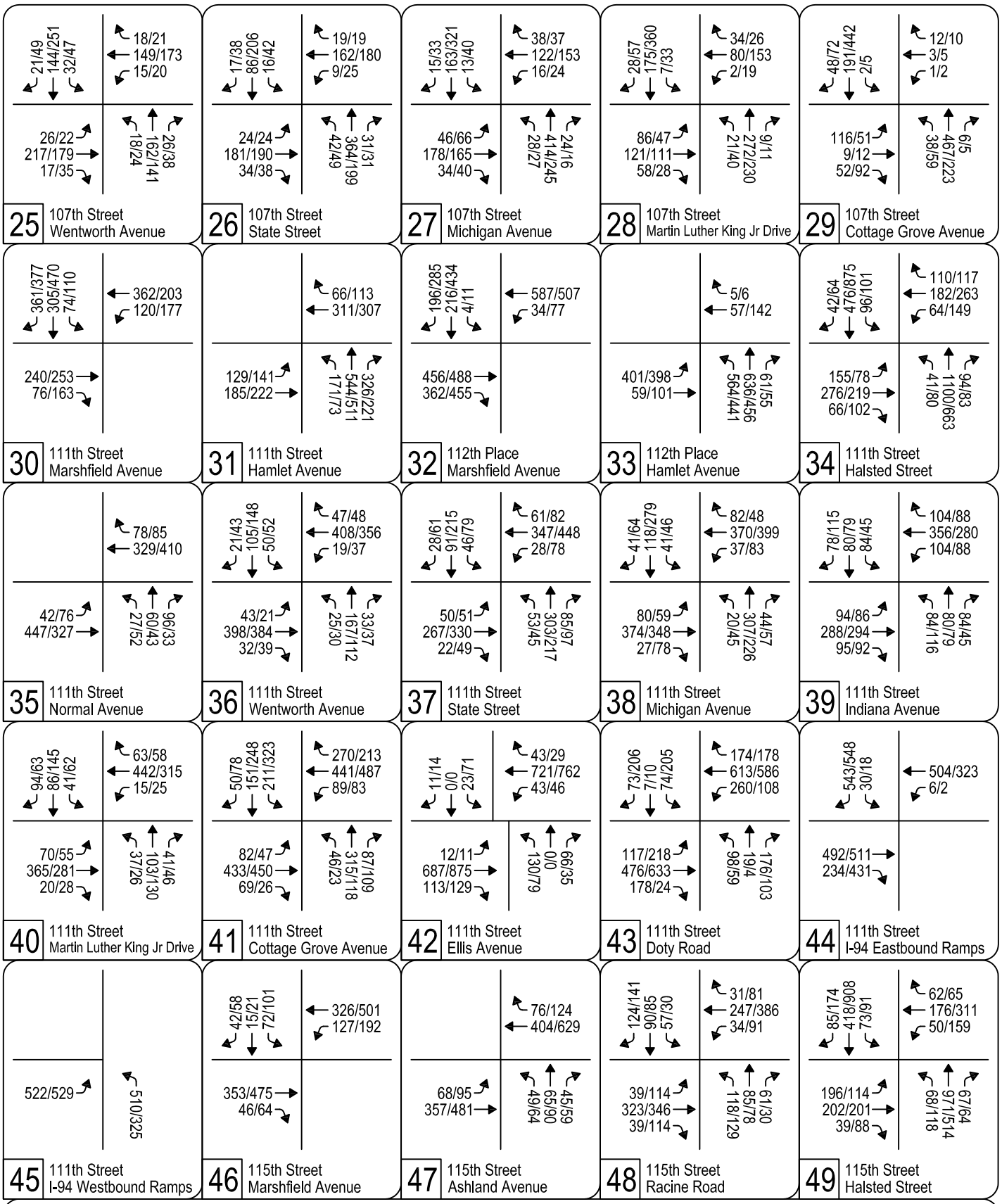
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UPRR ROW Option Alternative (2026) Intersection Traffic Volumes

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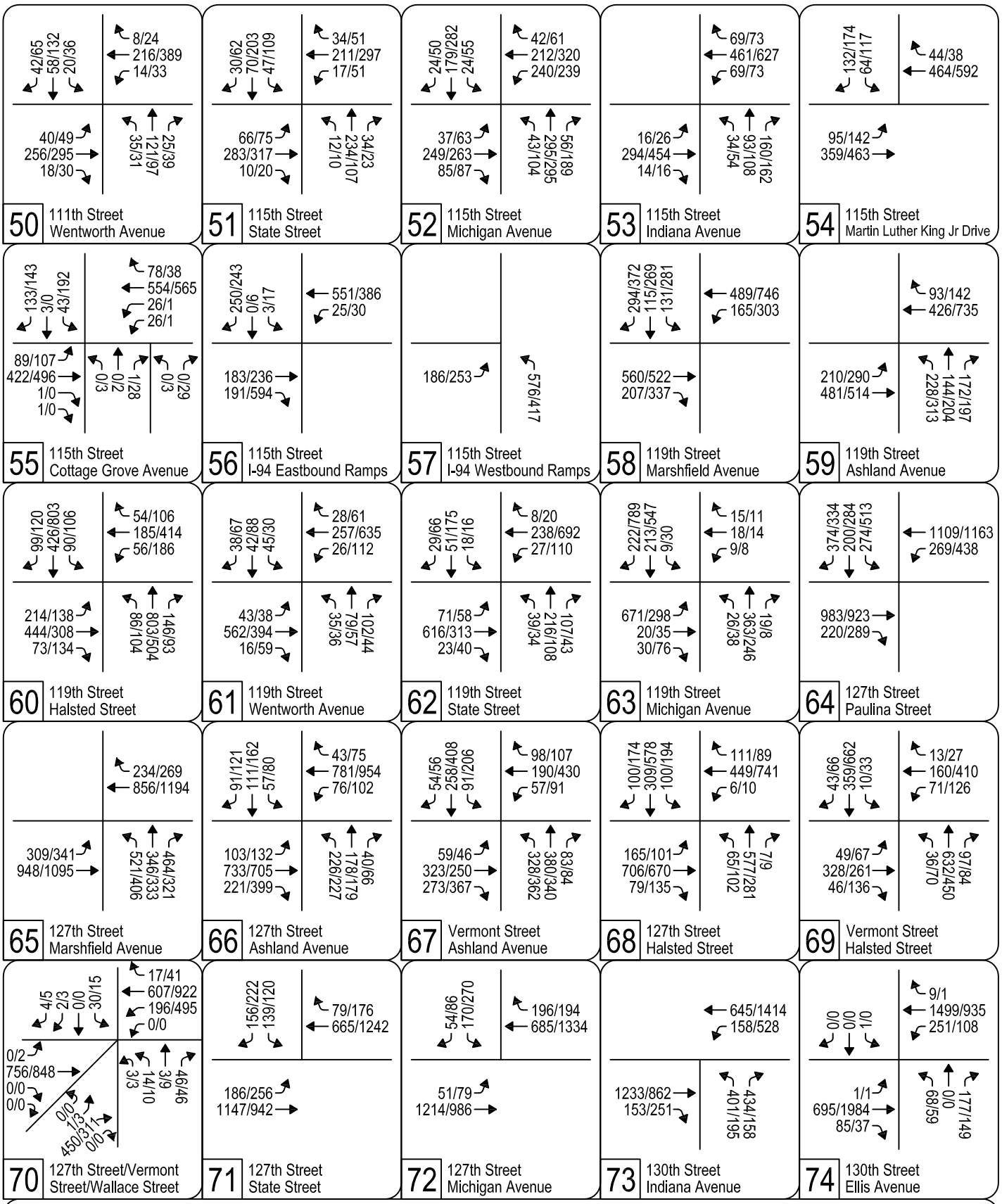
Legend: AM/PM Peak Hour Volumes



UPRR ROW Option Alternative (2026) Intersection Traffic Volumes

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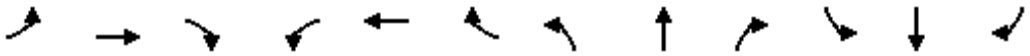
Legend: AM/PM Peak Hour Volumes



UPRR ROW Option Alternative (2026) Intersection Traffic Volumes

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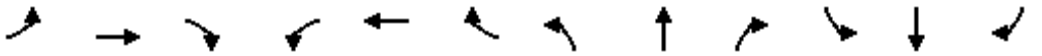
Legend: AM/PM Peak Hour Volumes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	38	824	19	23	789	48	45	67	79	39	43	95
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	16	10	10	16	8	15	8	8	14	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			0.99			0.99	
Flpb, ped/bikes	0.98	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	0.99			0.94			0.93	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1416	2975		1592	2978			1754			1673	
Flt Permitted	0.26	1.00		0.26	1.00			0.90			0.91	
Satd. Flow (perm)	384	2975		429	2978			1598			1532	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	40	867	20	24	831	51	47	71	83	41	45	100
RTOR Reduction (vph)	0	2	0	0	7	0	0	39	0	0	63	0
Lane Group Flow (vph)	40	885	0	24	875	0	0	162	0	0	123	0
Confl. Peds. (#/hr)	61		11	11		61	3		5	5		3
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	11%	7%	0%	0%	6%	2%	2%	7%	4%	5%	7%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			22.0			22.0	
Effective Green, g (s)	34.0	34.0		34.0	34.0			23.0			23.0	
Actuated g/C Ratio	0.52	0.52		0.52	0.52			0.35			0.35	
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0			5.0	
Lane Grp Cap (vph)	201	1556		224	1558			565			542	
v/s Ratio Prot		c0.30			0.29							
v/s Ratio Perm	0.10			0.06				c0.10			0.08	
v/c Ratio	0.20	0.57		0.11	0.56			0.29			0.23	
Uniform Delay, d1	8.3	10.5		7.8	10.5			15.1			14.8	
Progression Factor	1.00	1.00		0.82	1.13			1.00			1.00	
Incremental Delay, d2	2.2	1.5		0.8	1.3			1.3			1.0	
Delay (s)	10.5	12.0		7.2	13.1			16.4			15.7	
Level of Service	B	B		A	B			B			B	
Approach Delay (s)		12.0			12.9			16.4			15.7	
Approach LOS		B			B			B			B	

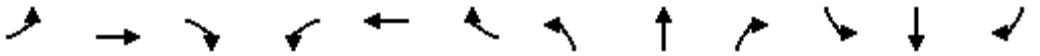
Intersection Summary			
HCM Average Control Delay	13.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	27	943	7	24	548	55	0	0	0	514	9	359
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00				0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.67				1.00	1.00	0.96
Flpb, ped/bikes	0.91	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	776	3285		1710	3138	512				3100	1440	1399
Flt Permitted	0.43	1.00		0.14	1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	355	3285		248	3138	512				3100	1440	1399
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	28	993	7	25	577	58	0	0	0	541	9	378
RTOR Reduction (vph)	0	1	0	0	0	25	0	0	0	0	0	172
Lane Group Flow (vph)	28	999	0	25	577	33	0	0	0	541	9	206
Confl. Peds. (#/hr)	354		13	13		354	22		22	22		22
Confl. Bikes (#/hr)	4					4			1	1		
Heavy Vehicles (%)	100%	4%	0%	0%	9%	100%	0%	0%	0%	7%	25%	5%
Turn Type	pm+pt			pm+pt		Perm				Split		Perm
Protected Phases	7	4		3	8					6	6	
Permitted Phases	4			8		8						6
Actuated Green, G (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Effective Green, g (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Actuated g/C Ratio	0.33	0.33		0.56	0.56	0.56				0.23	0.23	0.23
Clearance Time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Grp Cap (vph)	163	1087		634	1762	288				715	332	323
v/s Ratio Prot	0.02	c0.30		0.01	c0.18					c0.17	0.01	
v/s Ratio Perm	0.04			0.01		0.06						0.15
v/c Ratio	0.17	0.92		0.04	0.33	0.11				0.76	0.03	0.64
Uniform Delay, d1	31.6	41.8		15.1	15.3	13.3				46.6	38.7	45.1
Progression Factor	0.80	0.83		0.30	0.63	1.55				1.00	1.00	1.00
Incremental Delay, d2	2.0	12.2		0.1	0.3	0.5				7.3	0.2	9.2
Delay (s)	27.2	46.8		4.6	10.0	21.2				53.9	38.9	54.3
Level of Service	C	D		A	A	C				D	D	D
Approach Delay (s)		46.2			10.8			0.0			54.0	
Approach LOS		D			B			A			D	

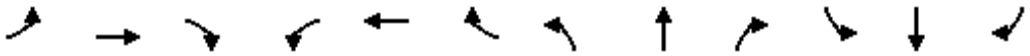
Intersection Summary			
HCM Average Control Delay	40.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	51.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	475	854	128	22	464	269	132	508	61	43	0	31
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.65		1.00	0.94	1.00		0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.98		1.00	1.00	0.85		1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (prot)	3190	3107		1555	2923	944		3300	1417	855		734
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (perm)	3190	3107		1555	2923	944		3300	1417	855		734
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	500	899	135	23	488	283	139	535	64	45	0	33
RTOR Reduction (vph)	0	9	0	0	0	161	0	0	25	0	0	31
Lane Group Flow (vph)	500	1026	0	23	488	122	0	674	39	45	0	2
Confl. Peds. (#/hr)	425		21	21		425	6		34	34		6
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	4%	8%	3%	10%	17%	5%	1%	3%	2%	100%	0%	100%
Turn Type	Prot			Prot		Perm	Split		Perm	Prot		custom
Protected Phases	7	4		3	8		2	2		6		
Permitted Phases						8			2			6
Actuated Green, G (s)	43.0	65.0		9.0	31.0	31.0		30.0	30.0	8.0		8.0
Effective Green, g (s)	43.0	65.0		9.0	31.0	31.0		30.0	30.0	8.0		8.0
Actuated g/C Ratio	0.33	0.50		0.07	0.24	0.24		0.23	0.23	0.06		0.06
Clearance Time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	1055	1554		108	697	225		762	327	53		45
v/s Ratio Prot	0.16	c0.33		0.01	c0.17			c0.20		c0.05		
v/s Ratio Perm						0.13			0.03			0.00
v/c Ratio	0.47	0.66		0.21	0.70	0.54		0.88	0.12	0.85		0.05
Uniform Delay, d1	34.5	24.3		57.2	45.3	43.3		48.3	39.5	60.4		57.4
Progression Factor	0.75	0.19		1.00	1.00	1.00		0.95	0.90	1.00		1.00
Incremental Delay, d2	0.7	1.1		4.5	5.8	9.0		14.1	0.7	70.0		0.4
Delay (s)	26.6	5.7		61.6	51.0	52.3		59.8	36.3	130.4		57.8
Level of Service	C	A		E	D	D		E	D	F		E
Approach Delay (s)		12.5			51.8			57.7			99.7	
Approach LOS		B			D			E			F	

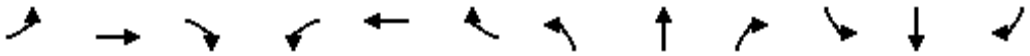
Intersection Summary			
HCM Average Control Delay	35.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	71.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	874	216	61	624	0	111	0	108	3	13	2
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	11	11	8	12	12	12	14	15	12
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes		0.99		1.00	1.00		1.00		0.98	1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00		1.00		1.00	0.99	1.00	
Frt		0.97		1.00	1.00		1.00		0.85	1.00	0.98	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		2860		1650	3005		1390		1465	1803	1943	
Flt Permitted		1.00		0.16	1.00		0.75		1.00	0.95	1.00	
Satd. Flow (perm)		2860		283	3005		1093		1465	1803	1943	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	971	240	68	693	0	123	0	120	3	14	2
RTOR Reduction (vph)	0	22	0	0	0	0	0	0	82	0	1	0
Lane Group Flow (vph)	0	1189	0	68	693	0	123	0	38	3	15	0
Confl. Peds. (#/hr)	49		15	15		49			12	12		
Heavy Vehicles (%)	0%	6%	14%	0%	10%	0%	23%	0%	2%	0%	0%	0%
Turn Type				Perm			custom		custom	Perm		
Protected Phases		4			8						6	
Permitted Phases				8			2		2	6		
Actuated Green, G (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Effective Green, g (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Actuated g/C Ratio		0.60		0.60	0.60		0.32		0.32	0.32	0.32	
Clearance Time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)		1716		170	1803		350		469	577	622	
v/s Ratio Prot		c0.42			0.23						0.01	
v/s Ratio Perm				0.24			c0.11		0.03	0.00		
v/c Ratio		0.69		0.40	0.38		0.35		0.08	0.01	0.02	
Uniform Delay, d1		13.7		10.5	10.4		26.0		23.7	23.2	23.3	
Progression Factor		1.00		1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		2.3		6.9	0.6		2.8		0.3	0.0	0.1	
Delay (s)		16.0		17.4	11.0		28.8		24.1	23.2	23.4	
Level of Service		B		B	B		C		C	C	C	
Approach Delay (s)		16.0			11.6			26.5			23.3	
Approach LOS		B			B			C			C	

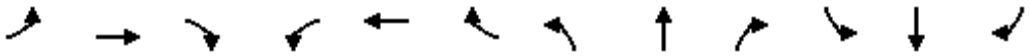
Intersection Summary			
HCM Average Control Delay	15.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	334	39	1048	200	899	0	0	463	736
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	12	10	10	12	12	11	12
Total Lost time (s)				4.0	4.0	5.0	3.0	4.0			4.0	
Lane Util. Factor				0.95	0.95	1.00	1.00	0.91			0.91	
Frpb, ped/bikes				1.00	1.00	0.99	1.00	1.00			0.98	
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00			1.00	
Frt				1.00	1.00	0.85	1.00	1.00			0.91	
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (prot)				1525	1629	1479	1550	4368			3938	
Flt Permitted				0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (perm)				1525	1629	1479	1550	4368			3938	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	341	40	1069	204	917	0	0	472	751
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	341	40	1069	204	917	0	0	1223	0
Confl. Peds. (#/hr)	2					2	12		8	8		12
Heavy Vehicles (%)	0%	0%	0%	3%	5%	2%	3%	5%	0%	0%	5%	8%
Turn Type				Perm		Perm	Prot					
Protected Phases					8		5	2			6	
Permitted Phases				8		8						
Actuated Green, G (s)				30.0	30.0	30.0	32.0	66.0			31.0	
Effective Green, g (s)				31.0	31.0	30.0	32.0	66.0			31.0	
Actuated g/C Ratio				0.30	0.30	0.29	0.30	0.63			0.30	
Clearance Time (s)				5.0	5.0	5.0	3.0	4.0			4.0	
Lane Grp Cap (vph)				450	481	423	472	2746			1163	
v/s Ratio Prot							c0.13	0.21			c0.31	
v/s Ratio Perm				0.22	0.02	c0.72						
v/c Ratio				0.76	0.08	2.53	0.43	0.33			1.87dr	
Uniform Delay, d1				33.6	26.7	37.5	29.2	9.2			37.0	
Progression Factor				1.00	1.00	1.00	0.66	2.37			1.00	
Incremental Delay, d2				11.3	0.3	694.2	2.0	0.2			41.1	
Delay (s)				44.9	27.1	731.7	21.2	21.9			78.1	
Level of Service				D	C	F	C	C			E	
Approach Delay (s)		0.0			550.8			21.8			78.1	
Approach LOS		A			F			C			E	

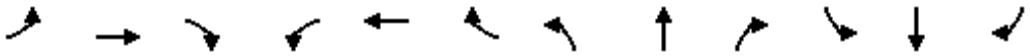
Intersection Summary			
HCM Average Control Delay	242.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.32		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.6%	ICU Level of Service	F
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group



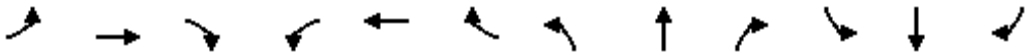
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	266	867	92	0	0	0	0	832	642	280	517	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	13	12	12	12	12	12	10	10	8	12	12	12
Total Lost time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Util. Factor	0.91	0.91						0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00						1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00						1.00	1.00	1.00	1.00	
Frt	1.00	0.99						1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1497	3184						4368	2187	1583	4636	
Flt Permitted	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1497	3184						4368	2187	1583	4636	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	274	894	95	0	0	0	0	858	662	289	533	0
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	247	1009	0	0	0	0	0	858	662	289	533	0
Confl. Peds. (#/hr)	4		14	14		4	4		3	3		4
Heavy Vehicles (%)	7%	1%	0%	0%	0%	0%	0%	5%	4%	8%	6%	0%
Turn Type	Perm								Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Actuated Green, G (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Effective Green, g (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Actuated g/C Ratio	0.32	0.32						0.27	0.27	0.30	0.59	
Clearance Time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Grp Cap (vph)	485	1031						1165	583	467	2737	
v/s Ratio Prot								0.20		c0.18	0.11	
v/s Ratio Perm	0.16	0.32							c0.30			
v/c Ratio	0.51	0.98						0.74	1.14	0.62	0.19	
Uniform Delay, d1	28.7	35.1						35.1	38.5	31.9	9.9	
Progression Factor	1.00	1.00						0.44	0.46	1.06	0.43	
Incremental Delay, d2	3.8	23.4						0.4	63.2	2.4	0.1	
Delay (s)	32.5	58.5						15.7	81.1	36.1	4.3	
Level of Service	C	E						B	F	D	A	
Approach Delay (s)		53.4			0.0			44.2			15.5	
Approach LOS		D			A			D			B	

Intersection Summary			
HCM Average Control Delay	40.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



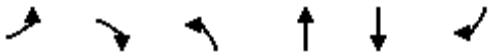
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	218	4	21	3	164	0	0	115	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	14	12	12	16	12
Total Lost time (s)				4.0	4.0		4.0	4.0			-3.0	
Lane Util. Factor				1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes				1.00	0.98		1.00	1.00			1.00	
Flpb, ped/bikes				1.00	1.00		1.00	1.00			1.00	
Frt				1.00	0.87		1.00	1.00			1.00	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1578	2709		1285	1882			1961	
Flt Permitted				0.95	1.00		0.58	1.00			1.00	
Satd. Flow (perm)				1578	2709		782	1882			1961	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	242	4	23	3	182	0	0	128	3
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	242	9	0	3	182	0	0	130	0
Confl. Peds. (#/hr)	2		2	2		2	3					3
Heavy Vehicles (%)	0%	0%	0%	8%	25%	5%	33%	2%	0%	0%	3%	33%
Turn Type				Perm			pm+pt					
Protected Phases					8		7	2			6	
Permitted Phases				8			2					
Actuated Green, G (s)				27.0	27.0		50.0	50.0			40.0	
Effective Green, g (s)				27.0	27.0		50.0	50.0			46.0	
Actuated g/C Ratio				0.32	0.32		0.59	0.59			0.54	
Clearance Time (s)				4.0	4.0		4.0	4.0			3.0	
Lane Grp Cap (vph)				501	861		501	1107			1061	
v/s Ratio Prot					0.00		0.00	c0.10			0.07	
v/s Ratio Perm				c0.15			0.00					
v/c Ratio				0.48	0.01		0.01	0.16			0.12	
Uniform Delay, d1				23.4	19.9		10.0	8.0			9.6	
Progression Factor				1.00	1.00		1.05	1.18			1.00	
Incremental Delay, d2				3.3	0.0		0.0	0.3			0.2	
Delay (s)				26.7	19.9		10.5	9.7			9.8	
Level of Service				C	B		B	A			A	
Approach Delay (s)		0.0			26.0			9.7			9.8	
Approach LOS		A			C			A			A	

Intersection Summary			
HCM Average Control Delay	17.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



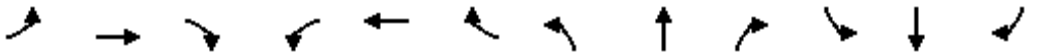
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	8	5	5	12	0	18	0	141	42	33	300	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	16	15	12	8	12	8	12	12	12	10	13	12
Total Lost time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99			1.00			0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00			1.00		1.00	1.00	
Frt	1.00	0.93			0.92			0.97		1.00	1.00	
Flt Protected	0.95	1.00			0.98			1.00		0.95	1.00	
Satd. Flow (prot)	1938	1809			1620			1685		1595	1755	
Flt Permitted	0.74	1.00			0.93			1.00		0.60	1.00	
Satd. Flow (perm)	1502	1809			1543			1685		1010	1755	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	8	5	5	13	0	19	0	148	44	35	316	0
RTOR Reduction (vph)	0	3	0	0	13	0	0	13	0	0	0	0
Lane Group Flow (vph)	8	7	0	0	19	0	0	179	0	35	316	0
Confl. Peds. (#/hr)			3	3			5		2	2		5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	3%	0%	6%	0%
Turn Type	Perm			Perm						pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Effective Green, g (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Actuated g/C Ratio	0.32	0.32			0.32			0.47		0.59	0.59	
Clearance Time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Grp Cap (vph)	477	575			490			793		642	1032	
v/s Ratio Prot		0.00						0.11		0.00	c0.18	
v/s Ratio Perm	0.01				c0.01					0.03		
v/c Ratio	0.02	0.01			0.04			0.23		0.05	0.31	
Uniform Delay, d1	19.9	19.9			20.0			13.3		8.5	8.8	
Progression Factor	1.00	1.00			1.00			1.00		1.01	0.92	
Incremental Delay, d2	0.1	0.0			0.1			0.7		0.2	0.7	
Delay (s)	20.0	19.9			20.2			14.0		8.7	8.9	
Level of Service	B	B			C			B		A	A	
Approach Delay (s)		19.9			20.2			14.0			8.8	
Approach LOS		B			C			B			A	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.21		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



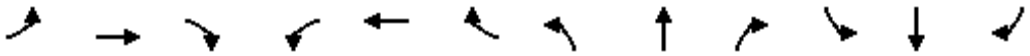
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	63	16	10	346	159	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	14	12	13	12	10	12
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.97		1.00	1.00	0.99	
Flt Protected	0.96		0.95	1.00	1.00	
Satd. Flow (prot)	1787		1767	1765	1634	
Flt Permitted	0.96		0.64	1.00	1.00	
Satd. Flow (perm)	1787		1187	1765	1634	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	70	18	11	384	177	13
RTOR Reduction (vph)	12	0	0	0	4	0
Lane Group Flow (vph)	76	0	11	384	186	0
Confl. Peds. (#/hr)		2				
Heavy Vehicles (%)	0%	0%	0%	2%	2%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.0		36.0	36.0	36.0	
Effective Green, g (s)	21.0		36.0	36.0	36.0	
Actuated g/C Ratio	0.32		0.55	0.55	0.55	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	577		657	978	905	
v/s Ratio Prot	c0.04			c0.22	0.11	
v/s Ratio Perm			0.01			
v/c Ratio	0.13		0.02	0.39	0.21	
Uniform Delay, d1	15.6		6.5	8.3	7.3	
Progression Factor	1.00		0.32	0.51	1.17	
Incremental Delay, d2	0.5		0.0	1.1	0.5	
Delay (s)	16.0		2.1	5.3	9.0	
Level of Service	B		A	A	A	
Approach Delay (s)	16.0			5.2	9.0	
Approach LOS	B			A	A	

Intersection Summary			
HCM Average Control Delay	7.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	39.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	23	266	14	552	246	0	0	187	34
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	14	16	12	12	15	12	12	13	10
Total Lost time (s)					4.0		4.0	4.0			3.0	3.0
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Frt					0.99		1.00	1.00			1.00	0.85
Flt Protected					1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3737		1660	1752			1603	1298
Flt Permitted					1.00		0.58	1.00			1.00	1.00
Satd. Flow (perm)					3737		1013	1752			1603	1298
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	26	296	16	613	273	0	0	208	38
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	0	0	0	21
Lane Group Flow (vph)	0	0	0	0	334	0	613	273	0	0	208	17
Confl. Peds. (#/hr)									30	30		
Heavy Vehicles (%)	0%	0%	0%	11%	2%	0%	3%	13%	0%	0%	16%	10%
Turn Type				Split			pm+pt					Perm
Protected Phases				8	8		7	2			6	
Permitted Phases							2					6
Actuated Green, G (s)					26.0		51.0	51.0			38.0	38.0
Effective Green, g (s)					26.0		51.0	51.0			38.0	38.0
Actuated g/C Ratio					0.31		0.60	0.60			0.45	0.45
Clearance Time (s)					4.0		4.0	4.0			3.0	3.0
Lane Grp Cap (vph)					1143		684	1051			717	580
v/s Ratio Prot					c0.09		c0.11	0.16			0.13	
v/s Ratio Perm							c0.43					0.01
v/c Ratio					0.29		0.90	0.26			0.29	0.03
Uniform Delay, d1					22.5		16.8	8.1			14.9	13.2
Progression Factor					1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2					0.6		16.7	0.6			1.0	0.1
Delay (s)					23.1		33.5	8.7			16.0	13.3
Level of Service					C		C	A			B	B
Approach Delay (s)		0.0			23.1			25.9			15.5	
Approach LOS		A			C			C			B	

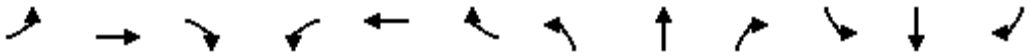
Intersection Summary			
HCM Average Control Delay	23.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	14	11	9	314	501	92	70	324	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	15	12	12	12	12	12	13	12
Total Lost time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.96		1.00	0.98		1.00	0.99	
Flt Protected					0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1801		1691	3237		1707	3352	
Flt Permitted					0.98		0.51	1.00		0.33	1.00	
Satd. Flow (perm)					1801		915	3237		598	3352	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	16	12	10	349	557	102	78	360	13
RTOR Reduction (vph)	0	0	0	0	7	0	0	20	0	0	3	0
Lane Group Flow (vph)	0	0	0	0	31	0	349	639	0	78	370	0
Confl. Peds. (#/hr)	2					2	6		20	20		6
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	0%	0%	0%	11%	0%	1%	3%	0%	0%	5%	0%
Turn Type				Split			pm+pt			pm+pt		
Protected Phases				8	8		5	2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)					23.0		41.0	34.0		41.0	34.0	
Effective Green, g (s)					23.0		41.0	34.0		41.0	34.0	
Actuated g/C Ratio					0.31		0.55	0.45		0.55	0.45	
Clearance Time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Grp Cap (vph)					552		573	1467		430	1520	
v/s Ratio Prot					c0.02		c0.06	0.20		0.02	0.11	
v/s Ratio Perm							c0.28			0.08		
v/c Ratio					0.06		0.61	0.44		0.18	0.24	
Uniform Delay, d1					18.3		13.0	14.0		11.8	12.6	
Progression Factor					1.00		0.71	0.73		1.00	1.00	
Incremental Delay, d2					0.2		4.4	0.9		0.9	0.4	
Delay (s)					18.5		13.6	11.1		12.8	13.0	
Level of Service					B		B	B		B	B	
Approach Delay (s)		0.0			18.5			11.9			12.9	
Approach LOS		A			B			B			B	

Intersection Summary			
HCM Average Control Delay	12.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	55.0%	ICU Level of Service	B
Analysis Period (min)	15		

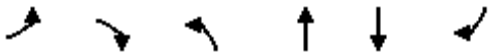
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	54	51	23	13	160	211	19	642	12	66	258	14
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	16	12	12	10	11	12	12	11	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.93		1.00	1.00		1.00	0.99	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1945			1625		1596	3232		1641	3132	
Flt Permitted		0.71			0.99		0.58	1.00		0.35	1.00	
Satd. Flow (perm)		1411			1612		968	3232		604	3132	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	57	54	24	14	168	222	20	676	13	69	272	15
RTOR Reduction (vph)	0	11	0	0	59	0	0	2	0	0	5	0
Lane Group Flow (vph)	0	124	0	0	345	0	20	687	0	69	282	0
Confl. Peds. (#/hr)									6	6		
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	0%	0%	12%	2%	2%	0%	2%	0%	4%	5%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Effective Green, g (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Actuated g/C Ratio		0.33			0.33		0.56	0.56		0.56	0.56	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		470			537		542	1810		338	1754	
v/s Ratio Prot								c0.21			0.09	
v/s Ratio Perm		0.09			c0.21		0.02			0.11		
v/c Ratio		0.26			0.64		0.04	0.38		0.20	0.16	
Uniform Delay, d1		18.3			21.2		7.4	9.2		8.2	8.0	
Progression Factor		1.00			1.00		1.00	1.00		0.16	0.07	
Incremental Delay, d2		1.4			5.8		0.1	0.6		1.3	0.2	
Delay (s)		19.7			27.0		7.5	9.8		2.7	0.8	
Level of Service		B			C		A	A		A	A	
Approach Delay (s)		19.7			27.0			9.8			1.1	
Approach LOS		B			C			A			A	

Intersection Summary			
HCM Average Control Delay	13.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.1%	ICU Level of Service	C
Analysis Period (min)	15		

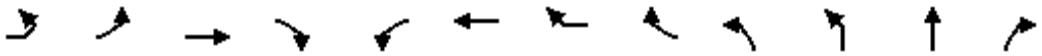
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	43	54	100	309	191	19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	48	60	111	343	212	21

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	108	226	229	141	92
Volume Left (vph)	48	111	0	0	0
Volume Right (vph)	60	0	0	0	21
Hadj (s)	-0.16	0.33	0.09	0.08	-0.08
Departure Headway (s)	5.2	5.4	5.1	5.3	5.2
Degree Utilization, x	0.16	0.34	0.33	0.21	0.13
Capacity (veh/h)	634	657	687	648	667
Control Delay (s)	9.2	9.9	9.4	8.6	7.8
Approach Delay (s)	9.2	9.6		8.3	
Approach LOS	A	A		A	

Intersection Summary			
Delay	9.2		
HCM Level of Service	A		
Intersection Capacity Utilization	34.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	44	51	328	13	6	482	39	40	41	52	700	44
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	0.95	
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.97			1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Frt		1.00	1.00	0.85	1.00	1.00	0.85			1.00	0.99	
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	
Satd. Flow (prot)		1575	1731	1530	1710	1731	1487			1710	3290	
Flt Permitted		0.11	1.00	1.00	0.54	1.00	1.00			0.41	1.00	
Satd. Flow (perm)		187	1731	1530	980	1731	1487			737	3290	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	49	57	364	14	7	536	43	44	46	58	778	49
RTOR Reduction (vph)	0	0	0	7	0	0	31	0	0	0	5	0
Lane Group Flow (vph)	0	106	364	7	7	536	56	0	0	104	822	0
Confl. Peds. (#/hr)		5					5					6
Heavy Vehicles (%)	8%	9%	4%	0%	0%	4%	0%	0%	0%	0%	3%	0%
Turn Type	Perm	pm+pt		Perm	Perm		Perm		Perm	Perm		
Protected Phases		7	4			8					2	
Permitted Phases	4	4		4	8		8		2	2		
Actuated Green, G (s)		50.0	50.0	50.0	32.0	32.0	32.0			25.0	25.0	
Effective Green, g (s)		50.0	50.0	50.0	32.0	32.0	32.0			25.0	25.0	
Actuated g/C Ratio		0.48	0.48	0.48	0.30	0.30	0.30			0.24	0.24	
Clearance Time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Grp Cap (vph)		281	824	729	299	528	453			175	783	
v/s Ratio Prot		0.05	c0.21			c0.31					c0.25	
v/s Ratio Perm		0.13		0.00	0.01		0.04			0.14		
v/c Ratio		0.38	0.44	0.01	0.02	1.02	0.12			0.59	1.05	
Uniform Delay, d1		20.2	18.2	14.5	25.6	36.5	26.4			35.5	40.0	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Incremental Delay, d2		3.8	1.7	0.0	0.1	43.0	0.6			14.0	46.2	
Delay (s)		24.1	20.0	14.5	25.7	79.5	26.9			49.5	86.2	
Level of Service		C	B	B	C	E	C			D	F	
Approach Delay (s)			20.7			71.7					82.1	
Approach LOS			C			E					F	

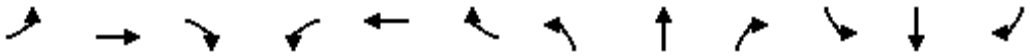
Intersection Summary			
HCM Average Control Delay	59.6	HCM Level of Service	E
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	79.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations								
Volume (vph)	52	285	26	31	4	62	110	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5				4.5	4.5	
Lane Util. Factor	1.00	0.95				1.00	0.88	
Frpb, ped/bikes	1.00	1.00				1.00	1.00	
Flpb, ped/bikes	1.00	1.00				1.00	1.00	
Frt	1.00	0.98				1.00	0.85	
Flt Protected	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1706	3280				1710	2622	
Flt Permitted	0.16	1.00				0.95	1.00	
Satd. Flow (perm)	293	3280				1710	2622	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	58	317	29	34	4	69	122	13
RTOR Reduction (vph)	0	7	0	0	0	0	7	0
Lane Group Flow (vph)	58	373	0	0	0	73	128	0
Confl. Peds. (#/hr)	6							
Heavy Vehicles (%)	0%	2%	0%	0%	0%	0%	3%	0%
Turn Type	Perm				Split		Perm	
Protected Phases		6			9	9		
Permitted Phases	6						9	
Actuated Green, G (s)	24.5	24.5				17.5	17.5	
Effective Green, g (s)	24.5	24.5				17.5	17.5	
Actuated g/C Ratio	0.23	0.23				0.17	0.17	
Clearance Time (s)	4.5	4.5				4.5	4.5	
Lane Grp Cap (vph)	68	765				285	437	
v/s Ratio Prot		0.11				0.04		
v/s Ratio Perm	0.20						c0.05	
v/c Ratio	0.85	0.49				0.26	0.29	
Uniform Delay, d1	38.5	34.8				38.1	38.3	
Progression Factor	1.00	1.00				1.00	1.00	
Incremental Delay, d2	73.0	2.2				2.2	1.7	
Delay (s)	111.5	37.0				40.2	40.0	
Level of Service	F	D				D	D	
Approach Delay (s)		46.9				40.1		
Approach LOS		D				D		

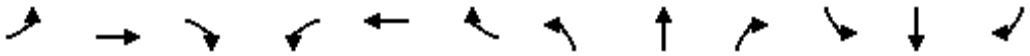
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	480	0	0	485	27	115	113	120	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	11	11	16	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.99			0.95				
Flt Protected		1.00			1.00			0.98				
Satd. Flow (prot)		1653			1929			1769				
Flt Permitted		0.97			1.00			0.98				
Satd. Flow (perm)		1600			1929			1769				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	26	533	0	0	539	30	128	126	133	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	559	0	0	569	0	0	387	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		31.0			31.0			26.0				
Effective Green, g (s)		31.0			31.0			26.0				
Actuated g/C Ratio		0.48			0.48			0.40				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		763			920			708				
v/s Ratio Prot					0.29							
v/s Ratio Perm		c0.35						0.22				
v/c Ratio		0.73			0.62			0.55				
Uniform Delay, d1		13.7			12.6			15.0				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		6.2			3.1			3.0				
Delay (s)		19.8			15.7			18.0				
Level of Service		B			B			B				
Approach Delay (s)		19.8			15.7			18.0			0.0	
Approach LOS		B			B			B			A	

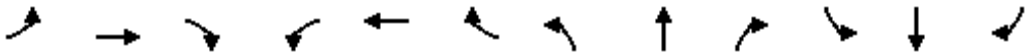
Intersection Summary			
HCM Average Control Delay	17.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	112	385	110	67	274	115	143	1647	126	92	445	93
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	9	9	10	9
Total Lost time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.96	1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1924	1426		1923	1396	1500	3099	1284	1425	2956	1265
Flt Permitted		0.66	1.00		0.56	1.00	0.40	1.00	1.00	0.09	1.00	1.00
Satd. Flow (perm)		1284	1426		1088	1396	631	3099	1284	142	2956	1265
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	118	405	116	71	288	121	151	1734	133	97	468	98
RTOR Reduction (vph)	0	0	68	0	0	71	0	0	30	0	0	59
Lane Group Flow (vph)	0	523	48	0	359	50	151	1734	103	97	468	39
Confl. Peds. (#/hr)	42		39	39		42	20		8	8		20
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	6%	4%	3%	0%	6%	5%	6%	3%	4%	8%	8%	4%
Turn Type	pm+pt		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		43.0	43.0		43.0	43.0	52.7	44.0	44.0	49.3	42.3	42.3
Effective Green, g (s)		43.0	43.0		43.0	43.0	52.7	44.0	44.0	49.3	42.3	42.3
Actuated g/C Ratio		0.41	0.41		0.41	0.41	0.50	0.42	0.42	0.47	0.40	0.40
Clearance Time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		526	584		446	572	389	1299	538	152	1191	510
v/s Ratio Prot							c0.03	c0.56		c0.04	0.16	
v/s Ratio Perm		c0.41	0.03		0.33	0.04	0.16		0.08	0.26		0.03
v/c Ratio		0.99	0.08		0.80	0.09	0.39	1.33	0.19	0.64	0.39	0.08
Uniform Delay, d1		30.9	18.9		27.3	19.0	14.8	30.5	19.3	23.3	22.2	19.3
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.23	0.77	0.42
Incremental Delay, d2		37.6	0.3		14.3	0.3	0.6	156.0	0.8	8.3	0.9	0.3
Delay (s)		68.4	19.2		41.6	19.3	15.5	186.5	20.0	36.9	18.0	8.4
Level of Service		E	B		D	B	B	F	C	D	B	A
Approach Delay (s)		59.5			36.0			162.8			19.4	
Approach LOS		E			D			F			B	

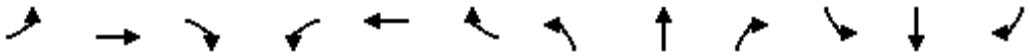
Intersection Summary			
HCM Average Control Delay	104.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	113.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	56	534	56	49	404	48	64	59	55	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		0.99			0.99			0.96				
Flt Protected		1.00			1.00			0.98				
Satd. Flow (prot)		1631			1628			1775				
Flt Permitted		0.92			0.90			0.98				
Satd. Flow (perm)		1510			1468			1775				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	62	593	62	54	449	53	71	66	61	0	0	0
RTOR Reduction (vph)	0	5	0	0	6	0	0	25	0	0	0	0
Lane Group Flow (vph)	0	712	0	0	550	0	0	173	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		38.0			38.0			19.0				
Effective Green, g (s)		38.0			38.0			19.0				
Actuated g/C Ratio		0.58			0.58			0.29				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		883			858			519				
v/s Ratio Prot												
v/s Ratio Perm		c0.47			0.37			0.10				
v/c Ratio		0.81			0.64			0.33				
Uniform Delay, d1		10.6			9.0			18.0				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		7.8			3.7			1.7				
Delay (s)		18.4			12.6			19.8				
Level of Service		B			B			B				
Approach Delay (s)		18.4			12.6			19.8			0.0	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	16.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	64.0%	ICU Level of Service	B
Analysis Period (min)	15		

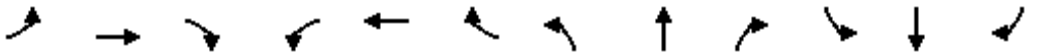
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	29	484	64	31	436	38	54	146	87	49	192	53
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	11	12	12	15	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.97		1.00	0.95		1.00	0.98		0.98	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		0.99	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.98	
Flt Protected		1.00	1.00		1.00	1.00		0.99	1.00		0.99	
Satd. Flow (prot)		1656	1255		1636	1288		1658	1490		1738	
Flt Permitted		0.96	1.00		0.95	1.00		0.84	1.00		0.92	
Satd. Flow (perm)		1595	1255		1560	1288		1419	1490		1609	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	31	509	67	33	459	40	57	154	92	52	202	56
RTOR Reduction (vph)	0	0	29	0	0	16	0	0	63	0	11	0
Lane Group Flow (vph)	0	540	38	0	492	24	0	211	29	0	299	0
Confl. Peds. (#/hr)	33		15	15		33	68		5	5		68
Confl. Bikes (#/hr)	4					4						
Heavy Vehicles (%)	0%	5%	14%	19%	5%	9%	2%	2%	1%	10%	7%	8%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Effective Green, g (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.32	0.32		0.32	
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Grp Cap (vph)		914	720		894	738		454	477		515	
v/s Ratio Prot												
v/s Ratio Perm		c0.34	0.03		0.32	0.02		0.15	0.02		c0.19	
v/c Ratio		0.59	0.05		0.55	0.03		0.46	0.06		0.58	
Uniform Delay, d1		10.3	7.0		10.0	7.0		20.4	17.7		21.3	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		2.8	0.1		2.4	0.1		3.4	0.2		4.7	
Delay (s)		13.1	7.2		12.4	7.0		23.8	17.9		26.0	
Level of Service		B	A		B	A		C	B		C	
Approach Delay (s)		12.5			12.0			22.0			26.0	
Approach LOS		B			B			C			C	

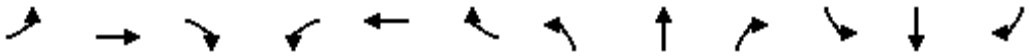
Intersection Summary			
HCM Average Control Delay	16.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	93.1%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	81	426	29	17	317	38	55	302	38	38	92	11
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	11	16	8	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.98	1.00	1.00	0.99
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1464	2990		1459	3535		1534	1647	1301	1517	1541	1156
Flt Permitted	0.51	1.00		0.44	1.00		0.69	1.00	1.00	0.45	1.00	1.00
Satd. Flow (perm)	789	2990		673	3535		1116	1647	1301	722	1541	1156
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	90	473	32	19	352	42	61	336	42	42	102	12
RTOR Reduction (vph)	0	7	0	0	14	0	0	0	22	0	0	7
Lane Group Flow (vph)	90	498	0	19	380	0	61	336	20	42	102	5
Confl. Peds. (#/hr)	16		9	9		16	1		5	5		1
Heavy Vehicles (%)	8%	6%	0%	13%	8%	3%	4%	2%	8%	5%	9%	22%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Effective Green, g (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	376	1426		321	1686		446	659	520	289	616	462
v/s Ratio Prot		c0.17			0.11			c0.20			0.07	
v/s Ratio Perm	0.11			0.03			0.05		0.02	0.06		0.00
v/c Ratio	0.24	0.35		0.06	0.23		0.14	0.51	0.04	0.15	0.17	0.01
Uniform Delay, d1	10.0	10.7		9.2	10.0		12.4	14.7	11.9	12.4	12.5	11.7
Progression Factor	1.00	1.00		1.00	1.00		0.62	0.76	0.33	0.53	0.54	0.28
Incremental Delay, d2	1.5	0.7		0.4	0.3		0.6	2.8	0.1	1.0	0.6	0.0
Delay (s)	11.5	11.3		9.5	10.3		8.3	13.9	4.1	7.7	7.3	3.4
Level of Service	B	B		A	B		A	B	A	A	A	A
Approach Delay (s)		11.4			10.2			12.2			7.1	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	10.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

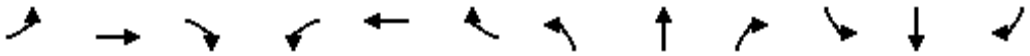


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	94	398	81	43	285	64	71	360	43	55	139	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	11	10	11	11	10	11	11	10	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.96	1.00		1.00	1.00		0.98	1.00		0.97	1.00	
Frt	1.00	0.97		1.00	0.97		1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1465	3058		1588	3012		1541	3021		1402	2764	
Flt Permitted	0.52	1.00		0.43	1.00		0.62	1.00		0.47	1.00	
Satd. Flow (perm)	806	3058		721	3012		1013	3021		691	2764	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	99	419	85	45	300	67	75	379	45	58	146	57
RTOR Reduction (vph)	0	0	0	0	0	0	0	12	0	0	33	0
Lane Group Flow (vph)	99	504	0	45	367	0	75	412	0	58	170	0
Confl. Peds. (#/hr)	98		10	10		98	28		52	52		28
Heavy Vehicles (%)	5%	5%	4%	0%	5%	7%	2%	6%	13%	10%	11%	20%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.41	0.41		0.41	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	387	1468		346	1446		419	1249		286	1142	
v/s Ratio Prot		c0.16			0.12			c0.14			0.06	
v/s Ratio Perm	0.12			0.06			0.07			0.08		
v/c Ratio	0.26	0.34		0.13	0.25		0.18	0.33		0.20	0.15	
Uniform Delay, d1	11.6	12.1		10.8	11.5		13.9	14.9		14.1	13.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.6	0.6		0.8	0.4		0.9	0.7		1.6	0.3	
Delay (s)	13.2	12.8		11.6	12.0		14.9	15.6		15.7	14.0	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		12.8			11.9			15.5			14.4	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	49.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	106	313	36	23	328	46	65	397	25	41	196	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	8	16	12	9	10	10	9	10	10
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1533	1576		1473	1842		1533	3073		1372	2875	
Flt Permitted	0.45	1.00		0.48	1.00		0.59	1.00		0.43	1.00	
Satd. Flow (perm)	722	1576		742	1842		951	3073		622	2875	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	112	329	38	24	345	48	68	418	26	43	206	57
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	112	367	0	24	393	0	68	444	0	43	263	0
Confl. Peds. (#/hr)	7		23	23		7	10		8	8		10
Confl. Bikes (#/hr)	1		2	2		1	1		1	1		1
Heavy Vehicles (%)	4%	8%	10%	0%	9%	5%	0%	3%	0%	12%	7%	6%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	47.0	41.8		40.6	38.6		26.8	22.2		23.6	20.6	
Effective Green, g (s)	47.0	39.8		40.6	36.6		26.8	20.2		23.6	18.6	
Actuated g/C Ratio	0.55	0.47		0.48	0.43		0.32	0.24		0.28	0.22	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	449	738		372	793		331	730		199	629	
v/s Ratio Prot	c0.02	c0.23		0.00	0.21		c0.01	c0.14		0.01	0.09	
v/s Ratio Perm	0.12			0.03			0.05			0.05		
v/c Ratio	0.25	0.50		0.06	0.50		0.21	0.61		0.22	0.42	
Uniform Delay, d1	13.4	15.7		14.5	17.5		21.5	28.9		25.7	28.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	2.4		0.1	2.2		0.3	3.7		0.5	2.0	
Delay (s)	13.7	18.1		14.6	19.7		21.8	32.6		26.2	30.6	
Level of Service	B	B		B	B		C	C		C	C	
Approach Delay (s)		17.0			19.4			31.2			30.0	
Approach LOS		B			B			C			C	

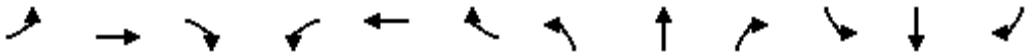
Intersection Summary			
HCM Average Control Delay	24.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	62.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	66	307	42	63	373	111	56	370	120	55	158	37
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	11	11	11	11	12	12	10	10	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		0.99	1.00	
Frt		0.98			0.97		1.00	0.96		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3493			2913		1614	3156		1580	2919	
Flt Permitted		0.79			0.85		0.62	1.00		0.40	1.00	
Satd. Flow (perm)		2775			2481		1046	3156		658	2919	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	73	341	47	70	414	123	62	411	133	61	176	41
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	461	0	0	607	0	62	544	0	61	217	0
Confl. Peds. (#/hr)	20		16	16		20	5		33	33		5
Confl. Bikes (#/hr)	2					2			2	2		
Heavy Vehicles (%)	9%	9%	0%	24%	7%	6%	2%	4%	2%	0%	5%	9%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.0			33.0		32.0	32.0		32.0	32.0	
Effective Green, g (s)		34.0			34.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio		0.45			0.45		0.44	0.44		0.44	0.44	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		1258			1125		460	1389		290	1284	
v/s Ratio Prot								c0.17			0.07	
v/s Ratio Perm		0.17			c0.24		0.06			0.09		
v/c Ratio		0.37			0.54		0.13	0.39		0.21	0.17	
Uniform Delay, d1		13.4			14.8		12.5	14.2		13.0	12.7	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.8			1.9		0.6	0.8		1.6	0.3	
Delay (s)		14.3			16.7		13.1	15.0		14.6	13.0	
Level of Service		B			B		B	B		B	B	
Approach Delay (s)		14.3			16.7			14.8			13.3	
Approach LOS		B			B			B			B	

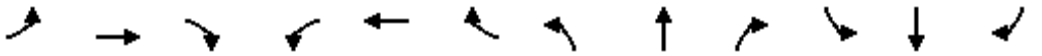
Intersection Summary			
HCM Average Control Delay	15.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	138	496	5	14	635	371	68	9	19	112	1	49
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	12	12	12	12	12	13	13	13
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	1.00		1.00	1.00	0.85		0.97			0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97			0.97	
Satd. Flow (prot)	1574	3143		1629	3257	1457		1612			3106	
Flt Permitted	0.36	1.00		0.44	1.00	1.00		0.70			0.75	
Satd. Flow (perm)	603	3143		748	3257	1457		1174			2411	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	153	551	6	16	706	412	76	10	21	124	1	54
RTOR Reduction (vph)	0	1	0	0	0	143	0	12	0	0	41	0
Lane Group Flow (vph)	153	556	0	16	706	269	0	95	0	0	138	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	46.0	46.0		46.0	46.0	46.0		16.4			16.4	
Effective Green, g (s)	46.0	46.0		46.0	46.0	46.0		16.4			16.4	
Actuated g/C Ratio	0.65	0.65		0.65	0.65	0.65		0.23			0.23	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		8.0			8.0	
Lane Grp Cap (vph)	394	2054		489	2128	952		273			562	
v/s Ratio Prot		0.18			0.22							
v/s Ratio Perm	c0.25			0.02		0.18		c0.08			0.06	
v/c Ratio	0.39	0.27		0.03	0.33	0.28		0.35			0.24	
Uniform Delay, d1	5.7	5.1		4.3	5.4	5.2		22.5			22.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	2.9	0.3		0.1	0.4	0.7		3.3			1.0	
Delay (s)	8.5	5.5		4.4	5.8	5.9		25.8			22.9	
Level of Service	A	A		A	A	A		C			C	
Approach Delay (s)		6.1			5.8			25.8			22.9	
Approach LOS		A			A			C			C	

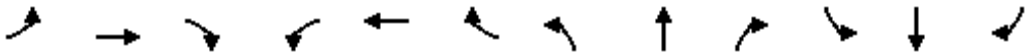
Intersection Summary			
HCM Average Control Delay	8.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	70.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	111	214	75	63	190	68	127	1887	84	70	494	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	9	12	10	10	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.96	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.96		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1548	1499		1547	1586		1493	3069	1271	1452	2983	1301
Flt Permitted	0.38	1.00		0.32	1.00		0.39	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	617	1499		524	1586		617	3069	1271	180	2983	1301
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	117	225	79	66	200	72	134	1986	88	74	520	44
RTOR Reduction (vph)	0	15	0	0	16	0	0	0	18	0	0	26
Lane Group Flow (vph)	117	289	0	66	256	0	134	1986	70	74	520	18
Confl. Peds. (#/hr)	4		9	9		4	6		16	16		6
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	3%	3%	4%	3%	1%	2%	3%	4%	4%	6%	7%	3%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	28.0	21.0		28.0	21.0		42.0	35.0	35.0	42.0	35.0	35.0
Effective Green, g (s)	26.0	22.0		26.0	22.0		40.0	35.0	35.0	40.0	35.0	35.0
Actuated g/C Ratio	0.31	0.26		0.31	0.26		0.47	0.41	0.41	0.47	0.41	0.41
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	254	388		232	410		352	1264	523	174	1228	536
v/s Ratio Prot	c0.03	c0.19		0.02	0.16		0.03	c0.65		c0.03	0.17	
v/s Ratio Perm	0.11			0.07			0.15		0.06	0.17		0.01
v/c Ratio	0.46	0.75		0.28	0.63		0.38	1.57	0.13	0.43	0.42	0.03
Uniform Delay, d1	22.5	28.9		21.9	27.9		13.3	25.0	15.6	18.1	17.8	14.9
Progression Factor	1.00	1.00		1.00	1.00		0.62	0.71	0.49	1.00	1.00	1.00
Incremental Delay, d2	5.9	12.3		3.1	7.0		2.6	260.3	0.4	7.4	1.1	0.1
Delay (s)	28.4	41.2		24.9	34.9		10.8	277.9	8.0	25.6	18.9	15.0
Level of Service	C	D		C	C		B	F	A	C	B	B
Approach Delay (s)		37.6			32.9			250.9			19.4	
Approach LOS		D			C			F			B	

Intersection Summary			
HCM Average Control Delay	164.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	94.0%	ICU Level of Service	F
Analysis Period (min)	15		

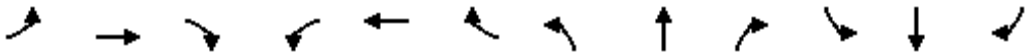
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	26	217	17	15	149	18	18	162	26	32	144	21
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	14	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.99			0.98			0.99	
Flt Protected		1.00			1.00			1.00			0.99	
Satd. Flow (prot)		1850			1836			1902			1930	
Flt Permitted		0.96			0.97			0.97			0.94	
Satd. Flow (perm)		1791			1791			1856			1824	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	27	224	18	15	154	19	19	167	27	33	148	22
RTOR Reduction (vph)	0	4	0	0	6	0	0	8	0	0	7	0
Lane Group Flow (vph)	0	265	0	0	182	0	0	205	0	0	196	0
Confl. Peds. (#/hr)	5		11	11		5	7		34	34		7
Confl. Bikes (#/hr)			3	3								
Heavy Vehicles (%)	4%	2%	0%	20%	1%	0%	12%	3%	8%	0%	3%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.42			0.42			0.46			0.46	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		744			744			857			842	
v/s Ratio Prot												
v/s Ratio Perm		c0.15			0.10			c0.11			0.11	
v/c Ratio		0.36			0.24			0.24			0.23	
Uniform Delay, d1		13.0			12.4			10.6			10.6	
Progression Factor		1.00			0.62			1.05			1.00	
Incremental Delay, d2		1.3			0.8			0.6			0.6	
Delay (s)		14.4			8.5			11.8			11.2	
Level of Service		B			A			B			B	
Approach Delay (s)		14.4			8.5			11.8			11.2	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	11.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.5%	ICU Level of Service	A
Analysis Period (min)	15		

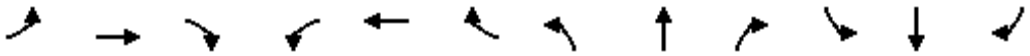
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	181	34	9	162	19	42	364	31	16	86	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.95	1.00		1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1465	2994		1302	3037		1529	3094		1492	2868	
Flt Permitted	0.63	1.00		0.60	1.00		0.68	1.00		0.50	1.00	
Satd. Flow (perm)	965	2994		827	3037		1093	3094		781	2868	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	201	38	10	180	21	47	404	34	18	96	19
RTOR Reduction (vph)	0	24	0	0	13	0	0	10	0	0	8	0
Lane Group Flow (vph)	27	215	0	10	188	0	47	428	0	18	107	0
Confl. Peds. (#/hr)	35		6	6		35	18					18
Confl. Bikes (#/hr)	14		32	32		14	23		7	7		23
Heavy Vehicles (%)	4%	4%	0%	22%	2%	6%	3%	2%	0%	7%	8%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0		39.0	39.0		39.0	39.0	
Effective Green, g (s)	19.0	19.0		19.0	19.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.58	0.58		0.58	0.58	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	282	875		242	888		639	1809		457	1677	
v/s Ratio Prot		c0.07			0.06			c0.14			0.04	
v/s Ratio Perm	0.03			0.01			0.04			0.02		
v/c Ratio	0.10	0.25		0.04	0.21		0.07	0.24		0.04	0.06	
Uniform Delay, d1	16.7	17.5		16.5	17.3		5.9	6.5		5.7	5.8	
Progression Factor	0.72	0.72		0.75	0.74		0.96	0.99		0.49	0.44	
Incremental Delay, d2	0.6	0.6		0.3	0.5		0.2	0.3		0.2	0.1	
Delay (s)	12.7	13.3		12.7	13.4		5.8	6.7		3.0	2.6	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		13.3			13.4			6.6			2.7	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	9.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.7%	ICU Level of Service	A
Analysis Period (min)	15		

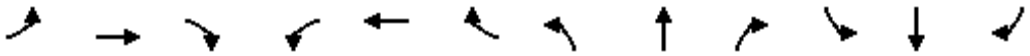
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	46	178	34	16	122	38	28	414	24	13	163	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	9	9	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.98		1.00	0.96			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1556	2952		1515	2868			1878			1807	
Flt Permitted	0.64	1.00		0.60	1.00			0.98			0.96	
Satd. Flow (perm)	1047	2952		965	2868			1839			1749	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	51	198	38	18	136	42	31	460	27	14	181	17
RTOR Reduction (vph)	0	23	0	0	25	0	0	3	0	0	5	0
Lane Group Flow (vph)	51	213	0	18	153	0	0	515	0	0	207	0
Confl. Peds. (#/hr)	10		29	29		10	17		10	10		17
Confl. Bikes (#/hr)									2	2		
Heavy Vehicles (%)	2%	4%	10%	0%	4%	0%	0%	8%	4%	0%	13%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Effective Green, g (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40			0.48			0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	419	1181		386	1147			877			834	
v/s Ratio Prot		c0.07			0.05							
v/s Ratio Perm	0.05			0.02				c0.28			0.12	
v/c Ratio	0.12	0.18		0.05	0.13			0.59			0.25	
Uniform Delay, d1	12.3	12.6		11.9	12.4			12.4			10.1	
Progression Factor	1.01	0.92		0.88	0.88			0.96			1.00	
Incremental Delay, d2	0.6	0.3		0.2	0.2			2.8			0.7	
Delay (s)	13.0	11.9		10.7	11.1			14.7			10.8	
Level of Service	B	B		B	B			B			B	
Approach Delay (s)		12.1			11.1			14.7			10.8	
Approach LOS		B			B			B			B	

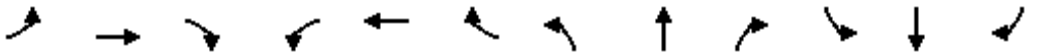
Intersection Summary			
HCM Average Control Delay	12.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



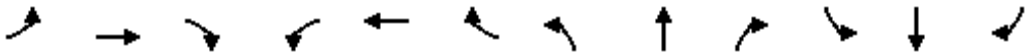
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	86	121	58	2	80	34	21	272	9	7	175	28
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	16	12	10	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.95		1.00	0.96			1.00			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1605	1878		1587	1870			1971			1932	
Flt Permitted	0.68	1.00		0.58	1.00			0.98			0.99	
Satd. Flow (perm)	1141	1878		975	1870			1929			1915	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	96	134	64	2	89	38	23	302	10	8	194	31
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	96	198	0	2	127	0	0	335	0	0	233	0
Confl. Peds. (#/hr)			8	8			1		8	8		1
Heavy Vehicles (%)	3%	3%	2%	0%	6%	0%	0%	3%	0%	0%	4%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Effective Green, g (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Actuated g/C Ratio	0.31	0.31		0.31	0.31			0.57			0.57	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	351	578		300	575			1098			1090	
v/s Ratio Prot		c0.11			0.07							
v/s Ratio Perm	0.08			0.00				c0.17			0.12	
v/c Ratio	0.27	0.34		0.01	0.22			0.31			0.21	
Uniform Delay, d1	17.0	17.4		15.6	16.7			7.3			6.9	
Progression Factor	0.90	0.89		0.87	0.92			0.95			1.00	
Incremental Delay, d2	1.9	1.6		0.0	0.9			0.7			0.4	
Delay (s)	17.2	17.1		13.7	16.2			7.7			7.3	
Level of Service	B	B		B	B			A			A	
Approach Delay (s)		17.1			16.2			7.7			7.3	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	116	9	52	1	3	12	38	467	6	2	191	48
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	10	11	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.97		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	0.98	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.87		1.00	0.88		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1603	1673		1710	1422		1491	1631	1392	1649	1907	1427
Flt Permitted	0.75	1.00		0.71	1.00		0.63	1.00	1.00	0.39	1.00	1.00
Satd. Flow (perm)	1260	1673		1283	1422		981	1631	1392	682	1907	1427
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	129	10	58	1	3	13	42	519	7	2	212	53
RTOR Reduction (vph)	0	42	0	0	9	0	0	0	3	0	0	21
Lane Group Flow (vph)	129	26	0	1	7	0	42	519	4	2	212	32
Confl. Peds. (#/hr)	9					9	1		6	6		1
Heavy Vehicles (%)	5%	14%	5%	0%	67%	12%	7%	3%	0%	0%	7%	5%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	17.0	17.0		17.0	17.0		39.0	39.0	39.0	39.0	39.0	39.0
Effective Green, g (s)	18.0	18.0		18.0	18.0		39.0	39.0	39.0	39.0	39.0	39.0
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.60	0.60	0.60	0.60	0.60	0.60
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	349	463		355	394		589	979	835	409	1144	856
v/s Ratio Prot		0.02			0.00			c0.32			0.11	
v/s Ratio Perm	c0.10			0.00			0.04		0.00	0.00		0.02
v/c Ratio	0.37	0.06		0.00	0.02		0.07	0.53	0.01	0.00	0.19	0.04
Uniform Delay, d1	18.9	17.3		17.0	17.1		5.4	7.6	5.2	5.2	5.9	5.3
Progression Factor	1.47	2.38		1.00	1.00		1.13	1.07	1.31	1.00	1.00	1.00
Incremental Delay, d2	2.9	0.2		0.0	0.1		0.2	1.6	0.0	0.0	0.4	0.1
Delay (s)	30.8	41.3		17.0	17.1		6.3	9.8	6.8	5.2	6.2	5.4
Level of Service	C	D		B	B		A	A	A	A	A	A
Approach Delay (s)		34.4			17.1			9.5			6.0	
Approach LOS		C			B			A			A	

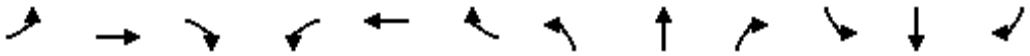
Intersection Summary			
HCM Average Control Delay	13.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	240	76	120	362	0	0	0	0	74	305	361
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)		4.0		3.0	3.0					5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	
Frpb, ped/bikes		0.99		1.00	1.00					1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Frt		0.96		1.00	1.00					1.00	0.92	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		2826		1621	3288					1574	2907	
Flt Permitted		1.00		0.50	1.00					0.95	1.00	
Satd. Flow (perm)		2826		848	3288					1574	2907	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	253	80	126	381	0	0	0	0	78	321	380
RTOR Reduction (vph)	0	30	0	0	0	0	0	0	0	0	214	0
Lane Group Flow (vph)	0	303	0	126	381	0	0	0	0	78	487	0
Confl. Peds. (#/hr)	14		32	32		14	14					14
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	9%	4%	5%	4%	0%	0%	0%	0%	5%	2%	4%
Turn Type				D.P+P						custom		
Protected Phases		8		7	7 8					6	6	
Permitted Phases				8						6		
Actuated Green, G (s)		33.0		56.0	59.0					32.0	32.0	
Effective Green, g (s)		33.0		56.0	59.0					32.0	32.0	
Actuated g/C Ratio		0.33		0.56	0.59					0.32	0.32	
Clearance Time (s)		4.0		3.0						5.0	5.0	
Lane Grp Cap (vph)		933		653	1940					504	930	
v/s Ratio Prot		c0.11		0.04	c0.12					0.05	c0.17	
v/s Ratio Perm				0.06								
v/c Ratio		0.32		0.19	0.20					0.15	0.52	
Uniform Delay, d1		25.1		10.6	9.5					24.3	27.8	
Progression Factor		1.00		1.95	2.05					1.00	1.00	
Incremental Delay, d2		0.9		0.6	0.2					0.7	2.1	
Delay (s)		26.1		21.1	19.7					25.0	29.9	
Level of Service		C		C	B					C	C	
Approach Delay (s)		26.1			20.0			0.0			29.4	
Approach LOS		C			C			A			C	

Intersection Summary			
HCM Average Control Delay	25.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		

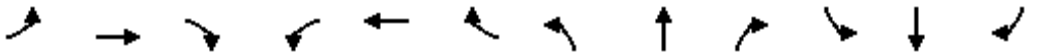
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	129	185	0	0	311	66	171	544	326	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	9	12	13	12	13	12	12	12
Total Lost time (s)	4.0	4.0			4.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.97		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1673	3054			2832		1750	1782	1514			
Flt Permitted	0.36	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	637	3054			2832		1750	1782	1514			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	136	195	0	0	327	69	180	573	343	0	0	0
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	230	0	0	0
Lane Group Flow (vph)	136	195	0	0	378	0	180	573	113	0	0	0
Confl. Peds. (#/hr)	14		16	16		14			1	1		
Confl. Bikes (#/hr)	1					1			1	1		
Heavy Vehicles (%)	2%	12%	0%	0%	5%	4%	1%	1%	3%	0%	0%	0%
Turn Type	pm+pt						custom		Perm			
Protected Phases	4	1 4			1		2	2				
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	54.0	58.0			21.0		33.0	33.0	33.0			
Effective Green, g (s)	54.0	58.0			21.0		33.0	33.0	33.0			
Actuated g/C Ratio	0.54	0.58			0.21		0.33	0.33	0.33			
Clearance Time (s)	4.0				4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	686	1771			595		578	588	500			
v/s Ratio Prot	c0.07	0.06			c0.13		0.10	c0.32				
v/s Ratio Perm	0.04								0.07			
v/c Ratio	0.20	0.11			0.64		0.31	0.97	0.23			
Uniform Delay, d1	11.8	9.4			36.0		25.0	33.1	24.3			
Progression Factor	0.24	0.25			1.00		0.75	0.78	1.92			
Incremental Delay, d2	0.6	0.1			5.1		0.9	24.5	0.7			
Delay (s)	3.5	2.5			41.1		19.6	50.4	47.4			
Level of Service	A	A			D		B	D	D			
Approach Delay (s)		2.9			41.1			44.4			0.0	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM Average Control Delay	36.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		

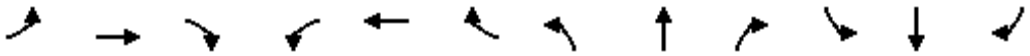
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	456	362	34	587	0	0	0	0	4	216	196
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	11	12	12	12	12	10	10	12
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	1.00
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.93		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3110		1613	3273					1596	3160	1443
Flt Permitted		1.00		0.17	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3110		294	3273					1596	3160	1443
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	475	377	35	611	0	0	0	0	4	225	204
RTOR Reduction (vph)	0	143	0	0	0	0	0	0	0	0	0	135
Lane Group Flow (vph)	0	709	0	35	611	0	0	0	0	4	225	69
Confl. Peds. (#/hr)	22		3	3		22						
Confl. Bikes (#/hr)	4					4			32	32		
Heavy Vehicles (%)	0%	2%	2%	6%	1%	0%	0%	0%	0%	0%	1%	6%
Turn Type				pm+pt						Split		Prot
Protected Phases		8		7	7 8					6	6	6
Permitted Phases				7 8								
Actuated Green, G (s)		36.0		54.0	58.0					34.0	34.0	34.0
Effective Green, g (s)		36.0		54.0	58.0					34.0	34.0	34.0
Actuated g/C Ratio		0.36		0.54	0.58					0.34	0.34	0.34
Clearance Time (s)		4.0		4.0						4.0	4.0	4.0
Lane Grp Cap (vph)		1120		396	1898					543	1074	491
v/s Ratio Prot		c0.23		0.02	c0.19					0.00	c0.07	0.05
v/s Ratio Perm				0.03								
v/c Ratio		0.63		0.09	0.32					0.01	0.21	0.14
Uniform Delay, d1		26.5		12.4	10.8					21.8	23.5	22.9
Progression Factor		1.00		0.55	0.68					0.74	0.79	0.94
Incremental Delay, d2		2.7		0.2	0.2					0.0	0.4	0.5
Delay (s)		29.3		7.0	7.6					16.1	19.0	22.0
Level of Service		C		A	A					B	B	C
Approach Delay (s)		29.3			7.5			0.0			20.4	
Approach LOS		C			A			A			C	

Intersection Summary			
HCM Average Control Delay	20.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.7%	ICU Level of Service	E
Analysis Period (min)	15		

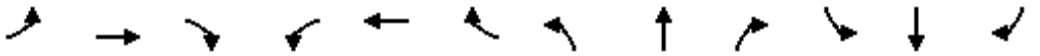
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	401	59	0	0	57	5	564	636	61	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	10	12	11	11	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	0.91	0.91			0.95		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	1.00			
Flpb, ped/bikes	0.99	0.99			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.99		1.00	1.00	0.85			
Flt Protected	0.95	0.96			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1444	3041			3079		1555	1637	1500			
Flt Permitted	0.71	0.74			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	1084	2338			3079		1555	1637	1500			
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	413	61	0	0	59	5	581	656	63	0	0	0
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	38	0	0	0
Lane Group Flow (vph)	206	268	0	0	60	0	581	656	25	0	0	0
Confl. Peds. (#/hr)	30		2	2		30			4	4		
Confl. Bikes (#/hr)	3					3			2	2		
Heavy Vehicles (%)	3%	2%	0%	0%	2%	0%	1%	1%	2%	0%	0%	0%
Turn Type	pm+pt						custom		custom			
Protected Phases	4	1 4			1		2	2	2			
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Effective Green, g (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Actuated g/C Ratio	0.51	0.51			0.15		0.37	0.37	0.37			
Clearance Time (s)	4.0				4.0		4.0	4.0	4.0			
Lane Grp Cap (vph)	682	1445			462		575	606	555			
v/s Ratio Prot	c0.11	0.07			0.02		0.37	c0.40	0.02			
v/s Ratio Perm	c0.05	0.03										
v/c Ratio	0.30	0.19			0.13		1.01	1.08	0.05			
Uniform Delay, d1	14.0	13.3			36.8		31.5	31.5	20.2			
Progression Factor	0.23	0.25			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.8	0.2			0.6		40.1	60.9	0.2			
Delay (s)	4.1	3.5			37.4		71.6	92.4	20.3			
Level of Service	A	A			D		E	F	C			
Approach Delay (s)		3.7			37.4			79.6			0.0	
Approach LOS		A			D			E			A	

Intersection Summary			
HCM Average Control Delay	58.6	HCM Level of Service	E
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.7%	ICU Level of Service	E
Analysis Period (min)	15		

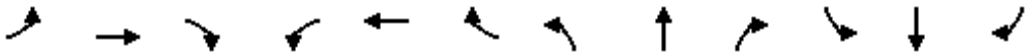
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	155	276	66	64	182	110	41	1100	94	96	476	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	9	10	9	9	10	9
Total Lost time (s)		4.0			4.0		4.0	3.5	4.0	4.0	3.5	4.0
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00			0.98		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.98			0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.98			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		2844			2772		1447	3069	1336	1494	2956	1270
Flt Permitted		0.67			0.79		0.39	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)		1936			2201		600	3069	1336	197	2956	1270
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	161	288	69	67	190	115	43	1146	98	100	496	44
RTOR Reduction (vph)	0	14	0	0	60	0	0	0	39	0	0	27
Lane Group Flow (vph)	0	504	0	0	312	0	43	1146	59	100	496	17
Confl. Peds. (#/hr)	49		20	20		49	26		8	8		26
Confl. Bikes (#/hr)	2					2						
Heavy Vehicles (%)	10%	7%	4%	9%	7%	5%	6%	4%	0%	3%	8%	5%
Turn Type	pm+pt			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		35.0			27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)		36.0			28.0		36.0	33.5	33.0	36.0	33.5	33.0
Actuated g/C Ratio		0.42			0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)		5.0			5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)		884			725		294	1210	519	144	1165	493
v/s Ratio Prot		c0.04					0.01	c0.37		c0.03	0.17	
v/s Ratio Perm		0.20			c0.14		0.06		0.04	0.26		0.01
v/c Ratio		0.57			0.43		0.15	0.95	0.11	0.69	0.43	0.03
Uniform Delay, d1		18.6			22.3		14.7	24.9	16.6	18.6	18.7	16.1
Progression Factor		1.00			1.00		1.30	0.86	1.39	1.83	1.64	3.16
Incremental Delay, d2		2.7			1.9		0.6	11.0	0.3	22.3	1.0	0.1
Delay (s)		21.3			24.1		19.7	32.3	23.4	56.4	31.8	51.0
Level of Service		C			C		B	C	C	E	C	D
Approach Delay (s)		21.3			24.1			31.2			37.0	
Approach LOS		C			C			C			D	

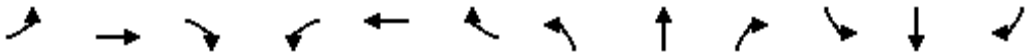
Intersection Summary			
HCM Average Control Delay	29.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	79.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	42	447	0	0	329	78	27	60	96	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.97			0.93				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		1707			1670			1581				
Flt Permitted		0.94			1.00			0.99				
Satd. Flow (perm)		1609			1670			1581				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	47	497	0	0	366	87	30	67	107	0	0	0
RTOR Reduction (vph)	0	0	0	0	13	0	0	61	0	0	0	0
Lane Group Flow (vph)	0	544	0	0	440	0	0	143	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		34.0			34.0			23.0				
Effective Green, g (s)		34.0			34.0			23.0				
Actuated g/C Ratio		0.52			0.52			0.35				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		842			874			559				
v/s Ratio Prot					0.26							
v/s Ratio Perm		c0.34						0.09				
v/c Ratio		0.65			0.50			0.26				
Uniform Delay, d1		11.2			10.0			14.9				
Progression Factor		1.00			0.64			1.00				
Incremental Delay, d2		3.8			1.7			1.1				
Delay (s)		15.0			8.1			16.0				
Level of Service		B			A			B				
Approach Delay (s)		15.0			8.1			16.0			0.0	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM Average Control Delay	12.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	71.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	43	398	32	19	408	47	25	167	33	50	105	21
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.99			0.98			0.98	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1886			1843			3185			3147	
Flt Permitted		0.93			0.97			0.91			0.83	
Satd. Flow (perm)		1760			1798			2931			2649	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	48	442	36	21	453	52	28	186	37	56	117	23
RTOR Reduction (vph)	0	4	0	0	6	0	0	22	0	0	13	0
Lane Group Flow (vph)	0	522	0	0	520	0	0	229	0	0	183	0
Confl. Peds. (#/hr)	29		16	16		29	28		14	14		28
Confl. Bikes (#/hr)	1					1	1					1
Heavy Vehicles (%)	3%	7%	4%	12%	8%	13%	0%	4%	4%	4%	4%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0			27.0			27.0	
Effective Green, g (s)		30.0			30.0			27.0			27.0	
Actuated g/C Ratio		0.46			0.46			0.42			0.42	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		812			830			1217			1100	
v/s Ratio Prot												
v/s Ratio Perm		c0.30			0.29			c0.08			0.07	
v/c Ratio		0.64			0.63			0.19			0.17	
Uniform Delay, d1		13.4			13.3			12.1			11.9	
Progression Factor		0.65			0.52			0.86			0.57	
Incremental Delay, d2		3.2			3.4			0.3			0.3	
Delay (s)		11.8			10.3			10.7			7.1	
Level of Service		B			B			B			A	
Approach Delay (s)		11.8			10.3			10.7			7.1	
Approach LOS		B			B			B			A	

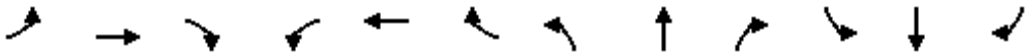
Intersection Summary			
HCM Average Control Delay	10.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	79.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	267	22	28	347	61	53	303	85	46	91	28
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	9	10	10	9	10	10	12	10	10	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.98		1.00	0.97		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1503	2934		1583	2945		1497	3034		1594	2896	
Flt Permitted	0.43	1.00		0.55	1.00		0.67	1.00		0.50	1.00	
Satd. Flow (perm)	684	2934		910	2945		1053	3034		833	2896	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	56	297	24	31	386	68	59	337	94	51	101	31
RTOR Reduction (vph)	0	9	0	0	22	0	0	39	0	0	14	0
Lane Group Flow (vph)	56	312	0	31	432	0	59	392	0	51	118	0
Confl. Peds. (#/hr)	25		14	14		25	12		4	4		12
Confl. Bikes (#/hr)	1					1			1	1		
Heavy Vehicles (%)	5%	7%	12%	0%	6%	2%	6%	1%	3%	0%	4%	12%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	232	993		308	997		567	1634		449	1559	
v/s Ratio Prot		0.11			c0.15			c0.13			0.04	
v/s Ratio Perm	0.08			0.03			0.06			0.06		
v/c Ratio	0.24	0.31		0.10	0.43		0.10	0.24		0.11	0.08	
Uniform Delay, d1	15.5	15.9		14.7	16.7		7.3	7.9		7.4	7.2	
Progression Factor	0.59	0.56		0.77	0.78		0.68	0.68		1.32	1.37	
Incremental Delay, d2	2.0	0.7		0.6	1.3		0.4	0.3		0.5	0.1	
Delay (s)	11.1	9.6		11.9	14.4		5.4	5.7		10.3	10.0	
Level of Service	B	A		B	B		A	A		B	A	
Approach Delay (s)		9.8			14.2			5.7			10.1	
Approach LOS		A			B			A			B	

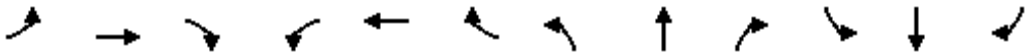
Intersection Summary			
HCM Average Control Delay	9.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	374	27	37	370	82	20	307	44	41	118	41
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	9	10	9	9	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00			0.99	
Flpb, ped/bikes	0.97	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.97			0.98			0.97	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1385	3013		1334	3540			3438			3303	
Flt Permitted	0.46	1.00		0.49	1.00			0.94			0.84	
Satd. Flow (perm)	667	3013		692	3540			3226			2809	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	84	394	28	39	389	86	21	323	46	43	124	43
RTOR Reduction (vph)	0	8	0	0	29	0	0	16	0	0	26	0
Lane Group Flow (vph)	84	414	0	39	446	0	0	374	0	0	184	0
Confl. Peds. (#/hr)	53		34	34		53	67		28	28		67
Heavy Vehicles (%)	8%	5%	0%	14%	6%	1%	0%	9%	20%	5%	15%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Effective Green, g (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48			0.40			0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	318	1437		330	1688			1290			1124	
v/s Ratio Prot		c0.14			0.13							
v/s Ratio Perm	0.13			0.06				c0.12			0.07	
v/c Ratio	0.26	0.29		0.12	0.26			0.29			0.16	
Uniform Delay, d1	10.2	10.3		9.4	10.2			13.2			12.5	
Progression Factor	1.60	1.64		0.77	0.75			0.36			0.64	
Incremental Delay, d2	2.0	0.5		0.6	0.3			0.5			0.3	
Delay (s)	18.3	17.4		7.9	8.0			5.3			8.3	
Level of Service	B	B		A	A			A			A	
Approach Delay (s)		17.6			8.0			5.3			8.3	
Approach LOS		B			A			A			A	

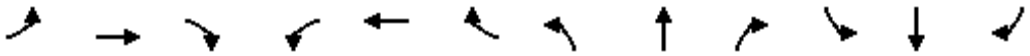
Intersection Summary			
HCM Average Control Delay	10.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	94	288	95	104	356	104	84	80	84	84	80	78
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	16	12	12	16	12
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		0.95			1.00			1.00	
Frt		1.00	0.85		0.97			0.95			0.96	
Flt Protected		0.99	1.00		0.99			0.98			0.98	
Satd. Flow (prot)		1637	1409		3033			1823			1826	
Flt Permitted		0.75	1.00		0.77			0.80			0.79	
Satd. Flow (perm)		1235	1409		2363			1480			1469	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	104	320	106	116	396	116	93	89	93	93	89	87
RTOR Reduction (vph)	0	0	51	0	30	0	0	28	0	0	26	0
Lane Group Flow (vph)	0	424	55	0	598	0	0	247	0	0	243	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		34.0	34.0		34.0			21.0			21.0	
Effective Green, g (s)		34.0	34.0		34.0			21.0			21.0	
Actuated g/C Ratio		0.52	0.52		0.52			0.32			0.32	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Grp Cap (vph)		646	737		1236			478			475	
v/s Ratio Prot												
v/s Ratio Perm		c0.34	0.04		0.25			c0.17			0.17	
v/c Ratio		0.66	0.08		0.48			0.52			0.51	
Uniform Delay, d1		11.3	7.7		9.9			17.9			17.8	
Progression Factor		2.03	5.66		0.40			1.00			1.00	
Incremental Delay, d2		5.0	0.2		1.3			3.9			3.9	
Delay (s)		27.9	43.8		5.3			21.8			21.7	
Level of Service		C	D		A			C			C	
Approach Delay (s)		31.1			5.3			21.8			21.7	
Approach LOS		C			A			C			C	

Intersection Summary			
HCM Average Control Delay	18.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	70.2%	ICU Level of Service	C
Analysis Period (min)	15		

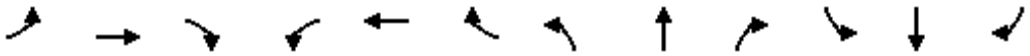
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	70	365	20	15	442	63	37	103	41	41	86	94
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	15	8	16	8	8	16	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00			0.99	
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.98			0.97			0.94	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1475	3018		1572	3002			3454			3404	
Flt Permitted	0.39	1.00		0.48	1.00			0.87			0.88	
Satd. Flow (perm)	606	3018		793	3002			3037			3020	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	78	406	22	17	491	70	41	114	46	46	96	104
RTOR Reduction (vph)	0	6	0	0	17	0	0	25	0	0	58	0
Lane Group Flow (vph)	78	422	0	17	544	0	0	176	0	0	188	0
Confl. Peds. (#/hr)	22		40	40		22	18		3	3		18
Confl. Bikes (#/hr)			2	2			1					1
Heavy Vehicles (%)	7%	5%	0%	0%	4%	2%	0%	3%	22%	0%	3%	8%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	28.0	28.0		28.0	28.0			29.0			29.0	
Effective Green, g (s)	28.0	28.0		28.0	28.0			29.0			29.0	
Actuated g/C Ratio	0.43	0.43		0.43	0.43			0.45			0.45	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	261	1300		342	1293			1355			1347	
v/s Ratio Prot		0.14			c0.18							
v/s Ratio Perm	0.13			0.02				0.06			c0.06	
v/c Ratio	0.30	0.32		0.05	0.42			0.13			0.14	
Uniform Delay, d1	12.1	12.2		10.8	12.9			10.6			10.6	
Progression Factor	0.99	1.01		1.12	0.94			0.99			0.81	
Incremental Delay, d2	2.3	0.5		0.2	0.6			0.2			0.2	
Delay (s)	14.2	12.9		12.2	12.7			10.7			8.9	
Level of Service	B	B		B	B			B			A	
Approach Delay (s)		13.1			12.6			10.7			8.9	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	11.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

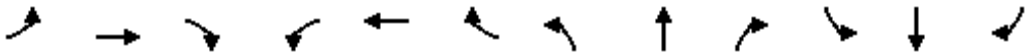


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	82	433	69	89	441	270	46	315	87	211	151	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.98			0.95			0.97			0.98	
Flt Protected		0.99			0.99			0.99			0.98	
Satd. Flow (prot)		3177			3075			3146			3118	
Flt Permitted		0.66			0.76			0.88			0.63	
Satd. Flow (perm)		2099			2351			2784			2030	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	91	481	77	99	490	300	51	350	97	234	168	56
RTOR Reduction (vph)	0	16	0	0	99	0	0	33	0	0	17	0
Lane Group Flow (vph)	0	633	0	0	790	0	0	465	0	0	441	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		26.0			26.0			29.0			20.0	
Effective Green, g (s)		26.0			26.0			29.0			20.0	
Actuated g/C Ratio		0.40			0.40			0.45			0.31	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		840			940			1276			625	
v/s Ratio Prot								c0.03				
v/s Ratio Perm		0.30			c0.34			0.13			c0.22	
v/c Ratio		0.75			0.84			0.36			0.88dl	
Uniform Delay, d1		16.7			17.6			11.9			19.9	
Progression Factor		1.76			1.00			1.00			0.89	
Incremental Delay, d2		6.1			9.0			0.8			6.6	
Delay (s)		35.5			26.6			12.7			24.3	
Level of Service		D			C			B			C	
Approach Delay (s)		35.5			26.6			12.7			24.3	
Approach LOS		D			C			B			C	

Intersection Summary			
HCM Average Control Delay	25.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	85.0%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group



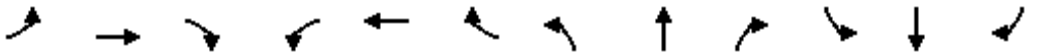
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	687	113	43	721	0	130	0	66	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	10	10	12	12	12	12	10	10	10
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			1.00				
Frt		0.98			1.00			0.95				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		2975			3031			1584				
Flt Permitted		1.00			0.84			0.80				
Satd. Flow (perm)		2975			2567			1309				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	763	126	48	801	0	144	0	73	0	0	0
RTOR Reduction (vph)	0	18	0	0	0	0	0	21	0	0	0	0
Lane Group Flow (vph)	0	871	0	0	849	0	0	196	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	custom			Perm			Perm			Perm		
Protected Phases		4 5 6 11			8			2			2	
Permitted Phases	4 6 11			8			2			2		
Actuated Green, G (s)		65.0			33.0			16.0				
Effective Green, g (s)		58.0			33.0			16.0				
Actuated g/C Ratio		0.64			0.37			0.18				
Clearance Time (s)					5.0			5.0				
Lane Grp Cap (vph)		1917			941			233				
v/s Ratio Prot		c0.29										
v/s Ratio Perm					c0.33			c0.15				
v/c Ratio		0.45			0.90			0.84				
Uniform Delay, d1		8.0			27.0			35.8				
Progression Factor		0.01			1.57			1.00				
Incremental Delay, d2		0.4			12.2			29.3				
Delay (s)		0.5			54.5			65.1				
Level of Service		A			D			E				
Approach Delay (s)		0.5			54.5			65.1			0.0	
Approach LOS		A			D			E			A	

Intersection Summary			
HCM Average Control Delay	31.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	70.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	117	476	178	260	613	174	98	19	176	74	7	73
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	10	12	12	12	12	16	12	12	12	12
Total Lost time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	1.00
Frt	1.00	0.96		1.00	1.00	0.85		0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (prot)	1520	3020		1629	3257	1457		1756		1629	1714	1457
Flt Permitted	0.33	1.00		0.23	1.00	1.00		0.89		0.41	1.00	1.00
Satd. Flow (perm)	529	3020		400	3257	1457		1581		698	1714	1457
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	130	529	198	289	681	193	109	21	196	82	8	81
RTOR Reduction (vph)	0	40	0	0	0	98	0	74	0	0	0	44
Lane Group Flow (vph)	130	687	0	289	681	95	0	252	0	82	8	37
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	41.9	32.6		48.2	35.9	44.5		20.2		31.8	31.8	41.1
Effective Green, g (s)	41.9	32.6		48.2	35.9	44.5		20.2		31.8	31.8	41.1
Actuated g/C Ratio	0.47	0.36		0.54	0.40	0.49		0.22		0.35	0.35	0.46
Clearance Time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Vehicle Extension (s)	4.0	3.0		4.0	3.0	3.0		4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	349	1094		386	1299	720		355		336	606	665
v/s Ratio Prot	0.04	0.23		c0.10	0.21	0.01				c0.02	0.00	0.01
v/s Ratio Perm	0.14			c0.30		0.05		c0.16		0.06		0.02
v/c Ratio	0.37	0.63		0.75	0.52	0.13		0.71		0.24	0.01	0.06
Uniform Delay, d1	14.2	23.7		13.6	20.6	12.3		32.2		21.4	18.9	13.6
Progression Factor	1.92	1.62		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	0.8	2.5		8.2	1.5	0.1		7.0		0.4	0.0	0.0
Delay (s)	28.1	40.8		21.9	22.1	12.4		39.2		21.8	18.9	13.7
Level of Service	C	D		C	C	B		D		C	B	B
Approach Delay (s)		38.9			20.4			39.2			17.8	
Approach LOS		D			C			D			B	

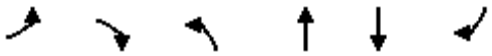
Intersection Summary			
HCM Average Control Delay	29.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	71.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	492	234	6	504	0	0	0	0	30	0	543
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	547	260	7	560	0	0	0	0	33	0	603
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		498										
pX, platoon unblocked												
vC, conflicting volume	560			547			840	1120	273	847	1120	280
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	560			547			840	1120	273	847	1120	280
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	100	100	87	100	15
cM capacity (veh/h)	987			998			37	199	715	249	199	708

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	273	273	260	193	373	33	603
Volume Left	0	0	0	7	0	33	0
Volume Right	0	0	260	0	0	0	603
cSH	1700	1700	1700	998	1700	249	708
Volume to Capacity	0.16	0.16	0.15	0.01	0.22	0.13	0.85
Queue Length 95th (ft)	0	0	0	1	0	11	246
Control Delay (s)	0.0	0.0	0.0	0.4	0.0	21.7	32.1
Lane LOS				A		C	D
Approach Delay (s)	0.0			0.1		31.5	
Approach LOS						D	

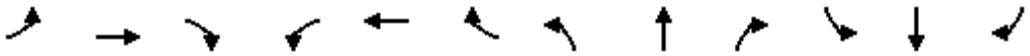
Intersection Summary				
Average Delay	10.0			
Intersection Capacity Utilization	57.0%	ICU Level of Service		B
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	522	0	510	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	580	0	567	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	290	290	567
Volume Left (vph)	290	290	567
Volume Right (vph)	0	0	0
Hadj (s)	0.58	0.58	0.29
Departure Headway (s)	6.8	6.8	5.7
Degree Utilization, x	0.55	0.55	0.90
Capacity (veh/h)	514	505	627
Control Delay (s)	16.7	16.7	38.6
Approach Delay (s)	16.7		38.6
Approach LOS	C		E

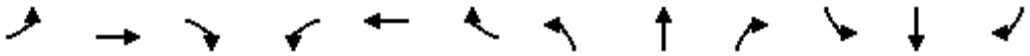
Intersection Summary			
Delay	27.5		
HCM Level of Service	D		
Intersection Capacity Utilization	52.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	353	46	127	326	0	0	0	0	72	15	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)		3.0		4.0	4.0						5.0	
Lane Util. Factor		0.95		1.00	0.95						0.95	
Frt		0.98		1.00	1.00						0.95	
Flt Protected		1.00		0.95	1.00						0.97	
Satd. Flow (prot)		3094		1574	3149						3014	
Flt Permitted		1.00		0.44	1.00						0.97	
Satd. Flow (perm)		3094		730	3149						3014	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	392	51	141	362	0	0	0	0	80	17	47
RTOR Reduction (vph)	0	12	0	0	0	0	0	0	0	0	32	0
Lane Group Flow (vph)	0	431	0	141	362	0	0	0	0	0	112	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type				pm+pt						Split		
Protected Phases		4		3	8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		36.0		49.0	49.0						27.0	
Effective Green, g (s)		36.0		49.0	49.0						27.0	
Actuated g/C Ratio		0.42		0.58	0.58						0.32	
Clearance Time (s)		3.0		4.0	4.0						5.0	
Lane Grp Cap (vph)		1310		520	1815						957	
v/s Ratio Prot		c0.14		c0.03	0.11						c0.04	
v/s Ratio Perm				0.12								
v/c Ratio		0.33		0.27	0.20						0.12	
Uniform Delay, d1		16.4		11.5	8.6						20.6	
Progression Factor		1.00		0.27	0.24						1.00	
Incremental Delay, d2		0.7		1.2	0.2						0.2	
Delay (s)		17.1		4.4	2.3						20.8	
Level of Service		B		A	A						C	
Approach Delay (s)		17.1			2.9			0.0			20.8	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	11.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	34.2%	ICU Level of Service	A
Analysis Period (min)	15		

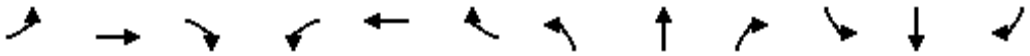
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	68	357	0	0	404	76	49	65	45	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	11	11	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0			3.0			5.0				
Lane Util. Factor	1.00	0.95			0.95			0.91				
Frt	1.00	1.00			0.98			0.96				
Flt Protected	0.95	1.00			1.00			0.98				
Satd. Flow (prot)	1629	3257			3074			4413				
Flt Permitted	0.38	1.00			1.00			0.98				
Satd. Flow (perm)	650	3257			3074			4413				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	76	397	0	0	449	84	54	72	50	0	0	0
RTOR Reduction (vph)	0	0	0	0	18	0	0	34	0	0	0	0
Lane Group Flow (vph)	76	397	0	0	515	0	0	142	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	pm+pt						Split					
Protected Phases	7	4			8		2	2				
Permitted Phases	4											
Actuated Green, G (s)	48.0	48.0			35.0			27.0				
Effective Green, g (s)	48.0	48.0			35.0			27.0				
Actuated g/C Ratio	0.56	0.56			0.41			0.32				
Clearance Time (s)	5.0	5.0			3.0			5.0				
Lane Grp Cap (vph)	482	1839			1266			1402				
v/s Ratio Prot	0.02	c0.12			c0.17			c0.03				
v/s Ratio Perm	0.07											
v/c Ratio	0.16	0.22			0.41			0.10				
Uniform Delay, d1	12.2	9.2			17.7			20.4				
Progression Factor	0.33	0.32			1.00			1.00				
Incremental Delay, d2	0.7	0.3			1.0			0.1				
Delay (s)	4.6	3.2			18.6			20.6				
Level of Service	A	A			B			C				
Approach Delay (s)		3.5			18.6			20.6			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM Average Control Delay	12.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	34.2%	ICU Level of Service	A
Analysis Period (min)	15		

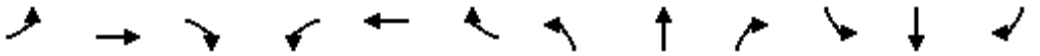
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	323	39	34	247	31	118	85	61	57	90	124
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	12	15	12	12	15	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		0.99			0.99			0.97			0.94	
Flt Protected		1.00			0.99			0.98			0.99	
Satd. Flow (prot)		2982			2979			1787			1751	
Flt Permitted		0.89			0.87			0.76			0.88	
Satd. Flow (perm)		2664			2613			1380			1562	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	43	359	43	38	274	34	131	94	68	63	100	138
RTOR Reduction (vph)	0	12	0	0	13	0	0	17	0	0	47	0
Lane Group Flow (vph)	0	433	0	0	333	0	0	276	0	0	254	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		23.0			23.0			32.0			32.0	
Effective Green, g (s)		23.0			23.0			32.0			32.0	
Actuated g/C Ratio		0.35			0.35			0.49			0.49	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		943			925			679			769	
v/s Ratio Prot												
v/s Ratio Perm		c0.16			0.13			c0.20			0.16	
v/c Ratio		0.46			0.36			0.41			0.33	
Uniform Delay, d1		16.2			15.6			10.5			10.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.6			1.1			1.8			1.2	
Delay (s)		17.8			16.6			12.3			11.2	
Level of Service		B			B			B			B	
Approach Delay (s)		17.8			16.6			12.3			11.2	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	14.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	63.7%	ICU Level of Service	B
Analysis Period (min)	15		

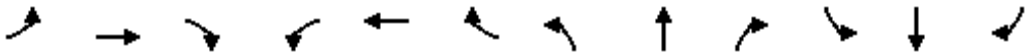
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	196	202	39	50	176	62	68	971	67	73	418	85
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	12	10	16	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.96
Flpb, ped/bikes	0.99	1.00		1.00	1.00		0.99	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1548	3005		1592	3512		1486	3040	1347	1494	3011	1271
Flt Permitted	0.59	1.00		0.58	1.00		0.44	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	954	3005		975	3512		688	3040	1347	197	3011	1271
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	206	213	41	53	185	65	72	1022	71	77	440	89
RTOR Reduction (vph)	0	19	0	0	41	0	0	0	43	0	0	54
Lane Group Flow (vph)	206	235	0	53	209	0	72	1022	28	77	440	35
Confl. Peds. (#/hr)	31		7	7		31	37		12	12		37
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	2%	4%	0%	0%	6%	2%	3%	5%	0%	3%	6%	4%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	32.0	27.0		32.0	27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)	30.0	28.0		30.0	28.0		36.0	33.0	33.0	36.0	33.0	33.0
Actuated g/C Ratio	0.35	0.33		0.35	0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	365	990		373	1157		329	1180	523	144	1169	493
v/s Ratio Prot	c0.03	0.08		0.01	0.06		0.01	c0.34		c0.03	0.15	
v/s Ratio Perm	c0.17			0.04			0.08		0.02	0.20		0.03
v/c Ratio	0.56	0.24		0.14	0.18		0.22	0.87	0.05	0.53	0.38	0.07
Uniform Delay, d1	21.3	20.7		18.4	20.3		14.9	24.0	16.2	17.2	18.6	16.4
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	2.00	0.61	0.82
Incremental Delay, d2	6.2	0.6		0.8	0.3		1.5	8.6	0.2	12.3	0.8	0.3
Delay (s)	27.5	21.3		19.2	20.7		16.5	32.6	16.4	46.8	12.2	13.7
Level of Service	C	C		B	C		B	C	B	D	B	B
Approach Delay (s)		24.1			20.4			30.6			16.8	
Approach LOS		C			C			C			B	

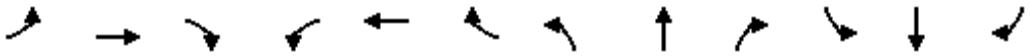
Intersection Summary			
HCM Average Control Delay	24.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	70.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	256	18	14	216	8	35	121	25	20	58	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	16	12	12	16	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00	0.99		1.00	0.98
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		0.99	1.00
Satd. Flow (prot)		1929	1382		1950	1331		1973	1452		1928	1430
Flt Permitted		0.94	1.00		0.98	1.00		0.94	1.00		0.93	1.00
Satd. Flow (perm)		1823	1382		1910	1331		1866	1452		1810	1430
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	42	269	19	15	227	8	37	127	26	21	61	44
RTOR Reduction (vph)	0	0	10	0	0	4	0	0	15	0	0	26
Lane Group Flow (vph)	0	311	9	0	242	4	0	164	11	0	82	18
Confl. Peds. (#/hr)	5		21	21		5	9		1	1		9
Heavy Vehicles (%)	5%	5%	6%	7%	4%	12%	6%	1%	4%	0%	6%	5%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Effective Green, g (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Actuated g/C Ratio		0.46	0.46		0.46	0.46		0.42	0.42		0.42	0.42
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		841	638		882	614		775	603		752	594
v/s Ratio Prot												
v/s Ratio Perm		c0.17	0.01		0.13	0.00		c0.09	0.01		0.05	0.01
v/c Ratio		0.37	0.01		0.27	0.01		0.21	0.02		0.11	0.03
Uniform Delay, d1		11.4	9.5		10.8	9.4		12.2	11.2		11.6	11.3
Progression Factor		1.00	1.00		0.46	0.35		1.17	1.42		0.94	0.84
Incremental Delay, d2		1.3	0.0		0.8	0.0		0.6	0.1		0.3	0.1
Delay (s)		12.6	9.5		5.7	3.4		14.8	16.0		11.2	9.5
Level of Service		B	A		A	A		B	B		B	A
Approach Delay (s)		12.4			5.6			15.0			10.6	
Approach LOS		B			A			B			B	

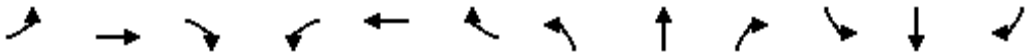
Intersection Summary			
HCM Average Control Delay	10.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	66	283	10	17	211	34	12	234	34	47	70	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.98		1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1520	3025		1520	2976		1520	2982		1520	2904	
Flt Permitted	0.95	1.00		0.56	1.00		0.68	1.00		0.56	1.00	
Satd. Flow (perm)	1520	3025		888	2976		1091	2982		891	2904	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	73	314	11	19	234	38	13	260	38	52	78	33
RTOR Reduction (vph)	0	4	0	0	20	0	0	18	0	0	19	0
Lane Group Flow (vph)	73	321	0	19	252	0	13	280	0	52	92	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Prot			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Effective Green, g (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.11	0.49		0.34	0.34		0.42	0.42		0.42	0.42	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	164	1489		301	1007		453	1239		370	1206	
v/s Ratio Prot	c0.05	0.11			c0.08			c0.09			0.03	
v/s Ratio Perm				0.02			0.01			0.06		
v/c Ratio	0.45	0.22		0.06	0.25		0.03	0.23		0.14	0.08	
Uniform Delay, d1	27.2	9.4		14.5	15.5		11.2	12.3		11.8	11.5	
Progression Factor	0.85	0.48		0.86	0.83		0.54	0.56		1.16	1.17	
Incremental Delay, d2	8.3	0.3		0.4	0.6		0.1	0.4		0.8	0.1	
Delay (s)	31.6	4.8		12.8	13.5		6.2	7.2		14.4	13.6	
Level of Service	C	A		B	B		A	A		B	B	
Approach Delay (s)		9.7			13.4			7.2			13.8	
Approach LOS		A			B			A			B	

Intersection Summary			
HCM Average Control Delay	10.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	36.6%	ICU Level of Service	A
Analysis Period (min)	15		

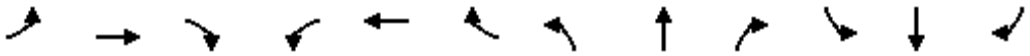
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	37	249	85	240	212	42	43	295	56	24	179	24
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.96		1.00	0.98			0.98			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1520	2924		1520	2964			3171			3188	
Flt Permitted	0.58	1.00		0.95	1.00			0.90			0.89	
Satd. Flow (perm)	925	2924		1520	2964			2860			2861	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	41	277	94	267	236	47	48	328	62	27	199	27
RTOR Reduction (vph)	0	51	0	0	25	0	0	20	0	0	14	0
Lane Group Flow (vph)	41	320	0	267	258	0	0	418	0	0	239	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Prot			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4						2			6		
Actuated Green, G (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Effective Green, g (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Actuated g/C Ratio	0.31	0.31		0.09	0.45			0.38			0.38	
Clearance Time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	285	900		140	1322			1100			1100	
v/s Ratio Prot		c0.11		c0.18	0.09							
v/s Ratio Perm	0.04							c0.15			0.08	
v/c Ratio	0.14	0.36		1.91	0.19			0.38			0.22	
Uniform Delay, d1	16.3	17.5		29.5	10.9			14.4			13.4	
Progression Factor	0.64	0.55		1.32	1.10			1.26			0.81	
Incremental Delay, d2	1.0	1.1		426.9	0.2			0.2			0.5	
Delay (s)	11.5	10.7		465.9	12.3			18.4			11.4	
Level of Service	B	B		F	B			B			B	
Approach Delay (s)		10.8			232.5			18.4			11.4	
Approach LOS		B			F			B			B	

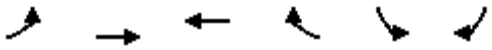
Intersection Summary			
HCM Average Control Delay	86.7	HCM Level of Service	F
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	56.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	16	294	14	69	461	69	34	93	160	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	14	12	10	15	10
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			0.95				
Frt		0.99			0.98			0.92				
Flt Protected		1.00			0.99			0.99				
Satd. Flow (prot)		1586			1566			3165				
Flt Permitted		0.97			0.92			0.99				
Satd. Flow (perm)		1535			1453			3165				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	18	327	16	77	512	77	38	103	178	0	0	0
RTOR Reduction (vph)	0	2	0	0	6	0	0	137	0	0	0	0
Lane Group Flow (vph)	0	359	0	0	660	0	0	182	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		41.9			41.9			15.1				
Effective Green, g (s)		41.9			41.9			15.1				
Actuated g/C Ratio		0.64			0.64			0.23				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		3.0			3.0			8.0				
Lane Grp Cap (vph)		989			937			735				
v/s Ratio Prot												
v/s Ratio Perm		0.23			c0.45			0.06				
v/c Ratio		0.36			0.70			0.25				
Uniform Delay, d1		5.4			7.5			20.3				
Progression Factor		1.68			1.00			1.00				
Incremental Delay, d2		1.0			4.4			0.8				
Delay (s)		10.0			11.9			21.1				
Level of Service		A			B			C				
Approach Delay (s)		10.0			11.9			21.1			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM Average Control Delay	13.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	71.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	95	359	464	44	64	132
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	100	378	488	46	67	139
Pedestrians		3	5		21	
Lane Width (ft)		16.0	16.0		10.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1319	491			
pX, platoon unblocked	0.86				0.86	0.86
vC, conflicting volume	556				1115	536
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	398				1051	374
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	89				64	75
cM capacity (veh/h)	936				188	565

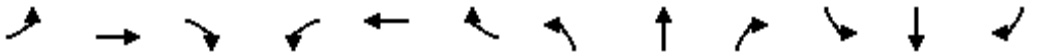
Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	478	535	67	139
Volume Left	100	0	67	0
Volume Right	0	46	0	139
cSH	936	1700	188	565
Volume to Capacity	0.11	0.31	0.36	0.25
Queue Length 95th (ft)	9	0	38	24
Control Delay (s)	3.0	0.0	34.4	13.4
Lane LOS	A		D	B
Approach Delay (s)	3.0	0.0	20.3	
Approach LOS			C	

Intersection Summary			
Average Delay	4.6		
Intersection Capacity Utilization	68.9%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	463	1	26	658	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0			4.0		
Lane Util. Factor	1.00			1.00		
Frt	1.00			1.00		
Flt Protected	1.00			1.00		
Satd. Flow (prot)	1714			1711		
Flt Permitted	1.00			0.97		
Satd. Flow (perm)	1714			1663		
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	514	1	29	731	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	515	0	0	760	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type			Perm			
Protected Phases	1 2 4			4	3	
Permitted Phases			4			
Actuated Green, G (s)	63.0			31.0		
Effective Green, g (s)	59.0			31.0		
Actuated g/C Ratio	0.69			0.36		
Clearance Time (s)				4.0		
Lane Grp Cap (vph)	1190			607		
v/s Ratio Prot	c0.30					
v/s Ratio Perm				c0.46		
v/c Ratio	0.43			1.25		
Uniform Delay, d1	5.7			27.0		
Progression Factor	0.05			1.00		
Incremental Delay, d2	0.1			126.6		
Delay (s)	0.4			153.6		
Level of Service	A			F		
Approach Delay (s)	0.4			153.6	0.0	
Approach LOS	A			F	A	

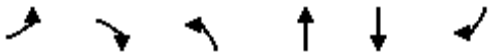
Intersection Summary			
HCM Average Control Delay	91.7	HCM Level of Service	F
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	62.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	183	191	25	551	0	0	0	0	3	0	250
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	203	212	28	612	0	0	0	0	3	0	278
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	612			203			977	977	208	769	871	612
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	612			203			977	977	208	769	871	612
tC, single (s)	4.1			5.5			7.5	6.5	6.9	7.5	6.5	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.9			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			100	100	100	99	100	36
cM capacity (veh/h)	977			986			72	246	805	288	283	431

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	136	280	640	3	278
Volume Left	0	0	28	3	0
Volume Right	0	212	0	0	278
cSH	1700	1700	986	288	431
Volume to Capacity	0.08	0.16	0.03	0.01	0.64
Queue Length 95th (ft)	0	0	2	1	110
Control Delay (s)	0.0	0.0	0.7	17.7	27.3
Lane LOS			A	C	D
Approach Delay (s)	0.0		0.7	27.2	
Approach LOS				D	

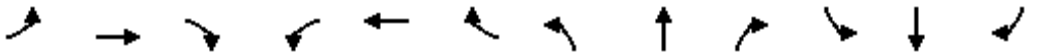
Intersection Summary				
Average Delay	6.1			
Intersection Capacity Utilization	57.2%	ICU Level of Service		B
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	186	0	576	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	207	0	640	0	0	0

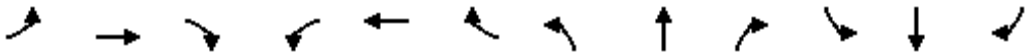
Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	103	103	640
Volume Left (vph)	103	103	640
Volume Right (vph)	0	0	0
Hadj (s)	0.58	0.58	0.29
Departure Headway (s)	6.8	6.8	4.8
Degree Utilization, x	0.19	0.19	0.86
Capacity (veh/h)	511	512	734
Control Delay (s)	10.2	10.2	29.9
Approach Delay (s)	10.2		29.9
Approach LOS	B		D

Intersection Summary			
Delay	25.1		
HCM Level of Service	D		
Intersection Capacity Utilization	46.0%	ICU Level of Service	A
Analysis Period (min)	15		



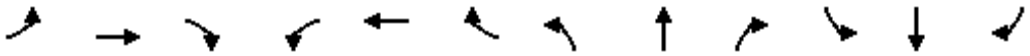
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	560	207	165	489	0	0	0	0	131	115	294
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	13	12	12	12	12	10	10	11
Total Lost time (s)		6.0	6.0		6.0					6.0	6.0	6.0
Lane Util. Factor		0.95	1.00		0.95					0.86	0.81	0.86
Frpb, ped/bikes		1.00	0.98		1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	0.93	0.85
Flt Protected		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (prot)		2978	1202		3372					1346	3693	1122
Flt Permitted		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (perm)		2978	1202		3372					1346	3693	1122
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	589	218	174	515	0	0	0	0	138	121	309
RTOR Reduction (vph)	0	0	123	0	0	0	0	0	0	0	99	91
Lane Group Flow (vph)	0	589	95	0	689	0	0	0	0	76	239	63
Confl. Peds. (#/hr)	5		3	3		5						
Heavy Vehicles (%)	0%	11%	9%	2%	4%	0%	0%	0%	0%	2%	2%	2%
Parking (#/hr)			0									0
Turn Type			Perm	Split						Split		custom
Protected Phases		2		10 12 14	10 12 14					4	4	
Permitted Phases			2									4 2
Actuated Green, G (s)		39.0	39.0		71.5					20.3	20.3	65.3
Effective Green, g (s)		39.0	39.0		71.5					20.3	20.3	65.3
Actuated g/C Ratio		0.24	0.24		0.45					0.13	0.13	0.41
Clearance Time (s)		6.0	6.0							6.0	6.0	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		726	293		1507					171	469	458
v/s Ratio Prot		c0.20			c0.20					0.06	c0.06	
v/s Ratio Perm			0.08									0.06
v/c Ratio		0.81	0.32		0.46					0.44	0.51	0.14
Uniform Delay, d1		57.0	49.7		30.8					64.6	65.2	29.7
Progression Factor		1.00	1.00		0.02					1.00	1.00	1.00
Incremental Delay, d2		9.6	2.9		0.1					1.8	0.9	0.1
Delay (s)		66.6	52.6		0.7					66.5	66.1	29.8
Level of Service		E	D		A					E	E	C
Approach Delay (s)		62.8			0.7			0.0			56.3	
Approach LOS		E			A			A			E	

Intersection Summary			
HCM Average Control Delay	40.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	31.2
Intersection Capacity Utilization	56.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



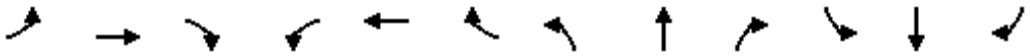
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	210	481	0	0	426	93	228	144	172	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	13	12	12	11	12	13	13	14	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0				
Lane Util. Factor	1.00	0.95			0.95	1.00	0.91	0.91				
Frt	1.00	1.00			1.00	0.85	1.00	0.93				
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (prot)	1574	3366			3149	1457	1531	2974				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (perm)	1574	3366			3149	1457	1531	2974				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	233	534	0	0	473	103	253	160	191	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	77	0	100	0	0	0	0
Lane Group Flow (vph)	233	534	0	0	473	26	207	297	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Split					Perm	Split					
Protected Phases	2 4 8	2 4 8			10		12	12				
Permitted Phases						10						
Actuated Green, G (s)	80.5	80.5			33.5	33.5	19.1	19.1				
Effective Green, g (s)	80.5	80.5			33.5	33.5	19.1	19.1				
Actuated g/C Ratio	0.50	0.50			0.21	0.21	0.12	0.12				
Clearance Time (s)					6.0	6.0	6.0	6.0				
Vehicle Extension (s)					3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	792	1694			659	305	183	355				
v/s Ratio Prot	0.15	c0.16			c0.15		c0.14	0.10				
v/s Ratio Perm						0.02						
v/c Ratio	0.29	0.32			0.72	0.08	1.13	0.84				
Uniform Delay, d1	23.2	23.5			58.9	50.9	70.5	68.9				
Progression Factor	0.07	0.07			1.00	1.00	1.00	1.00				
Incremental Delay, d2	0.1	0.1			3.7	0.1	106.2	15.7				
Delay (s)	1.7	1.7			62.6	51.0	176.6	84.6				
Level of Service	A	A			E	D	F	F				
Approach Delay (s)		1.7			60.5			116.2			0.0	
Approach LOS		A			E			F			A	

Intersection Summary			
HCM Average Control Delay	54.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	28.9
Intersection Capacity Utilization	51.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	214	444	73	56	185	54	86	803	146	90	426	99
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	14	12	10	10	12	9	10	12
Total Lost time (s)	4.0	4.0	5.0	4.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.99	1.00	1.00	1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1538	1556	1327	1596	1724		1524	2930		1509	2870	
Flt Permitted	0.46	1.00	1.00	0.21	1.00		0.36	1.00		0.12	1.00	
Satd. Flow (perm)	751	1556	1327	360	1724		571	2930		197	2870	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	225	467	77	59	195	57	91	845	154	95	448	104
RTOR Reduction (vph)	0	0	52	0	12	0	0	17	0	0	22	0
Lane Group Flow (vph)	225	467	25	59	240	0	91	982	0	95	530	0
Confl. Peds. (#/hr)	33		3	3		33	42		8	8		42
Confl. Bikes (#/hr)							1					1
Heavy Vehicles (%)	3%	8%	6%	0%	7%	5%	4%	5%	11%	2%	6%	9%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	36.3	29.3	29.3	33.3	27.8		39.6	34.1		39.6	34.1	
Effective Green, g (s)	34.3	30.3	29.3	31.3	27.8		37.6	34.1		37.6	34.1	
Actuated g/C Ratio	0.38	0.34	0.33	0.35	0.31		0.42	0.38		0.42	0.38	
Clearance Time (s)	3.0	5.0	5.0	3.0	5.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	341	527	435	188	536		288	1118		149	1095	
v/s Ratio Prot	c0.04	c0.30		0.02	0.14		0.02	c0.34		c0.03	0.18	
v/s Ratio Perm	0.21		0.02	0.09			0.12			0.24		
v/c Ratio	0.66	0.89	0.06	0.31	0.45		0.32	0.88		0.64	0.48	
Uniform Delay, d1	22.4	27.9	20.6	21.0	24.7		16.2	25.7		18.5	21.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.6	19.3	0.3	1.0	2.7		0.6	9.9		8.6	1.5	
Delay (s)	27.0	47.2	20.8	22.0	27.4		16.9	35.6		27.2	22.5	
Level of Service	C	D	C	C	C		B	D		C	C	
Approach Delay (s)		38.7			26.3			34.0			23.2	
Approach LOS		D			C			C			C	

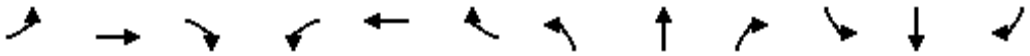
Intersection Summary			
HCM Average Control Delay	32.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	89.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	78.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	43	562	16	26	257	28	35	79	102	45	42	38
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	10	10	10	12	15	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Frpb, ped/bikes		1.00	0.97		1.00	0.97		0.99			0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.94			0.96	
Flt Protected		1.00	1.00		1.00	1.00		0.99			0.98	
Satd. Flow (prot)		1908	1482		1599	1198		1812			1821	
Flt Permitted		0.96	1.00		0.93	1.00		0.95			0.86	
Satd. Flow (perm)		1845	1482		1500	1198		1732			1599	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	45	592	17	27	271	29	37	83	107	47	44	40
RTOR Reduction (vph)	0	0	6	0	0	15	0	49	0	0	23	0
Lane Group Flow (vph)	0	637	11	0	298	14	0	178	0	0	108	0
Confl. Peds. (#/hr)	6		11	11		6	4		8	8		4
Confl. Bikes (#/hr)	1		1	1		1			1	1		
Heavy Vehicles (%)	0%	7%	0%	0%	5%	16%	0%	0%	0%	10%	0%	3%
Turn Type	Perm		Perm	Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Effective Green, g (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Actuated g/C Ratio		0.49	0.49		0.49	0.49		0.42			0.42	
Clearance Time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		908	730		738	590		719			664	
v/s Ratio Prot												
v/s Ratio Perm		c0.35	0.01		0.20	0.01		c0.10			0.07	
v/c Ratio		0.70	0.01		0.40	0.02		0.25			0.16	
Uniform Delay, d1		12.8	8.4		10.5	8.5		12.4			11.9	
Progression Factor		1.00	1.00		1.91	2.84		1.00			1.35	
Incremental Delay, d2		4.5	0.0		0.1	0.0		0.8			0.5	
Delay (s)		17.3	8.5		20.1	24.1		13.2			16.6	
Level of Service		B	A		C	C		B			B	
Approach Delay (s)		17.1			20.5			13.2			16.6	
Approach LOS		B			C			B			B	

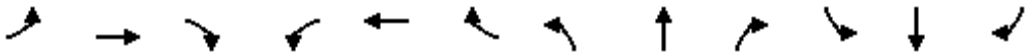
Intersection Summary			
HCM Average Control Delay	17.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	74.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	71	616	23	27	238	8	39	216	107	18	51	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.98		1.00	0.96		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.96	
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		0.99	
Satd. Flow (prot)		1656	1392		1581	1497		1754	1390		1656	
Flt Permitted		0.93	1.00		0.35	1.00		0.95	1.00		0.93	
Satd. Flow (perm)		1549	1392		562	1497		1679	1390		1560	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	75	648	24	28	251	8	41	227	113	19	54	31
RTOR Reduction (vph)	0	0	7	0	0	5	0	0	43	0	16	0
Lane Group Flow (vph)	0	723	17	0	279	3	0	268	70	0	88	0
Confl. Peds. (#/hr)	11		17	17		11	4		17	17		4
Confl. Bikes (#/hr)	1		1	1		1	1					1
Heavy Vehicles (%)	0%	9%	5%	33%	11%	0%	6%	1%	6%	0%	0%	8%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Effective Green, g (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Actuated g/C Ratio		0.35	0.35		0.35	0.35		0.49	0.49		0.49	
Clearance Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Grp Cap (vph)		548	493		199	530		827	684		768	
v/s Ratio Prot												
v/s Ratio Perm		0.47	0.01		c0.50	0.00		c0.16	0.05		0.06	
v/c Ratio		1.32	0.03		1.40	0.01		0.32	0.10		0.11	
Uniform Delay, d1		21.0	13.7		21.0	13.6		10.0	8.8		8.9	
Progression Factor		1.60	1.78		0.80	0.79		0.39	0.26		1.09	
Incremental Delay, d2		153.8	0.1		207.4	0.0		0.7	0.2		0.3	
Delay (s)		187.4	24.6		224.1	10.8		4.6	2.5		9.9	
Level of Service		F	C		F	B		A	A		A	
Approach Delay (s)		182.2			218.2			4.0			9.9	
Approach LOS		F			F			A			A	

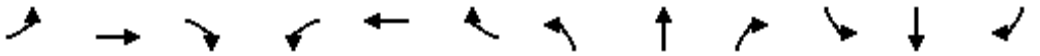
Intersection Summary			
HCM Average Control Delay	132.5	HCM Level of Service	F
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	87.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	671	20	30	9	18	15	26	363	19	9	213	222
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.97		0.98			1.00			1.00	0.95
Flpb, ped/bikes		0.98	1.00		1.00			1.00			1.00	1.00
Frt		1.00	0.85		0.95			0.99			1.00	0.85
Flt Protected		0.95	1.00		0.99			1.00			1.00	1.00
Satd. Flow (prot)		1750	1390		1761			1979			1873	1328
Flt Permitted		0.72	1.00		0.64			0.97			0.98	1.00
Satd. Flow (perm)		1330	1390		1140			1935			1847	1328
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	746	22	33	10	20	17	29	403	21	10	237	247
RTOR Reduction (vph)	0	0	9	0	13	0	0	3	0	0	0	125
Lane Group Flow (vph)	0	768	24	0	34	0	0	450	0	0	247	122
Confl. Peds. (#/hr)	49		22	22		49	34		17	17		34
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	9%	0%	7%	0%	0%	0%	0%	2%	0%	0%	9%	9%
Turn Type	pm+pt		Perm	Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		27.0	27.0		17.0			32.0			32.0	32.0
Effective Green, g (s)		27.0	27.0		17.0			32.0			32.0	32.0
Actuated g/C Ratio		0.42	0.42		0.26			0.49			0.49	0.49
Clearance Time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		604	577		298			953			909	654
v/s Ratio Prot		c0.16										
v/s Ratio Perm		0.37	0.02		0.03			c0.23			0.13	0.09
v/c Ratio		1.27	0.04		0.12			0.47			0.27	0.19
Uniform Delay, d1		19.0	11.3		18.3			10.9			9.7	9.2
Progression Factor		1.13	1.50		1.00			0.60			0.52	1.01
Incremental Delay, d2		123.4	0.0		0.8			1.6			0.1	0.1
Delay (s)		144.9	17.0		19.1			8.2			5.1	9.4
Level of Service		F	B		B			A			A	A
Approach Delay (s)		139.7			19.1			8.2			7.3	
Approach LOS		F			B			A			A	

Intersection Summary			
HCM Average Control Delay	66.9	HCM Level of Service	E
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	93.3%	ICU Level of Service	F
Analysis Period (min)	15		

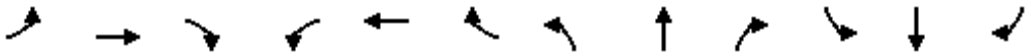
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	983	220	269	1109	0	0	0	0	274	200	374
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	11	8	8	8	11	12	14
Total Lost time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Lane Util. Factor		0.91		1.00	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00		1.00	1.00					1.00	0.99	0.99
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.97		1.00	1.00					1.00	0.94	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.99	1.00
Satd. Flow (prot)		4322		1589	3226					1419	2711	1355
Flt Permitted		1.00		0.14	1.00					0.95	0.99	1.00
Satd. Flow (perm)		4322		228	3226					1419	2711	1355
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1035	232	283	1167	0	0	0	0	288	211	394
RTOR Reduction (vph)	0	30	0	0	0	0	0	0	0	0	64	64
Lane Group Flow (vph)	0	1237	0	283	1167	0	0	0	0	233	387	145
Confl. Peds. (#/hr)	6		4	4		6	2					2
Heavy Vehicles (%)	0%	11%	7%	4%	6%	0%	0%	0%	0%	6%	4%	8%
Turn Type				pm+pt						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Actuated Green, G (s)		48.4		69.4	69.4					23.6	23.6	23.6
Effective Green, g (s)		48.4		69.4	69.4					23.6	23.6	23.6
Actuated g/C Ratio		0.46		0.66	0.66					0.22	0.22	0.22
Clearance Time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Vehicle Extension (s)		7.0		3.5	7.0					3.5	3.5	3.5
Lane Grp Cap (vph)		1992		365	2132					319	609	305
v/s Ratio Prot		0.29		c0.12	0.36							
v/s Ratio Perm				c0.39						c0.16	0.14	0.11
v/c Ratio		0.62		0.78	0.55					0.73	0.63	0.47
Uniform Delay, d1		21.4		18.0	9.5					37.7	36.8	35.3
Progression Factor		1.00		0.97	1.65					1.00	1.00	1.00
Incremental Delay, d2		1.5		6.0	0.6					8.6	2.3	1.4
Delay (s)		22.8		23.5	16.1					46.3	39.1	36.7
Level of Service		C		C	B					D	D	D
Approach Delay (s)		22.8			17.6			0.0			40.4	
Approach LOS		C			B			A			D	

Intersection Summary			
HCM Average Control Delay	25.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	103.8%	ICU Level of Service	G
Analysis Period (min)	15		

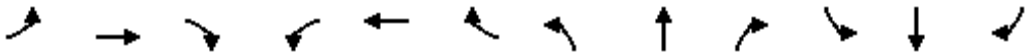
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	309	948	0	0	856	234	521	346	464	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	11	12	12	12	12	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0		6.0				
Lane Util. Factor	0.97	0.95			0.95	1.00		0.91				
Frpb, ped/bikes	1.00	1.00			1.00	0.99		1.00				
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00				
Frt	1.00	1.00			1.00	0.85		0.95				
Flt Protected	0.95	1.00			1.00	1.00		0.98				
Satd. Flow (prot)	2915	3138			3119	1449		4388				
Flt Permitted	0.19	1.00			1.00	1.00		0.98				
Satd. Flow (perm)	568	3138			3119	1449		4388				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	325	998	0	0	901	246	548	364	488	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	104	0	90	0	0	0	0
Lane Group Flow (vph)	325	998	0	0	901	142	0	1310	0	0	0	0
Confl. Peds. (#/hr)	4					4						
Heavy Vehicles (%)	10%	9%	0%	0%	6%	4%	4%	3%	5%	0%	0%	0%
Turn Type	pm+pt					Perm	Perm					
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8					
Actuated Green, G (s)	62.8	62.8			45.4	45.4		30.2				
Effective Green, g (s)	62.8	62.8			45.4	45.4		30.2				
Actuated g/C Ratio	0.60	0.60			0.43	0.43		0.29				
Clearance Time (s)	6.0	6.0			6.0	6.0		6.0				
Vehicle Extension (s)	3.5	7.0			7.0	7.0		5.0				
Lane Grp Cap (vph)	595	1877			1349	627		1262				
v/s Ratio Prot	0.06	c0.32			c0.29							
v/s Ratio Perm	0.27					0.10		0.30				
v/c Ratio	0.55	0.53			0.67	0.23		1.04				
Uniform Delay, d1	12.8	12.4			23.8	18.7		37.4				
Progression Factor	0.66	0.83			0.95	1.45		1.00				
Incremental Delay, d2	0.9	0.9			1.7	0.5		35.8				
Delay (s)	9.4	11.1			24.3	27.7		73.2				
Level of Service	A	B			C	C		E				
Approach Delay (s)		10.7			25.0			73.2			0.0	
Approach LOS		B			C			E			A	

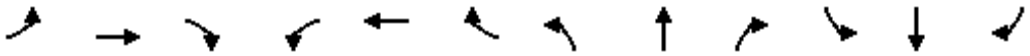
Intersection Summary			
HCM Average Control Delay	37.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	103.8%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	103	733	221	76	781	43	226	178	40	57	111	91
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	11	12	12	10	10	13	10	10	10
Total Lost time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.97		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1565	3061	1291	1603	3233		1446	3007		1544	2782	
Flt Permitted	0.14	1.00	1.00	0.36	1.00		0.53	1.00		0.61	1.00	
Satd. Flow (perm)	227	3061	1291	606	3233		811	3007		990	2782	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	108	772	233	80	822	45	238	187	42	60	117	96
RTOR Reduction (vph)	0	0	95	0	4	0	0	21	0	0	80	0
Lane Group Flow (vph)	108	772	138	80	863	0	238	208	0	60	133	0
Confl. Peds. (#/hr)	3		12	12		3	9		6	6		9
Heavy Vehicles (%)	2%	8%	5%	3%	5%	3%	10%	3%	2%	3%	7%	4%
Parking (#/hr)			0									
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	62.5	52.6	62.1	40.3	33.9		29.8	20.3		24.2	17.5	
Effective Green, g (s)	62.5	52.6	62.1	40.3	33.9		29.8	20.3		24.2	17.5	
Actuated g/C Ratio	0.60	0.50	0.59	0.38	0.32		0.28	0.19		0.23	0.17	
Clearance Time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0		3.0	7.0		3.0	7.0	
Lane Grp Cap (vph)	455	1533	764	293	1044		288	581		264	464	
v/s Ratio Prot	c0.06	c0.25	0.02	0.02	c0.27		c0.07	0.07		0.01	0.05	
v/s Ratio Perm	0.08		0.09	0.09			c0.16			0.04		
v/c Ratio	0.24	0.50	0.18	0.27	0.83		0.83	0.36		0.23	0.29	
Uniform Delay, d1	12.0	17.5	9.8	21.0	32.8		33.7	36.7		32.3	38.3	
Progression Factor	0.90	1.00	1.68	1.00	1.00		0.94	0.89		1.00	1.00	
Incremental Delay, d2	0.9	0.8	0.1	0.5	7.5		16.7	1.3		0.4	1.2	
Delay (s)	11.7	18.4	16.6	21.5	40.3		48.5	33.8		32.8	39.5	
Level of Service	B	B	B	C	D		D	C		C	D	
Approach Delay (s)		17.4			38.7			41.3			38.0	
Approach LOS		B			D			D			D	

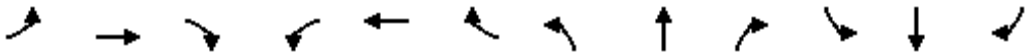
Intersection Summary			
HCM Average Control Delay	30.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	22.5
Intersection Capacity Utilization	72.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	323	273	57	190	98	328	380	83	91	258	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	12	11	12	12	11	13	12	10	11	12
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.93		1.00	0.95		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1635	2920		1463	3037		1589	3237		1549	3135	
Flt Permitted	0.54	1.00		0.25	1.00		0.46	1.00		0.47	1.00	
Satd. Flow (perm)	931	2920		389	3037		772	3237		774	3135	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	62	340	287	60	200	103	345	400	87	96	272	57
RTOR Reduction (vph)	0	139	0	0	60	0	0	17	0	0	17	0
Lane Group Flow (vph)	62	488	0	60	243	0	345	470	0	96	312	0
Confl. Peds. (#/hr)	20					20	1		2	2		1
Heavy Vehicles (%)	4%	5%	6%	13%	6%	5%	4%	6%	5%	3%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	35.7	28.7		35.9	28.8		53.2	41.9		38.6	31.3	
Effective Green, g (s)	35.7	28.7		35.9	28.8		53.2	41.9		38.6	31.3	
Actuated g/C Ratio	0.34	0.27		0.34	0.27		0.51	0.40		0.37	0.30	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.5	7.0		3.5	7.0		3.5	7.0		3.5	7.0	
Lane Grp Cap (vph)	363	798		206	833		530	1292		338	935	
v/s Ratio Prot	0.01	c0.17		c0.02	0.08		c0.11	0.15		0.02	0.10	
v/s Ratio Perm	0.05			0.08			c0.22			0.08		
v/c Ratio	0.17	0.61		0.29	0.29		0.65	0.36		0.28	0.33	
Uniform Delay, d1	23.8	33.3		24.4	30.1		16.6	22.2		22.4	28.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.06	0.94	
Incremental Delay, d2	0.3	3.5		0.9	0.9		3.0	0.8		0.5	0.9	
Delay (s)	24.0	36.8		25.3	30.9		19.6	23.0		24.2	27.8	
Level of Service	C	D		C	C		B	C		C	C	
Approach Delay (s)		35.6			30.0			21.6			27.0	
Approach LOS		D			C			C			C	

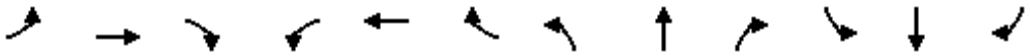
Intersection Summary			
HCM Average Control Delay	28.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	71.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	165	706	79	6	449	111	65	577	7	100	309	100
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	9	11	12	9	9	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.99			0.97		1.00	1.00		1.00	0.96	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		2929			2896		1436	3185		1450	2788	
Flt Permitted		0.59			0.94		0.43	1.00		0.29	1.00	
Satd. Flow (perm)		1740			2729		654	3185		448	2788	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	183	784	88	7	499	123	72	641	8	111	343	111
RTOR Reduction (vph)	0	11	0	0	33	0	0	1	0	0	48	0
Lane Group Flow (vph)	0	1044	0	0	596	0	72	648	0	111	406	0
Confl. Peds. (#/hr)	9		11	11		9	11		14	14		11
Heavy Vehicles (%)	3%	6%	18%	50%	6%	6%	7%	3%	50%	6%	7%	2%
Turn Type	pm+pt			Perm			pm+pt			pm+pt		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			19.0		26.0	22.0		26.0	22.0	
Effective Green, g (s)		27.0			19.0		26.0	22.0		26.0	22.0	
Actuated g/C Ratio		0.42			0.29		0.40	0.34		0.40	0.34	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		796			798		310	1078		241	944	
v/s Ratio Prot		c0.08					0.01	c0.20		c0.03	0.15	
v/s Ratio Perm		c0.46			0.22		0.08			0.16		
v/c Ratio		1.31			0.75		0.23	0.60		0.46	0.43	
Uniform Delay, d1		19.0			20.8		12.4	17.9		13.0	16.6	
Progression Factor		1.00			1.52		0.90	0.71		1.00	1.00	
Incremental Delay, d2		149.4			0.6		1.6	2.3		6.2	1.4	
Delay (s)		168.4			32.3		12.8	14.9		19.2	18.1	
Level of Service		F			C		B	B		B	B	
Approach Delay (s)		168.4			32.3			14.6			18.3	
Approach LOS		F			C			B			B	

Intersection Summary			
HCM Average Control Delay	73.7	HCM Level of Service	E
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	49	328	46	71	160	13	36	632	97	10	359	43
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1666	1917		1618	1943		1658	3195		1138	3197	
Flt Permitted	0.64	1.00		0.40	1.00		0.51	1.00		0.31	1.00	
Satd. Flow (perm)	1131	1917		676	1943		889	3195		374	3197	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	51	338	47	73	165	13	37	652	100	10	370	44
RTOR Reduction (vph)	0	8	0	0	4	0	0	19	0	0	14	0
Lane Group Flow (vph)	51	377	0	73	174	0	37	733	0	10	400	0
Confl. Peds. (#/hr)	10		16	16		10	4		6	6		4
Confl. Bikes (#/hr)			4	4								
Heavy Vehicles (%)	2%	4%	5%	5%	4%	0%	3%	4%	8%	50%	5%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.48	0.48		0.48	0.48	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	418	708		250	717		424	1524		178	1525	
v/s Ratio Prot		c0.20			0.09			c0.23			0.13	
v/s Ratio Perm	0.05			0.11			0.04			0.03		
v/c Ratio	0.12	0.53		0.29	0.24		0.09	0.48		0.06	0.26	
Uniform Delay, d1	13.5	16.1		14.5	14.2		9.3	11.5		9.1	10.2	
Progression Factor	1.00	1.00		1.73	1.78		1.00	1.00		0.50	0.49	
Incremental Delay, d2	0.6	2.9		1.1	0.3		0.4	1.1		0.5	0.3	
Delay (s)	14.1	19.0		26.2	25.6		9.7	12.6		5.0	5.3	
Level of Service	B	B		C	C		A	B		A	A	
Approach Delay (s)		18.4			25.8			12.5			5.3	
Approach LOS		B			C			B			A	

Intersection Summary			
HCM Average Control Delay	14.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	67.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR	SBR2
Lane Configurations												
Volume (vph)	756	196	607	17	3	14	3	46	30	0	2	4
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	12	12	16	12	12	16	12	12
Total Lost time (s)	5.0		5.0				4.0			4.0		
Lane Util. Factor	0.95		0.95				1.00			1.00		
Frpb, ped/bikes	1.00		1.00				1.00			1.00		
Flpb, ped/bikes	1.00		1.00				1.00			1.00		
Frt	1.00		1.00				0.91			0.98		
Flt Protected	1.00		0.99				0.99			0.96		
Satd. Flow (prot)	2956		2954				1732			1908		
Flt Permitted	1.00		0.55				0.94			0.79		
Satd. Flow (perm)	2956		1639				1643			1563		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	796	206	639	18	3	15	3	48	32	0	2	4
RTOR Reduction (vph)	0	0	2	0	0	0	38	0	0	3	0	0
Lane Group Flow (vph)	796	0	861	0	0	0	31	0	0	35	0	0
Confl. Peds. (#/hr)		7		6		3					3	
Confl. Bikes (#/hr)		1										
Heavy Vehicles (%)	8%	8%	6%	0%	0%	8%	0%	5%	0%	0%	0%	0%
Turn Type		custom				Perm			Perm			
Protected Phases	8	7	4				2			6		
Permitted Phases		4 7				2			6			
Actuated Green, G (s)	18.0		27.0				14.0			14.0		
Effective Green, g (s)	18.0		27.0				14.0			14.0		
Actuated g/C Ratio	0.28		0.42				0.22			0.22		
Clearance Time (s)	5.0		5.0				4.0			4.0		
Lane Grp Cap (vph)	819		802				354			337		
v/s Ratio Prot	0.27		c0.10									
v/s Ratio Perm			c0.35				0.02			c0.02		
v/c Ratio	0.97		1.07				0.09			0.10		
Uniform Delay, d1	23.2		19.0				20.4			20.5		
Progression Factor	1.35		0.76				1.00			1.00		
Incremental Delay, d2	4.9		52.3				0.5			0.6		
Delay (s)	36.2		66.7				20.9			21.1		
Level of Service	D		E				C			C		
Approach Delay (s)	36.2		66.7				20.9			21.1		
Approach LOS	D		E				C			C		

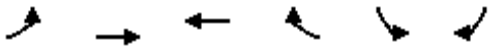
Intersection Summary			
HCM Average Control Delay	157.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	105.0%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



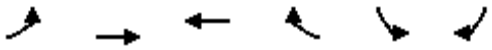
Movement	NEL	NER
Lane Configurations		
Volume (vph)	1	450
Ideal Flow (vphpl)	1800	1800
Lane Width	12	12
Total Lost time (s)	5.0	
Lane Util. Factor	1.00	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Frt	0.87	
Flt Protected	1.00	
Satd. Flow (prot)	1429	
Flt Permitted	1.00	
Satd. Flow (perm)	1429	
Peak-hour factor, PHF	0.95	0.95
Adj. Flow (vph)	1	474
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	475	0
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Heavy Vehicles (%)	0%	9%
Turn Type		
Protected Phases	3	
Permitted Phases		
Actuated Green, G (s)	10.0	
Effective Green, g (s)	10.0	
Actuated g/C Ratio	0.15	
Clearance Time (s)	5.0	
Lane Grp Cap (vph)	220	
v/s Ratio Prot	c0.33	
v/s Ratio Perm		
v/c Ratio	2.16	
Uniform Delay, d1	27.5	
Progression Factor	0.78	
Incremental Delay, d2	534.8	
Delay (s)	556.2	
Level of Service	F	
Approach Delay (s)	556.2	
Approach LOS	F	

Intersection Summary



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	186	1147	665	79	139	156
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frt		1.00	0.98		1.00	0.85
Flt Protected		0.99	1.00		0.95	1.00
Satd. Flow (prot)		3235	3205		1629	1457
Flt Permitted		0.67	1.00		0.95	1.00
Satd. Flow (perm)		2166	3205		1629	1457
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	207	1274	739	88	154	173
RTOR Reduction (vph)	0	0	14	0	0	128
Lane Group Flow (vph)	0	1481	813	0	154	45
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		40.0	40.0		17.0	17.0
Effective Green, g (s)		40.0	40.0		17.0	17.0
Actuated g/C Ratio		0.62	0.62		0.26	0.26
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1333	1972		426	381
v/s Ratio Prot			0.25		c0.09	
v/s Ratio Perm		c0.68				0.03
v/c Ratio		1.11	0.41		0.36	0.12
Uniform Delay, d1		12.5	6.4		19.6	18.3
Progression Factor		1.45	1.31		0.90	0.81
Incremental Delay, d2		51.2	0.6		2.4	0.6
Delay (s)		69.3	9.0		20.1	15.5
Level of Service		E	A		C	B
Approach Delay (s)		69.3	9.0		17.7	
Approach LOS		E	A		B	

Intersection Summary			
HCM Average Control Delay	43.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	79.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	51	1214	685	196	170	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	12	10	11	12	10	10
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frpb, ped/bikes		1.00	1.00		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.97		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2928	2921		1464	1373
Flt Permitted		0.88	1.00		0.95	1.00
Satd. Flow (perm)		2581	2921		1464	1373
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	54	1278	721	206	179	57
RTOR Reduction (vph)	0	0	40	0	0	40
Lane Group Flow (vph)	0	1332	887	0	179	17
Confl. Peds. (#/hr)	1			1		
Confl. Bikes (#/hr)	1			1		
Heavy Vehicles (%)	4%	9%	8%	12%	9%	4%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		38.0	38.0		19.0	19.0
Effective Green, g (s)		38.0	38.0		19.0	19.0
Actuated g/C Ratio		0.58	0.58		0.29	0.29
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1509	1708		428	401
v/s Ratio Prot			0.30		c0.12	
v/s Ratio Perm		c0.52				0.01
v/c Ratio		0.88	0.52		0.42	0.04
Uniform Delay, d1		11.6	8.1		18.5	16.5
Progression Factor		0.89	0.56		0.94	1.37
Incremental Delay, d2		0.8	0.6		2.9	0.2
Delay (s)		11.1	5.1		20.4	22.7
Level of Service		B	A		C	C
Approach Delay (s)		11.1	5.1		20.9	
Approach LOS		B	A		C	

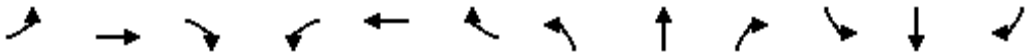
Intersection Summary			
HCM Average Control Delay	9.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	83.5%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



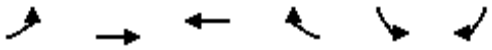
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1233	153	158	645	401	434
Ideal Flow (vphpl)	2300	1800	1800	2300	1800	1800
Lane Width	15	12	14	16	15	12
Total Lost time (s)	5.0		5.0	5.0	5.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	0.99	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.99		1.00	1.00	0.93	
Flt Protected	1.00		0.95	1.00	0.98	
Satd. Flow (prot)	2248		1770	2436	1746	
Flt Permitted	1.00		0.13	1.00	0.98	
Satd. Flow (perm)	2248		240	2436	1746	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	1258	156	161	658	409	443
RTOR Reduction (vph)	7	0	0	0	19	0
Lane Group Flow (vph)	1407	0	161	658	833	0
Confl. Peds. (#/hr)		4	4			8
Heavy Vehicles (%)	11%	7%	3%	7%	2%	2%
Turn Type			Perm			
Protected Phases	4			8	2	
Permitted Phases			8			
Actuated Green, G (s)	31.0		31.0	31.0	24.0	
Effective Green, g (s)	31.0		31.0	31.0	24.0	
Actuated g/C Ratio	0.48		0.48	0.48	0.37	
Clearance Time (s)	5.0		5.0	5.0	5.0	
Lane Grp Cap (vph)	1072		114	1162	645	
v/s Ratio Prot	0.63			0.27	c0.48	
v/s Ratio Perm			c0.67			
v/c Ratio	1.31		1.41	0.57	1.29	
Uniform Delay, d1	17.0		17.0	12.2	20.5	
Progression Factor	1.56		1.00	1.00	1.00	
Incremental Delay, d2	144.4		229.3	2.0	142.6	
Delay (s)	170.8		246.3	14.2	163.1	
Level of Service	F		F	B	F	
Approach Delay (s)	170.8			59.8	163.1	
Approach LOS	F			E	F	

Intersection Summary			
HCM Average Control Delay	139.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.36		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	135.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	695	85	251	1499	9	68	0	177	1	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	15	13	11	11	12	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0	4.0	3.0	3.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00		0.95	
Satd. Flow (prot)	1881	3213	1422	1589	3138	1366		1642	1443		969	
Flt Permitted	0.15	1.00	1.00	0.27	1.00	1.00		0.76	1.00		0.71	
Satd. Flow (perm)	290	3213	1422	459	3138	1366		1309	1443		722	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	772	94	279	1666	10	76	0	197	1	0	0
RTOR Reduction (vph)	0	0	46	0	0	2	0	0	173	0	0	0
Lane Group Flow (vph)	1	772	48	279	1666	8	0	76	24	0	1	0
Heavy Vehicles (%)	0%	10%	4%	4%	9%	12%	18%	0%	6%	100%	0%	0%
Turn Type	Perm		Perm	custom		custom	Perm		Perm	Perm		
Protected Phases		4		3	3 8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)	43.7	43.7	43.7	66.6	66.6	66.6		10.4	10.4		10.4	
Effective Green, g (s)	43.7	43.7	43.7	66.6	66.6	66.6		10.4	10.4		10.4	
Actuated g/C Ratio	0.51	0.51	0.51	0.78	0.78	0.78		0.12	0.12		0.12	
Clearance Time (s)	4.0	4.0	4.0	3.0		4.0		4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0		3.0	
Lane Grp Cap (vph)	149	1652	731	624	2459	1070		160	177		88	
v/s Ratio Prot		0.24		0.10	c0.53							
v/s Ratio Perm	0.00		0.03	0.25		0.01		c0.06	0.02		0.00	
v/c Ratio	0.01	0.47	0.07	0.45	0.68	0.01		0.47	0.14		0.01	
Uniform Delay, d1	10.1	13.2	10.4	3.8	4.2	2.0		34.8	33.3		32.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	0.1	1.0	0.2	0.5	0.8	0.0		2.2	0.4		0.1	
Delay (s)	10.1	14.2	10.6	4.3	5.0	2.0		37.0	33.6		32.8	
Level of Service	B	B	B	A	A	A		D	C		C	
Approach Delay (s)		13.8			4.9			34.6			32.8	
Approach LOS		B			A			C			C	

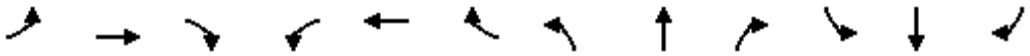
Intersection Summary			
HCM Average Control Delay	10.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	62.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	12	777	808	43	23	11
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	12	10	10
Total Lost time (s)		5.0	5.0		3.0	
Lane Util. Factor		0.95	0.95		1.00	
Frt		1.00	0.99		0.96	
Flt Protected		1.00	1.00		0.97	
Satd. Flow (prot)		3038	3017		1481	
Flt Permitted		0.93	1.00		0.97	
Satd. Flow (perm)		2842	3017		1481	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	13	863	898	48	26	12
RTOR Reduction (vph)	0	0	4	0	11	0
Lane Group Flow (vph)	0	876	942	0	27	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type	Perm					
Protected Phases		4	8 2 11		5	
Permitted Phases	4					
Actuated Green, G (s)		33.0	64.0		7.0	
Effective Green, g (s)		33.0	64.0		7.0	
Actuated g/C Ratio		0.37	0.71		0.08	
Clearance Time (s)		5.0			3.0	
Lane Grp Cap (vph)		1042	2145		115	
v/s Ratio Prot			c0.31		c0.02	
v/s Ratio Perm		c0.31				
v/c Ratio		0.84	0.44		0.23	
Uniform Delay, d1		26.1	5.5		39.0	
Progression Factor		1.00	0.00		1.00	
Incremental Delay, d2		8.2	0.3		4.7	
Delay (s)		34.3	0.3		43.7	
Level of Service		C	A		D	
Approach Delay (s)		34.3	0.3		43.7	
Approach LOS		C	A		D	

Intersection Summary			
HCM Average Control Delay	17.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	42.5%	ICU Level of Service	A
Analysis Period (min)	15		

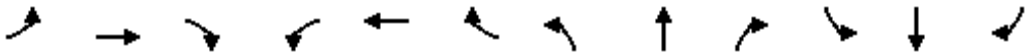
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	89	422	1	26	554	78	0	0	1	43	3	133
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12	12	11	12	11
Total Lost time (s)		4.0			4.0			3.0			3.0	3.0
Lane Util. Factor		1.00			0.95			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			0.92			1.00	0.96
Flpb, ped/bikes		1.00			1.00			1.00			0.98	1.00
Frt		1.00			0.98			0.86			1.00	0.85
Flt Protected		0.99			1.00			1.00			0.96	1.00
Satd. Flow (prot)		1726			3231			1432			1610	1282
Flt Permitted		0.77			0.93			1.00			0.94	1.00
Satd. Flow (perm)		1338			3023			1432			1581	1282
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	99	469	1	29	616	87	0	0	1	48	3	148
RTOR Reduction (vph)	0	0	0	0	12	0	0	1	0	0	0	99
Lane Group Flow (vph)	0	569	0	0	720	0	0	0	0	0	51	49
Confl. Peds. (#/hr)	33		13	13		33	29		13	13		29
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	4%	3%	0%	0%	4%	0%	0%	0%	0%	5%	0%	11%
Turn Type	Perm			Prot			Perm			pm+pt		Perm
Protected Phases		4		3	3 4			1		2	1 2	
Permitted Phases	4				3		1	1		1 2		1 2
Actuated Green, G (s)		31.0			45.0			9.0			25.0	28.0
Effective Green, g (s)		31.0			45.0			9.0			25.0	28.0
Actuated g/C Ratio		0.36			0.53			0.11			0.29	0.33
Clearance Time (s)		4.0						3.0				
Lane Grp Cap (vph)		488			1635			152			470	422
v/s Ratio Prot					c0.07			0.00			0.02	
v/s Ratio Perm		c0.43			0.16						0.01	c0.04
v/c Ratio		1.17			0.44			0.00			0.11	0.12
Uniform Delay, d1		27.0			12.3			34.0			21.9	19.9
Progression Factor		1.00			1.76			1.00			1.00	1.00
Incremental Delay, d2		95.1			0.1			0.0			0.5	0.6
Delay (s)		122.1			21.7			34.0			22.3	20.4
Level of Service		F			C			C			C	C
Approach Delay (s)		122.1			21.7			34.0			20.9	
Approach LOS		F			C			C			C	

Intersection Summary			
HCM Average Control Delay	59.6	HCM Level of Service	E
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	72.0%	ICU Level of Service	C
Analysis Period (min)	15		

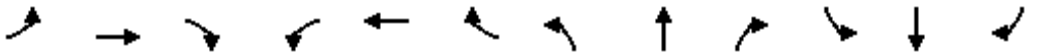
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	598	28	35	997	57	36	35	48	23	26	87
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	16	10	10	16	8	15	8	8	14	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			0.98	
Flpb, ped/bikes	0.98	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.99			0.95			0.91	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1556	3022		1587	3021			1816			1706	
Flt Permitted	0.17	1.00		0.36	1.00			0.89			0.95	
Satd. Flow (perm)	286	3022		604	3021			1649			1630	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	41	629	29	37	1049	60	38	37	51	24	27	92
RTOR Reduction (vph)	0	5	0	0	6	0	0	33	0	0	22	0
Lane Group Flow (vph)	41	653	0	37	1103	0	0	93	0	0	121	0
Confl. Peds. (#/hr)	145		16	16		145	17		19	19		17
Confl. Bikes (#/hr)	5					5			2	2		
Heavy Vehicles (%)	0%	5%	0%	0%	4%	2%	0%	0%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			22.0			22.0	
Effective Green, g (s)	34.0	34.0		34.0	34.0			23.0			23.0	
Actuated g/C Ratio	0.52	0.52		0.52	0.52			0.35			0.35	
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0			5.0	
Lane Grp Cap (vph)	150	1581		316	1580			583			577	
v/s Ratio Prot		0.22			c0.37							
v/s Ratio Perm	0.14			0.06				0.06			c0.07	
v/c Ratio	0.27	0.41		0.12	0.70			0.16			0.21	
Uniform Delay, d1	8.6	9.4		7.9	11.6			14.4			14.7	
Progression Factor	1.00	1.00		0.70	1.38			1.00			1.00	
Incremental Delay, d2	4.5	0.8		0.7	2.3			0.6			0.8	
Delay (s)	13.1	10.2		6.2	18.4			15.0			15.5	
Level of Service	B	B		A	B			B			B	
Approach Delay (s)		10.4			18.0			15.0			15.5	
Approach LOS		B			B			B			B	

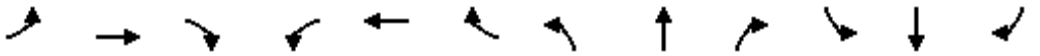
Intersection Summary			
HCM Average Control Delay	15.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	787	5	31	619	40	0	0	0	578	88	375
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00				0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.67				1.00	1.00	0.98
Flpb, ped/bikes	0.92	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	790	3379		1710	3226	514				3285	1731	1481
Flt Permitted	0.40	1.00		0.14	1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	336	3379		248	3226	514				3285	1731	1481
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	26	828	5	33	652	42	0	0	0	608	93	395
RTOR Reduction (vph)	0	0	0	0	0	18	0	0	0	0	0	168
Lane Group Flow (vph)	26	833	0	33	652	24	0	0	0	608	93	227
Confl. Peds. (#/hr)	350		4	4		350	8		6	6		8
Confl. Bikes (#/hr)	7		1	1		7						
Heavy Vehicles (%)	100%	1%	20%	0%	6%	100%	0%	0%	0%	1%	4%	1%
Turn Type	pm+pt			pm+pt		Perm				Split		Perm
Protected Phases	7	4		3	8					6	6	
Permitted Phases	4			8		8						6
Actuated Green, G (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Effective Green, g (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Actuated g/C Ratio	0.33	0.33		0.56	0.56	0.56				0.23	0.23	0.23
Clearance Time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Grp Cap (vph)	160	1118		634	1812	289				758	399	342
v/s Ratio Prot	0.02	c0.25		0.02	c0.20					c0.19	0.05	
v/s Ratio Perm	0.04			0.01		0.05						0.15
v/c Ratio	0.16	0.75		0.05	0.36	0.08				0.80	0.23	0.66
Uniform Delay, d1	31.6	38.6		15.2	15.7	13.1				47.2	40.6	45.4
Progression Factor	0.85	0.86		0.34	0.75	1.27				1.00	1.00	1.00
Incremental Delay, d2	2.1	4.4		0.1	0.4	0.4				8.8	1.4	9.8
Delay (s)	28.9	37.4		5.2	12.2	17.0				56.0	42.0	55.2
Level of Service	C	D		A	B	B				E	D	E
Approach Delay (s)		37.2			12.1			0.0			54.5	
Approach LOS		D			B			A			D	

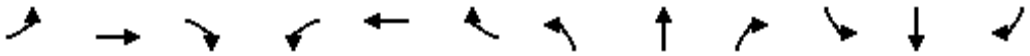
Intersection Summary			
HCM Average Control Delay	37.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	52.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	338	809	218	53	560	280	100	247	54	39	0	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.67		1.00	0.91	1.00		0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.97		1.00	1.00	0.85		1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (prot)	3285	3263		1710	3138	1018		3301	1359	855		734
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (perm)	3285	3263		1710	3138	1018		3301	1359	855		734
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	356	852	229	56	589	295	105	260	57	41	0	32
RTOR Reduction (vph)	0	18	0	0	0	222	0	0	42	0	0	30
Lane Group Flow (vph)	356	1063	0	56	589	73	0	365	15	41	0	2
Confl. Peds. (#/hr)	327		13	13		327	6		60	60		6
Confl. Bikes (#/hr)	6					6						
Heavy Vehicles (%)	1%	1%	0%	0%	9%	1%	0%	3%	2%	100%	0%	100%
Turn Type	Prot			Prot		Perm	Split		Perm	Prot		custom
Protected Phases	7	4		3	8		2	2		6		
Permitted Phases						8			2			6
Actuated Green, G (s)	44.0	68.0		8.0	32.0	32.0		28.0	28.0	8.0		8.0
Effective Green, g (s)	44.0	68.0		8.0	32.0	32.0		28.0	28.0	8.0		8.0
Actuated g/C Ratio	0.34	0.52		0.06	0.25	0.25		0.22	0.22	0.06		0.06
Clearance Time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	1112	1707		105	772	251		711	293	53		45
v/s Ratio Prot	0.11	c0.33		0.03	c0.19			c0.11		c0.05		
v/s Ratio Perm						0.07			0.01			0.00
v/c Ratio	0.32	0.62		0.53	0.76	0.29		0.51	0.05	0.77		0.04
Uniform Delay, d1	31.9	21.9		59.2	45.5	39.8		45.0	40.5	60.1		57.4
Progression Factor	0.94	0.17		1.00	1.00	1.00		0.95	1.00	1.00		1.00
Incremental Delay, d2	0.5	1.1		18.0	7.0	2.9		2.6	0.3	49.7		0.4
Delay (s)	30.5	4.7		77.2	52.5	42.7		45.3	41.0	109.9		57.8
Level of Service	C	A		E	D	D		D	D	F		E
Approach Delay (s)		11.1			50.9			44.7			87.0	
Approach LOS		B			D			D			F	

Intersection Summary			
HCM Average Control Delay	31.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	68.0%	ICU Level of Service	C
Analysis Period (min)	15		

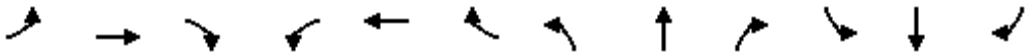
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	885	165	102	813	0	74	0	87	9	15	7
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	11	11	8	12	12	12	14	15	12
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes		0.99		1.00	1.00		1.00		0.98	1.00	0.98	
Flpb, ped/bikes		1.00		1.00	1.00		0.97		1.00	0.99	1.00	
Frt		0.98		1.00	1.00		1.00		0.85	1.00	0.95	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		2997		1649	3149		1388		1451	1803	1857	
Flt Permitted		1.00		0.18	1.00		0.74		1.00	0.95	1.00	
Satd. Flow (perm)		2997		304	3149		1082		1451	1803	1857	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	983	183	113	903	0	82	0	97	10	17	8
RTOR Reduction (vph)	0	15	0	0	0	0	0	0	66	0	5	0
Lane Group Flow (vph)	0	1151	0	113	903	0	82	0	31	10	20	0
Confl. Peds. (#/hr)	67		19	19		67	38		12	12		38
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	2%	11%	0%	5%	0%	19%	0%	3%	0%	0%	0%
Turn Type				Perm			custom		custom	Perm		
Protected Phases		4			8						6	
Permitted Phases				8			2		2	6		
Actuated Green, G (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Effective Green, g (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Actuated g/C Ratio		0.60		0.60	0.60		0.32		0.32	0.32	0.32	
Clearance Time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)		1798		182	1889		346		464	577	594	
v/s Ratio Prot		c0.38			0.29						0.01	
v/s Ratio Perm				0.37			c0.08		0.02	0.01		
v/c Ratio		0.64		0.62	0.48		0.24		0.07	0.02	0.03	
Uniform Delay, d1		13.0		12.7	11.2		25.0		23.6	23.2	23.4	
Progression Factor		1.00		1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		1.8		14.9	0.9		1.6		0.3	0.1	0.1	
Delay (s)		14.7		27.6	12.1		26.6		23.9	23.3	23.5	
Level of Service		B		C	B		C		C	C	C	
Approach Delay (s)		14.7			13.8			25.2			23.4	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	15.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.0%	ICU Level of Service	B
Analysis Period (min)	15		

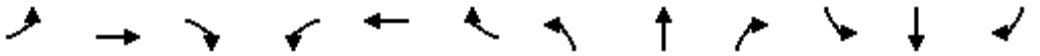
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	291	0	1188	214	682	0	0	792	490
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	12	10	10	12	12	11	12
Total Lost time (s)				4.0		5.0	3.0	4.0			4.0	
Lane Util. Factor				0.95		1.00	1.00	0.91			0.91	
Frpb, ped/bikes				1.00		1.00	1.00	1.00			0.98	
Flpb, ped/bikes				1.00		1.00	1.00	1.00			1.00	
Frt				1.00		0.85	1.00	1.00			0.94	
Flt Protected				0.95		1.00	0.95	1.00			1.00	
Satd. Flow (prot)				1540		1530	1535	4327			4271	
Flt Permitted				0.95		1.00	0.95	1.00			1.00	
Satd. Flow (perm)				1540		1530	1535	4327			4271	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	297	0	1212	218	696	0	0	808	500
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	297	0	1212	218	696	0	0	1308	0
Confl. Peds. (#/hr)	2					2	18		3	3		18
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%	4%	6%	0%	0%	4%	1%
Turn Type				Split		Prot	Prot					
Protected Phases				8	8	8	5	2			6	
Permitted Phases												
Actuated Green, G (s)				30.0		30.0	32.0	66.0			31.0	
Effective Green, g (s)				31.0		30.0	32.0	66.0			31.0	
Actuated g/C Ratio				0.30		0.29	0.30	0.63			0.30	
Clearance Time (s)				5.0		5.0	3.0	4.0			4.0	
Lane Grp Cap (vph)				455		437	468	2720			1261	
v/s Ratio Prot				0.19		c0.79	c0.14	0.16			c0.31	
v/s Ratio Perm												
v/c Ratio				0.65		2.77	0.47	0.26			1.16dr	
Uniform Delay, d1				32.3		37.5	29.6	8.6			37.0	
Progression Factor				1.00		1.00	0.64	2.10			1.00	
Incremental Delay, d2				7.1		804.4	2.8	0.2			35.5	
Delay (s)				39.4		841.9	21.7	18.3			72.5	
Level of Service				D		F	C	B			E	
Approach Delay (s)		0.0			684.0			19.1			72.5	
Approach LOS		A			F			B			E	

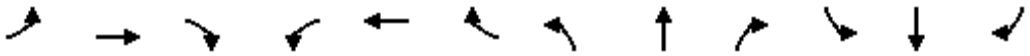
Intersection Summary			
HCM Average Control Delay	306.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.40		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	99.3%	ICU Level of Service	F
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	324	770	145	0	0	0	0	572	403	355	727	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	13	12	12	12	12	12	10	10	8	12	12	12
Total Lost time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Util. Factor	0.91	0.91						0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00						1.00	1.00	1.00	1.00	
Flpb, ped/bikes	0.99	1.00						1.00	1.00	1.00	1.00	
Frt	1.00	0.98						1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1509	3157						4368	2244	1598	4680	
Flt Permitted	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1509	3157						4368	2244	1598	4680	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	334	794	149	0	0	0	0	590	415	366	749	0
RTOR Reduction (vph)	0	14	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	301	962	0	0	0	0	0	590	415	366	749	0
Confl. Peds. (#/hr)	6		1	1		6	6					6
Heavy Vehicles (%)	6%	1%	0%	0%	0%	0%	0%	5%	4%	7%	5%	0%
Turn Type	Perm								Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Actuated Green, G (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Effective Green, g (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Actuated g/C Ratio	0.32	0.32						0.27	0.27	0.30	0.59	
Clearance Time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Grp Cap (vph)	489	1022						1165	598	472	2763	
v/s Ratio Prot								0.14		c0.23	0.16	
v/s Ratio Perm	0.20	0.30							c0.18			
v/c Ratio	0.62	0.94						0.51	0.69	0.78	0.27	
Uniform Delay, d1	30.0	34.5						32.6	34.6	33.8	10.5	
Progression Factor	1.00	1.00						1.14	1.14	0.86	0.21	
Incremental Delay, d2	5.7	17.2						1.4	5.8	4.6	0.1	
Delay (s)	35.7	51.7						38.5	45.2	33.7	2.3	
Level of Service	D	D						D	D	C	A	
Approach Delay (s)		48.0			0.0			41.3			12.6	
Approach LOS		D			A			D			B	

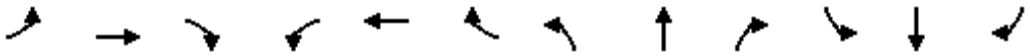
Intersection Summary			
HCM Average Control Delay	34.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	99.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	287	25	24	11	157	0	0	147	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	14	12	12	16	12
Total Lost time (s)				4.0	4.0		4.0	4.0			-3.0	
Lane Util. Factor				1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes				1.00	0.99		1.00	1.00			1.00	
Flpb, ped/bikes				1.00	1.00		1.00	1.00			1.00	
Frt				1.00	0.93		1.00	1.00			1.00	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1688	3132		1710	1846			1955	
Flt Permitted				0.95	1.00		0.54	1.00			1.00	
Satd. Flow (perm)				1688	3132		979	1846			1955	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	319	28	27	12	174	0	0	163	6
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	319	37	0	12	174	0	0	168	0
Confl. Peds. (#/hr)	2		2	2		2			6	6		
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	0%	4%	0%	0%	4%	0%
Turn Type				Perm			pm+pt					
Protected Phases					8		7	2			6	
Permitted Phases				8			2					
Actuated Green, G (s)				27.0	27.0		50.0	50.0			40.0	
Effective Green, g (s)				27.0	27.0		50.0	50.0			46.0	
Actuated g/C Ratio				0.32	0.32		0.59	0.59			0.54	
Clearance Time (s)				4.0	4.0		4.0	4.0			3.0	
Lane Grp Cap (vph)				536	995		636	1086			1058	
v/s Ratio Prot					0.01		0.00	c0.09			0.09	
v/s Ratio Perm				c0.19			0.01					
v/c Ratio				0.60	0.04		0.02	0.16			0.16	
Uniform Delay, d1				24.4	20.0		10.5	8.0			9.8	
Progression Factor				1.00	1.00		1.05	1.17			1.00	
Incremental Delay, d2				4.8	0.1		0.1	0.3			0.3	
Delay (s)				29.2	20.1		11.1	9.6			10.1	
Level of Service				C	C		B	A			B	
Approach Delay (s)		0.0			27.9			9.7			10.1	
Approach LOS		A			C			A			B	

Intersection Summary			
HCM Average Control Delay	19.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	36.8%	ICU Level of Service	A
Analysis Period (min)	15		

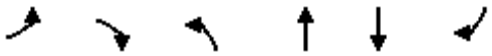
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	12	11	23	6	0	14	0	142	43	46	389	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	16	15	12	8	12	8	12	12	12	10	13	12
Total Lost time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.97			0.98			0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00			1.00		1.00	1.00	
Frt	1.00	0.90			0.90			0.97		1.00	1.00	
Flt Protected	0.95	1.00			0.99			1.00		0.95	1.00	
Satd. Flow (prot)	1935	1735			1571			1718		1590	1860	
Flt Permitted	0.74	1.00			0.96			1.00		0.60	1.00	
Satd. Flow (perm)	1515	1735			1529			1718		1004	1860	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	13	12	24	6	0	15	0	149	45	48	409	0
RTOR Reduction (vph)	0	16	0	0	10	0	0	13	0	0	0	0
Lane Group Flow (vph)	13	20	0	0	11	0	0	181	0	48	409	0
Confl. Peds. (#/hr)	1		11	11		1	1		10	10		1
Confl. Bikes (#/hr)			2	2			1		2	2		1
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Turn Type	Perm			Perm						pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Effective Green, g (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Actuated g/C Ratio	0.32	0.32			0.32			0.47		0.59	0.59	
Clearance Time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Grp Cap (vph)	481	551			486			808		639	1094	
v/s Ratio Prot		c0.01						0.11		0.01	c0.22	
v/s Ratio Perm	0.01				0.01					0.04		
v/c Ratio	0.03	0.04			0.02			0.22		0.08	0.37	
Uniform Delay, d1	20.0	20.0			19.9			13.3		8.6	9.2	
Progression Factor	1.00	1.00			1.00			1.00		0.97	0.87	
Incremental Delay, d2	0.1	0.1			0.1			0.6		0.2	0.9	
Delay (s)	20.1	20.1			20.0			14.0		8.6	8.9	
Level of Service	C	C			C			B		A	A	
Approach Delay (s)		20.1			20.0			14.0			8.9	
Approach LOS		C			C			B			A	

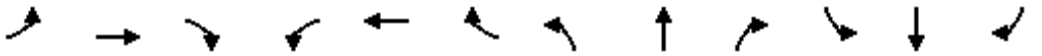
Intersection Summary			
HCM Average Control Delay	11.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	41.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	46	40	12	183	273	27
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	14	12	13	12	10	12
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.94		1.00	1.00	0.99	
Flt Protected	0.97		0.95	1.00	1.00	
Satd. Flow (prot)	1753		1765	1782	1656	
Flt Permitted	0.97		0.52	1.00	1.00	
Satd. Flow (perm)	1753		966	1782	1656	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	51	44	13	203	303	30
RTOR Reduction (vph)	30	0	0	0	5	0
Lane Group Flow (vph)	65	0	13	203	328	0
Confl. Peds. (#/hr)			2			2
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.0		36.0	36.0	36.0	
Effective Green, g (s)	21.0		36.0	36.0	36.0	
Actuated g/C Ratio	0.32		0.55	0.55	0.55	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	566		535	987	917	
v/s Ratio Prot	c0.04			0.11	c0.20	
v/s Ratio Perm			0.01			
v/c Ratio	0.12		0.02	0.21	0.36	
Uniform Delay, d1	15.5		6.6	7.3	8.1	
Progression Factor	1.00		0.49	0.61	1.44	
Incremental Delay, d2	0.4		0.1	0.5	0.9	
Delay (s)	15.9		3.3	4.9	12.6	
Level of Service	B		A	A	B	
Approach Delay (s)	15.9			4.8	12.6	
Approach LOS	B			A	B	

Intersection Summary			
HCM Average Control Delay	10.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	28.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

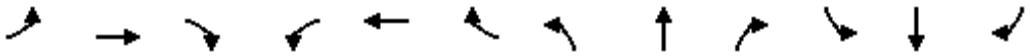


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	31	265	9	257	130	2	0	277	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	14	16	12	12	15	12	12	13	10
Total Lost time (s)					4.0		4.0	4.0			3.0	3.0
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Frt					1.00		1.00	1.00			1.00	0.85
Flt Protected					0.99		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3771		1693	1677			1738	1428
Flt Permitted					0.99		0.48	1.00			1.00	1.00
Satd. Flow (perm)					3771		854	1677			1738	1428
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	34	294	10	286	144	2	0	308	19
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	0	0	0	11
Lane Group Flow (vph)	0	0	0	0	335	0	286	146	0	0	308	8
Confl. Peds. (#/hr)	1					1			5	5		
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	1%	18%	0%	0%	7%	0%
Turn Type				Split			pm+pt					Perm
Protected Phases				8	8		7	2			6	
Permitted Phases							2					6
Actuated Green, G (s)					26.0		51.0	51.0			38.0	38.0
Effective Green, g (s)					26.0		51.0	51.0			38.0	38.0
Actuated g/C Ratio					0.31		0.60	0.60			0.45	0.45
Clearance Time (s)					4.0		4.0	4.0			3.0	3.0
Lane Grp Cap (vph)					1153		611	1006			777	638
v/s Ratio Prot					c0.09		c0.06	0.09			0.18	
v/s Ratio Perm							c0.23					0.01
v/c Ratio					0.29		0.47	0.14			0.40	0.01
Uniform Delay, d1					22.5		13.5	7.4			15.8	13.1
Progression Factor					1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2					0.6		2.6	0.3			1.5	0.0
Delay (s)					23.1		16.1	7.7			17.3	13.1
Level of Service					C		B	A			B	B
Approach Delay (s)		0.0			23.1			13.3			17.1	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM Average Control Delay	17.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	96	94	38	133	207	32	59	703	44
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	15	12	12	12	12	12	13	12
Total Lost time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.98		1.00	0.98		1.00	0.99	
Flt Protected					0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1896		1710	3282		1707	3467	
Flt Permitted					0.98		0.25	1.00		0.59	1.00	
Satd. Flow (perm)					1896		446	3282		1056	3467	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	107	104	42	148	230	36	66	781	49
RTOR Reduction (vph)	0	0	0	0	10	0	0	16	0	0	6	0
Lane Group Flow (vph)	0	0	0	0	243	0	148	250	0	66	824	0
Confl. Peds. (#/hr)							5		5	5		5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	1%	0%
Turn Type				Split			pm+pt			pm+pt		
Protected Phases				8	8		5	2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)					23.0		41.0	34.0		41.0	34.0	
Effective Green, g (s)					23.0		41.0	34.0		41.0	34.0	
Actuated g/C Ratio					0.31		0.55	0.45		0.55	0.45	
Clearance Time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Grp Cap (vph)					581		362	1488		638	1572	
v/s Ratio Prot					c0.13		c0.04	0.08		0.01	c0.24	
v/s Ratio Perm							0.19			0.05		
v/c Ratio					0.42		0.41	0.17		0.10	0.52	
Uniform Delay, d1					20.7		16.4	12.1		8.2	14.7	
Progression Factor					1.00		0.83	0.82		1.00	1.00	
Incremental Delay, d2					2.2		3.4	0.2		0.3	1.3	
Delay (s)					22.9		17.0	10.2		8.5	16.0	
Level of Service					C		B	B		A	B	
Approach Delay (s)		0.0			22.9			12.7			15.4	
Approach LOS		A			C			B			B	

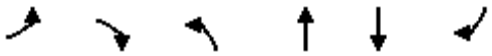
Intersection Summary			
HCM Average Control Delay	15.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	53.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	32	49	13	9	63	63	7	277	24	159	590	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	16	12	12	10	11	12	12	11	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.94		1.00	0.99		1.00	0.99	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1964			1655		1595	3173		1704	3231	
Flt Permitted		0.89			0.99		0.36	1.00		0.56	1.00	
Satd. Flow (perm)		1775			1637		599	3173		1004	3231	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	34	52	14	9	66	66	7	292	25	167	621	53
RTOR Reduction (vph)	0	8	0	0	42	0	0	8	0	0	8	0
Lane Group Flow (vph)	0	92	0	0	99	0	7	309	0	167	666	0
Confl. Peds. (#/hr)	2					2	1		6	6		1
Confl. Bikes (#/hr)			1	1			3					3
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	0%	3%	0%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Effective Green, g (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Actuated g/C Ratio		0.33			0.33		0.56	0.56		0.56	0.56	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		592			546		335	1777		562	1809	
v/s Ratio Prot								0.10			c0.21	
v/s Ratio Perm		0.05			c0.06		0.01			0.17		
v/c Ratio		0.16			0.18		0.02	0.17		0.30	0.37	
Uniform Delay, d1		17.6			17.7		7.3	8.0		8.7	9.1	
Progression Factor		1.00			1.00		1.00	1.00		0.27	0.25	
Incremental Delay, d2		0.6			0.7		0.1	0.2		1.2	0.5	
Delay (s)		18.1			18.5		7.5	8.3		3.5	2.8	
Level of Service		B			B		A	A		A	A	
Approach Delay (s)		18.1			18.5			8.2			3.0	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	6.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	48.4%	ICU Level of Service	A
Analysis Period (min)	15		

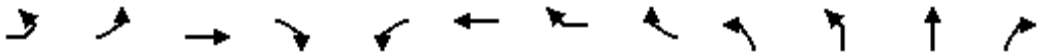
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	35	182	64	240	558	77
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	39	202	71	267	620	86

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	241	160	178	413	292
Volume Left (vph)	39	71	0	0	0
Volume Right (vph)	202	0	0	0	86
Hadj (s)	-0.42	0.27	0.05	0.05	-0.15
Departure Headway (s)	5.7	6.4	6.2	5.8	5.6
Degree Utilization, x	0.38	0.29	0.31	0.66	0.45
Capacity (veh/h)	598	538	557	611	632
Control Delay (s)	12.1	10.8	10.7	18.2	11.9
Approach Delay (s)	12.1	10.7		15.6	
Approach LOS	B	B		C	

Intersection Summary			
Delay	13.7		
HCM Level of Service	B		
Intersection Capacity Utilization	51.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	32	35	376	18	22	405	75	77	55	68	351	32
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	0.95	
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.93			1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Frt		1.00	1.00	0.85	1.00	1.00	0.85			1.00	0.99	
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	
Satd. Flow (prot)		1612	1731	1530	1710	1731	1421			1710	3250	
Flt Permitted		0.14	1.00	1.00	0.52	1.00	1.00			0.14	1.00	
Satd. Flow (perm)		238	1731	1530	932	1731	1421			257	3250	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	36	39	418	20	24	450	83	86	61	76	390	36
RTOR Reduction (vph)	0	0	0	12	0	0	36	0	0	0	7	0
Lane Group Flow (vph)	0	75	418	8	24	450	133	0	0	137	419	0
Confl. Peds. (#/hr)		25					25					3
Heavy Vehicles (%)	6%	6%	4%	0%	0%	4%	0%	0%	0%	0%	4%	0%
Turn Type	Perm	pm+pt		Perm	Perm		Perm		Perm	Perm		
Protected Phases		7	4			8					2	
Permitted Phases	4	4		4	8		8		2	2		
Actuated Green, G (s)		44.0	44.0	44.0	25.0	25.0	25.0			28.0	28.0	
Effective Green, g (s)		44.0	44.0	44.0	25.0	25.0	25.0			28.0	28.0	
Actuated g/C Ratio		0.42	0.42	0.42	0.24	0.24	0.24			0.27	0.27	
Clearance Time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Grp Cap (vph)		303	725	641	222	412	338			69	867	
v/s Ratio Prot		0.04	c0.24			c0.26					0.13	
v/s Ratio Perm		0.07		0.01	0.03		0.09			c0.53		
v/c Ratio		0.25	0.58	0.01	0.11	1.09	0.39			1.99	0.48	
Uniform Delay, d1		21.6	23.4	17.8	31.3	40.0	33.6			38.5	32.4	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Incremental Delay, d2		1.9	3.3	0.0	1.0	71.5	3.4			491.0	1.9	
Delay (s)		23.5	26.7	17.9	32.3	111.5	37.1			529.5	34.3	
Level of Service		C	C	B	C	F	D			F	C	
Approach Delay (s)			25.9			89.0					154.8	
Approach LOS			C			F					F	

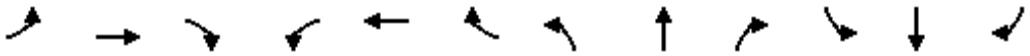
Intersection Summary			
HCM Average Control Delay	138.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.43		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	102.2%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations								
Volume (vph)	106	559	80	101	4	110	587	190
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5				4.5	4.5	
Lane Util. Factor	1.00	0.95				1.00	0.88	
Frpb, ped/bikes	1.00	1.00				1.00	1.00	
Flpb, ped/bikes	1.00	1.00				1.00	1.00	
Frt	1.00	0.96				1.00	0.85	
Flt Protected	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1705	3246				1710	2633	
Flt Permitted	0.38	1.00				0.95	1.00	
Satd. Flow (perm)	675	3246				1710	2633	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	118	621	89	112	4	122	652	211
RTOR Reduction (vph)	0	12	0	0	0	0	26	0
Lane Group Flow (vph)	118	810	0	0	0	126	837	0
Confl. Peds. (#/hr)	3							
Heavy Vehicles (%)	0%	2%	0%	0%	0%	0%	3%	0%
Turn Type	Perm				Split		Perm	
Protected Phases		6			9	9		
Permitted Phases	6						9	
Actuated Green, G (s)	27.5	27.5				20.5	20.5	
Effective Green, g (s)	27.5	27.5				20.5	20.5	
Actuated g/C Ratio	0.26	0.26				0.20	0.20	
Clearance Time (s)	4.5	4.5				4.5	4.5	
Lane Grp Cap (vph)	177	850				334	514	
v/s Ratio Prot		0.25				0.07		
v/s Ratio Perm	0.17						c0.32	
v/c Ratio	0.67	0.95				0.38	1.63	
Uniform Delay, d1	34.7	38.1				36.7	42.2	
Progression Factor	1.00	1.00				1.00	1.00	
Incremental Delay, d2	18.1	21.4				3.2	291.8	
Delay (s)	52.8	59.5				39.9	334.0	
Level of Service	D	E				D	F	
Approach Delay (s)		58.7				296.6		
Approach LOS		E				F		

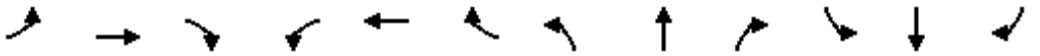
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	64	588	0	0	482	59	83	51	20	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	11	11	16	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.99			0.98				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		1681			1951			1839				
Flt Permitted		0.90			1.00			0.97				
Satd. Flow (perm)		1526			1951			1839				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	71	653	0	0	536	66	92	57	22	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	724	0	0	602	0	0	171	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		40.0			40.0			17.0				
Effective Green, g (s)		40.0			40.0			17.0				
Actuated g/C Ratio		0.62			0.62			0.26				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		939			1201			481				
v/s Ratio Prot					0.31							
v/s Ratio Perm		c0.47						0.09				
v/c Ratio		0.77			0.50			0.36				
Uniform Delay, d1		9.1			7.0			19.5				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		6.1			1.5			2.0				
Delay (s)		15.2			8.4			21.6				
Level of Service		B			A			C				
Approach Delay (s)		15.2			8.4			21.6			0.0	
Approach LOS		B			A			C			A	

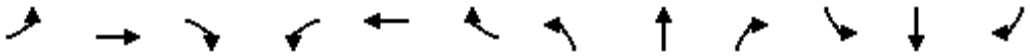
Intersection Summary			
HCM Average Control Delay	13.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	85.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	69	333	149	126	350	154	103	625	83	143	751	93
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	9	9	10	9
Total Lost time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.96	1.00	1.00	0.95	1.00	1.00	0.94
Flpb, ped/bikes		1.00	1.00		0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1982	1434		1947	1444	1546	3040	1296	1505	3069	1252
Flt Permitted		0.33	1.00		0.71	1.00	0.23	1.00	1.00	0.30	1.00	1.00
Satd. Flow (perm)		662	1434		1410	1444	379	3040	1296	468	3069	1252
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	73	351	157	133	368	162	108	658	87	151	791	98
RTOR Reduction (vph)	0	0	93	0	0	116	0	0	52	0	0	49
Lane Group Flow (vph)	0	424	64	0	501	46	108	658	35	151	791	49
Confl. Peds. (#/hr)	24		45	45		24	36		24	24		36
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	2%	2%	2%	2%	3%	2%	3%	5%	1%	2%	4%	3%
Turn Type	pm+pt		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		43.0	43.0		30.0	30.0	50.6	42.3	42.3	51.4	42.7	42.7
Effective Green, g (s)		43.0	43.0		30.0	30.0	50.6	42.3	42.3	51.4	42.7	42.7
Actuated g/C Ratio		0.41	0.41		0.29	0.29	0.48	0.40	0.40	0.49	0.41	0.41
Clearance Time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		397	587		403	413	275	1225	522	315	1248	509
v/s Ratio Prot		c0.10					0.03	0.22		c0.04	c0.26	
v/s Ratio Perm		0.34	0.04		c0.36	0.03	0.16		0.03	0.20		0.04
v/c Ratio		1.07	0.11		1.24	0.11	0.39	0.54	0.07	0.48	0.63	0.10
Uniform Delay, d1		31.0	19.2		37.5	27.7	16.4	23.9	19.2	16.0	24.9	19.2
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.77	1.56	2.70
Incremental Delay, d2		64.4	0.4		128.8	0.5	0.9	1.7	0.2	1.1	2.4	0.4
Delay (s)		95.4	19.5		166.3	28.2	17.3	25.6	19.5	29.4	41.1	52.3
Level of Service		F	B		F	C	B	C	B	C	D	D
Approach Delay (s)		74.9			132.6			23.9			40.5	
Approach LOS		E			F			C			D	

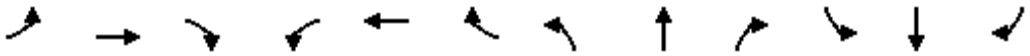
Intersection Summary			
HCM Average Control Delay	61.8	HCM Level of Service	E
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	90.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	83	409	83	94	522	90	49	59	69	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		0.98			0.98			0.95				
Flt Protected		0.99			0.99			0.99				
Satd. Flow (prot)		1645			1649			1796				
Flt Permitted		0.83			0.86			0.99				
Satd. Flow (perm)		1373			1422			1796				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	92	454	92	104	580	100	54	66	77	0	0	0
RTOR Reduction (vph)	0	9	0	0	8	0	0	35	0	0	0	0
Lane Group Flow (vph)	0	629	0	0	776	0	0	162	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		40.0			40.0			17.0				
Effective Green, g (s)		40.0			40.0			17.0				
Actuated g/C Ratio		0.62			0.62			0.26				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		845			875			470				
v/s Ratio Prot												
v/s Ratio Perm		0.46			c0.55			0.09				
v/c Ratio		0.74			0.89			0.34				
Uniform Delay, d1		8.9			10.6			19.5				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		5.9			12.9			2.0				
Delay (s)		14.8			23.4			21.5				
Level of Service		B			C			C				
Approach Delay (s)		14.8			23.4			21.5			0.0	
Approach LOS		B			C			C			A	

Intersection Summary			
HCM Average Control Delay	19.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.8%	ICU Level of Service	C
Analysis Period (min)	15		

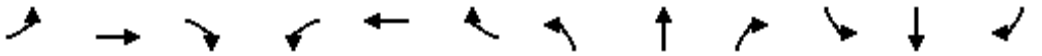
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	53	483	81	74	511	36	38	76	72	53	235	56
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	11	12	12	15	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.96		1.00	0.96		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		0.99	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.98	
Flt Protected		1.00	1.00		0.99	1.00		0.98	1.00		0.99	
Satd. Flow (prot)		1685	1382		1713	1417		1685	1455		1877	
Flt Permitted		0.90	1.00		0.85	1.00		0.83	1.00		0.94	
Satd. Flow (perm)		1531	1382		1473	1417		1417	1455		1774	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	56	508	85	78	538	38	40	80	76	56	247	59
RTOR Reduction (vph)	0	0	36	0	0	12	0	0	52	0	10	0
Lane Group Flow (vph)	0	564	49	0	616	26	0	120	24	0	352	0
Confl. Peds. (#/hr)	25		19	19		25	36		30	30		36
Confl. Bikes (#/hr)	1		2	2		1	3					3
Heavy Vehicles (%)	0%	3%	3%	0%	1%	0%	0%	1%	1%	0%	1%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Effective Green, g (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.32	0.32		0.32	
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Grp Cap (vph)		878	792		845	812		453	466		568	
v/s Ratio Prot												
v/s Ratio Perm		0.37	0.04		c0.42	0.02		0.08	0.02		c0.20	
v/c Ratio		0.64	0.06		0.73	0.03		0.26	0.05		0.62	
Uniform Delay, d1		10.8	7.1		11.7	7.0		18.9	17.6		21.6	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		3.6	0.1		5.5	0.1		1.4	0.2		5.0	
Delay (s)		14.4	7.2		17.2	7.0		20.4	17.8		26.7	
Level of Service		B	A		B	A		C	B		C	
Approach Delay (s)		13.5			16.6			19.4			26.7	
Approach LOS		B			B			B			C	

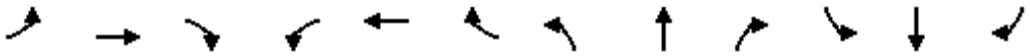
Intersection Summary			
HCM Average Control Delay	17.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	99.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	490	34	44	523	52	45	165	55	117	199	31
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	11	16	8	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	0.98	1.00		1.00	1.00		0.99	1.00	1.00	0.99	1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1532	3066		1652	3730		1585	1663	1370	1568	1680	1397
Flt Permitted	0.36	1.00		0.39	1.00		0.59	1.00	1.00	0.63	1.00	1.00
Satd. Flow (perm)	579	3066		680	3730		977	1663	1370	1043	1680	1397
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	66	544	38	49	581	58	50	183	61	130	221	34
RTOR Reduction (vph)	0	8	0	0	12	0	0	0	37	0	0	20
Lane Group Flow (vph)	66	574	0	49	627	0	50	183	24	130	221	14
Confl. Peds. (#/hr)	51		3	3		51	13		13	13		13
Heavy Vehicles (%)	2%	3%	3%	0%	2%	0%	0%	1%	2%	1%	0%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Effective Green, g (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	276	1462		324	1779		391	665	548	417	672	559
v/s Ratio Prot		c0.19			0.17			0.11			c0.13	
v/s Ratio Perm	0.11			0.07			0.05		0.02	0.12		0.01
v/c Ratio	0.24	0.39		0.15	0.35		0.13	0.28	0.04	0.31	0.33	0.02
Uniform Delay, d1	10.0	10.9		9.6	10.7		12.3	13.1	11.9	13.4	13.5	11.8
Progression Factor	1.00	1.00		1.00	1.00		0.86	0.91	0.79	0.59	0.59	0.27
Incremental Delay, d2	2.0	0.8		1.0	0.6		0.7	1.0	0.2	1.9	1.3	0.1
Delay (s)	12.1	11.7		10.6	11.2		11.2	13.0	9.6	9.8	9.3	3.3
Level of Service	B	B		B	B		B	B	A	A	A	A
Approach Delay (s)		11.8			11.2			12.0			8.9	
Approach LOS		B			B			B			A	

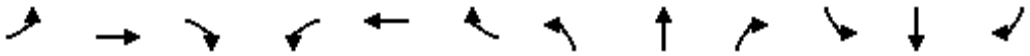
Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	421	81	70	378	64	57	179	64	87	240	78
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	11	10	11	11	10	11	11	10	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	0.96	1.00		0.95	1.00		0.99	1.00		0.96	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.96		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1327	3137		1520	3130		1579	2918		1452	2998	
Flt Permitted	0.46	1.00		0.42	1.00		0.54	1.00		0.59	1.00	
Satd. Flow (perm)	637	3137		667	3130		891	2918		908	2998	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	63	443	85	74	398	67	60	188	67	92	253	82
RTOR Reduction (vph)	0	0	0	0	0	0	0	39	0	0	42	0
Lane Group Flow (vph)	63	528	0	74	465	0	60	216	0	92	293	0
Confl. Peds. (#/hr)	112		99	99		112	23		53	53		23
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	16%	1%	0%	0%	1%	9%	0%	8%	2%	5%	5%	7%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.41	0.41		0.41	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	306	1506		320	1502		368	1206		375	1239	
v/s Ratio Prot		c0.17			0.15			0.07			0.10	
v/s Ratio Perm	0.10			0.11			0.07			c0.10		
v/c Ratio	0.21	0.35		0.23	0.31		0.16	0.18		0.25	0.24	
Uniform Delay, d1	11.3	12.2		11.4	11.9		13.8	13.9		14.4	14.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.5	0.6		1.7	0.5		1.0	0.3		1.6	0.5	
Delay (s)	12.8	12.8		13.1	12.4		14.8	14.3		15.9	14.8	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		12.8			12.5			14.4			15.0	
Approach LOS		B			B			B			B	

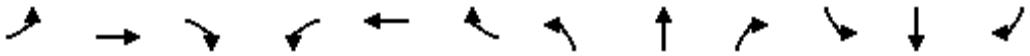
Intersection Summary			
HCM Average Control Delay	13.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	98	436	61	31	504	46	82	194	57	76	473	110
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	8	16	12	9	10	10	9	10	10
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1594	1652		1369	1974		1534	2998		1534	3012	
Flt Permitted	0.26	1.00		0.31	1.00		0.28	1.00		0.59	1.00	
Satd. Flow (perm)	439	1652		454	1974		451	2998		951	3012	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	103	459	64	33	531	48	86	204	60	80	498	116
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	103	523	0	33	579	0	86	264	0	80	614	0
Confl. Peds. (#/hr)	21		95	95		21	36		8	8		36
Confl. Bikes (#/hr)	2		3	3		2	2					2
Heavy Vehicles (%)	0%	2%	0%	7%	2%	0%	0%	3%	0%	0%	2%	1%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	44.0	39.4		40.8	37.8		26.6	21.8		26.6	21.8	
Effective Green, g (s)	44.0	37.4		40.8	35.8		26.6	19.8		26.6	19.8	
Actuated g/C Ratio	0.52	0.44		0.48	0.42		0.31	0.23		0.31	0.23	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	290	727		250	831		202	698		331	702	
v/s Ratio Prot	c0.02	c0.32		0.00	0.29		c0.02	0.09		0.01	c0.20	
v/s Ratio Perm	0.16			0.06			0.11			0.06		
v/c Ratio	0.36	0.72		0.13	0.70		0.43	0.38		0.24	0.87	
Uniform Delay, d1	22.4	19.5		19.9	20.2		29.1	27.4		21.9	31.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.8	6.1		0.2	4.8		1.4	1.6		0.4	14.3	
Delay (s)	23.2	25.6		20.1	25.0		30.5	29.0		22.3	45.7	
Level of Service	C	C		C	C		C	C		C	D	
Approach Delay (s)		25.2			24.7			29.4			43.0	
Approach LOS		C			C			C			D	

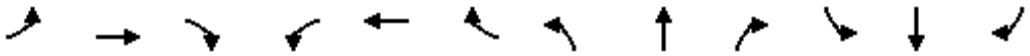
Intersection Summary			
HCM Average Control Delay	31.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	78.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	75	385	63	111	484	112	64	150	55	121	348	78
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	11	11	11	11	12	12	10	10	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		0.99	1.00	
Frt		0.98			0.98		1.00	0.96		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3681			3131		1652	3237		1549	3026	
Flt Permitted		0.73			0.74		0.44	1.00		0.61	1.00	
Satd. Flow (perm)		2691			2321		766	3237		994	3026	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	83	428	70	123	538	124	71	167	61	134	387	87
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	581	0	0	785	0	71	228	0	134	474	0
Confl. Peds. (#/hr)	23		30	30		23	1		20	20		1
Confl. Bikes (#/hr)	3					3						
Heavy Vehicles (%)	0%	3%	0%	2%	2%	0%	0%	1%	0%	2%	2%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.0			33.0		32.0	32.0		32.0	32.0	
Effective Green, g (s)		34.0			34.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio		0.45			0.45		0.44	0.44		0.44	0.44	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		1220			1052		337	1424		437	1331	
v/s Ratio Prot								0.07			c0.16	
v/s Ratio Perm		0.22			c0.34		0.09			0.13		
v/c Ratio		0.48			0.75		0.21	0.16		0.31	0.36	
Uniform Delay, d1		14.3			16.9		13.0	12.7		13.6	13.9	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.3			4.8		1.4	0.2		1.8	0.7	
Delay (s)		15.6			21.8		14.4	12.9		15.4	14.7	
Level of Service		B			C		B	B		B	B	
Approach Delay (s)		15.6			21.8			13.2			14.8	
Approach LOS		B			C			B			B	

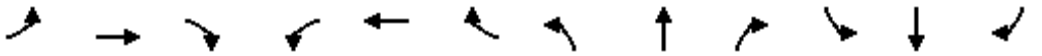
Intersection Summary			
HCM Average Control Delay	17.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	71.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	93	833	6	19	555	236	1	1	9	202	1	76
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	12	12	12	12	12	13	13	13
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	1.00		1.00	1.00	0.85		0.89			0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00		1.00			0.97	
Satd. Flow (prot)	1605	3206		1660	3320	1485		1545			3176	
Flt Permitted	0.40	1.00		0.27	1.00	1.00		0.98			0.77	
Satd. Flow (perm)	678	3206		466	3320	1485		1519			2535	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	103	926	7	21	617	262	1	1	10	224	1	84
RTOR Reduction (vph)	0	0	0	0	0	96	0	7	0	0	53	0
Lane Group Flow (vph)	103	933	0	21	617	166	0	5	0	0	256	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	46.1	46.1		46.1	46.1	46.1		18.6			18.6	
Effective Green, g (s)	46.1	46.1		46.1	46.1	46.1		18.6			18.6	
Actuated g/C Ratio	0.63	0.63		0.63	0.63	0.63		0.26			0.26	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		8.0			8.0	
Lane Grp Cap (vph)	430	2033		295	2105	942		389			649	
v/s Ratio Prot		c0.29			0.19							
v/s Ratio Perm	0.15			0.05		0.11		0.00			c0.10	
v/c Ratio	0.24	0.46		0.07	0.29	0.18		0.01			0.39	
Uniform Delay, d1	5.7	6.9		5.1	6.0	5.5		20.2			22.4	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	1.3	0.7		0.5	0.4	0.4		0.1			1.7	
Delay (s)	7.1	7.6		5.6	6.3	5.9		20.2			24.1	
Level of Service	A	A		A	A	A		C			C	
Approach Delay (s)		7.6			6.2			20.2			24.1	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM Average Control Delay	9.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	72.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	124	216	118	94	162	56	140	876	87	124	816	103
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	9	12	10	10	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.95		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1560	1505		1563	1585		1493	3069	1337	1523	3099	1318
Flt Permitted	0.45	1.00		0.24	1.00		0.21	1.00	1.00	0.18	1.00	1.00
Satd. Flow (perm)	746	1505		396	1585		323	3069	1337	285	3099	1318
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	131	227	124	99	171	59	147	922	92	131	859	108
RTOR Reduction (vph)	0	23	0	0	15	0	0	0	40	0	0	51
Lane Group Flow (vph)	131	328	0	99	215	0	147	922	52	131	859	57
Confl. Peds. (#/hr)	10		13	13		10	18		7	7		18
Confl. Bikes (#/hr)	2					2	2		1	1		2
Heavy Vehicles (%)	2%	1%	1%	2%	1%	2%	3%	4%	0%	1%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	28.0	21.0		28.0	21.0		42.0	35.0	35.0	42.0	35.0	35.0
Effective Green, g (s)	26.0	22.0		26.0	22.0		40.0	35.0	35.0	40.0	35.0	35.0
Actuated g/C Ratio	0.31	0.26		0.31	0.26		0.47	0.41	0.41	0.47	0.41	0.41
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	286	390		204	410		235	1264	551	222	1276	543
v/s Ratio Prot	0.03	c0.22		c0.03	0.14		c0.04	c0.30		0.04	0.28	
v/s Ratio Perm	0.11			0.11			0.25		0.04	0.24		0.04
v/c Ratio	0.46	0.84		0.49	0.52		0.63	0.73	0.09	0.59	0.67	0.11
Uniform Delay, d1	22.5	29.8		22.7	27.0		14.6	21.0	15.3	14.7	20.3	15.4
Progression Factor	1.00	1.00		1.00	1.00		0.67	0.82	0.55	1.00	1.00	1.00
Incremental Delay, d2	5.2	19.2		8.0	4.7		10.9	3.4	0.3	11.0	2.9	0.4
Delay (s)	27.7	49.1		30.7	31.8		20.7	20.6	8.7	25.7	23.2	15.8
Level of Service	C	D		C	C		C	C	A	C	C	B
Approach Delay (s)		43.3			31.5			19.7			22.8	
Approach LOS		D			C			B			C	

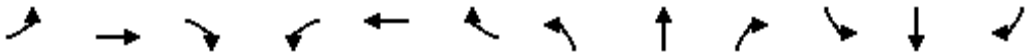
Intersection Summary			
HCM Average Control Delay	25.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	71.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	22	179	35	20	173	21	24	141	38	47	251	49
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	14	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.99			1.00			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.99			0.97			0.98	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1838			1849			1938			1974	
Flt Permitted		0.97			0.96			0.94			0.94	
Satd. Flow (perm)		1783			1791			1838			1870	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	23	185	36	21	178	22	25	145	39	48	259	51
RTOR Reduction (vph)	0	9	0	0	6	0	0	13	0	0	9	0
Lane Group Flow (vph)	0	235	0	0	215	0	0	196	0	0	349	0
Confl. Peds. (#/hr)	18		34	34		18	16		19	19		16
Confl. Bikes (#/hr)			6	6			1		4	4		1
Heavy Vehicles (%)	0%	1%	0%	5%	1%	0%	0%	2%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.42			0.42			0.46			0.46	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		741			744			848			863	
v/s Ratio Prot												
v/s Ratio Perm		c0.13			0.12			0.11			c0.19	
v/c Ratio		0.32			0.29			0.23			0.40	
Uniform Delay, d1		12.8			12.6			10.5			11.6	
Progression Factor		1.00			0.69			1.18			1.00	
Incremental Delay, d2		1.1			1.0			0.6			1.4	
Delay (s)		13.9			9.7			13.1			13.0	
Level of Service		B			A			B			B	
Approach Delay (s)		13.9			9.7			13.1			13.0	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	12.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.6%	ICU Level of Service	A
Analysis Period (min)	15		

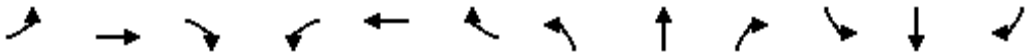
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	190	38	25	180	19	49	199	31	42	206	38
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.97	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1496	3058		1576	3119		1518	3119		1550	3075	
Flt Permitted	0.61	1.00		0.60	1.00		0.58	1.00		0.59	1.00	
Satd. Flow (perm)	966	3058		987	3119		935	3119		969	3075	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	211	42	28	200	21	54	221	34	47	229	42
RTOR Reduction (vph)	0	25	0	0	12	0	0	14	0	0	17	0
Lane Group Flow (vph)	27	228	0	28	209	0	54	241	0	47	254	0
Confl. Peds. (#/hr)	20		17	17		20	2					2
Confl. Bikes (#/hr)	32		36	36		32	22		25	25		22
Heavy Vehicles (%)	4%	1%	0%	0%	0%	0%	5%	0%	0%	3%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0		39.0	39.0		39.0	39.0	
Effective Green, g (s)	19.0	19.0		19.0	19.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.58	0.58		0.58	0.58	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	282	894		289	912		547	1823		566	1798	
v/s Ratio Prot		c0.07			0.07			0.08			c0.08	
v/s Ratio Perm	0.03			0.03			0.06			0.05		
v/c Ratio	0.10	0.25		0.10	0.23		0.10	0.13		0.08	0.14	
Uniform Delay, d1	16.7	17.6		16.8	17.4		6.0	6.1		5.9	6.1	
Progression Factor	0.93	0.96		0.76	0.76		1.32	1.33		0.40	0.36	
Incremental Delay, d2	0.7	0.7		0.7	0.6		0.3	0.1		0.3	0.2	
Delay (s)	16.3	17.6		13.4	13.8		8.2	8.2		2.6	2.3	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		17.4			13.8			8.2			2.4	
Approach LOS		B			B			A			A	

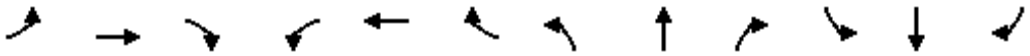
Intersection Summary			
HCM Average Control Delay	10.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.18		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



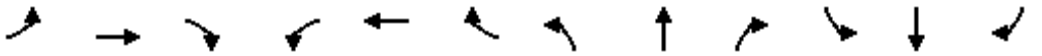
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	66	165	40	24	153	37	27	245	16	40	321	33
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	9	9	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.97		1.00	0.97			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1555	3060		1525	2936			1922			1938	
Flt Permitted	0.62	1.00		0.61	1.00			0.94			0.94	
Satd. Flow (perm)	1014	3060		979	2936			1822			1840	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	73	183	44	27	170	41	30	272	18	44	357	37
RTOR Reduction (vph)	0	26	0	0	25	0	0	3	0	0	5	0
Lane Group Flow (vph)	73	201	0	27	186	0	0	317	0	0	433	0
Confl. Peds. (#/hr)	11		17	17		11	26		7	7		26
Heavy Vehicles (%)	2%	1%	0%	0%	1%	3%	4%	5%	0%	0%	4%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Effective Green, g (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40			0.48			0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	406	1224		392	1174			869			878	
v/s Ratio Prot		0.07			0.06							
v/s Ratio Perm	c0.07			0.03				0.17			c0.24	
v/c Ratio	0.18	0.16		0.07	0.16			0.36			0.49	
Uniform Delay, d1	12.6	12.5		12.0	12.5			10.8			11.6	
Progression Factor	1.05	0.99		0.77	0.76			0.98			1.00	
Incremental Delay, d2	1.0	0.3		0.3	0.3			1.2			2.0	
Delay (s)	14.2	12.7		9.6	9.8			11.8			13.6	
Level of Service	B	B		A	A			B			B	
Approach Delay (s)		13.0			9.8			11.8			13.6	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	12.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



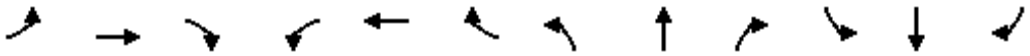
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	47	111	28	19	153	26	40	230	11	33	360	57
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	16	12	10	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.97		1.00	0.98			0.99			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			1.00	
Satd. Flow (prot)	1652	1970		1584	1975			1981			1979	
Flt Permitted	0.58	1.00		0.65	1.00			0.90			0.96	
Satd. Flow (perm)	1013	1970		1087	1975			1800			1912	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	52	123	31	21	170	29	44	256	12	37	400	63
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	52	154	0	21	199	0	0	312	0	0	500	0
Confl. Peds. (#/hr)	1		10	10		1	2		5	5		2
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	2%	0%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Effective Green, g (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Actuated g/C Ratio	0.31	0.31		0.31	0.31			0.57			0.57	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	312	606		334	608			1025			1088	
v/s Ratio Prot		0.08			c0.10							
v/s Ratio Perm	0.05			0.02				0.17			c0.26	
v/c Ratio	0.17	0.25		0.06	0.33			0.30			0.46	
Uniform Delay, d1	16.4	16.9		15.9	17.3			7.3			8.2	
Progression Factor	0.82	0.81		0.93	0.93			0.98			1.00	
Incremental Delay, d2	1.1	1.0		0.4	1.4			0.8			1.4	
Delay (s)	14.7	14.6		15.1	17.5			7.9			9.6	
Level of Service	B	B		B	B			A			A	
Approach Delay (s)		14.6			17.3			7.9			9.6	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



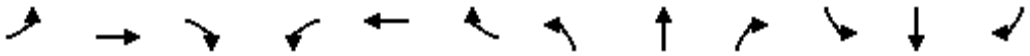
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	51	12	92	2	5	10	59	223	5	5	442	72
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	10	11	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98		1.00	0.98		1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.87		1.00	0.90		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1695	1726		1702	1808		1594	1647	1428	1653	2000	1496
Flt Permitted	0.75	1.00		0.68	1.00		0.41	1.00	1.00	0.60	1.00	1.00
Satd. Flow (perm)	1332	1726		1224	1808		693	1647	1428	1049	2000	1496
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	57	13	102	2	6	11	66	248	6	6	491	80
RTOR Reduction (vph)	0	74	0	0	8	0	0	0	2	0	0	28
Lane Group Flow (vph)	57	41	0	2	9	0	66	248	4	6	491	52
Confl. Peds. (#/hr)	5		5	5		5	3					3
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	0%	2%	0%	0%	2%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	17.0	17.0		17.0	17.0		39.0	39.0	39.0	39.0	39.0	39.0
Effective Green, g (s)	18.0	18.0		18.0	18.0		39.0	39.0	39.0	39.0	39.0	39.0
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.60	0.60	0.60	0.60	0.60	0.60
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	369	478		339	501		416	988	857	629	1200	898
v/s Ratio Prot		0.02			0.01			0.15			c0.25	
v/s Ratio Perm	c0.04			0.00			0.10		0.00	0.01		0.04
v/c Ratio	0.15	0.09		0.01	0.02		0.16	0.25	0.00	0.01	0.41	0.06
Uniform Delay, d1	17.8	17.4		17.0	17.1		5.7	6.1	5.2	5.2	6.9	5.4
Progression Factor	1.41	2.82		1.00	1.00		0.80	0.75	0.92	1.00	1.00	1.00
Incremental Delay, d2	0.9	0.3		0.0	0.1		0.6	0.5	0.0	0.0	1.0	0.1
Delay (s)	25.9	49.5		17.1	17.1		5.2	5.1	4.8	5.3	7.9	5.5
Level of Service	C	D		B	B		A	A	A	A	A	A
Approach Delay (s)		41.7			17.1			5.1			7.6	
Approach LOS		D			B			A			A	

Intersection Summary			
HCM Average Control Delay	12.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	253	163	177	203	0	0	0	0	110	470	377
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)		4.0		3.0	3.0					5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	
Frpb, ped/bikes		0.99		1.00	1.00					1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Frt		0.94		1.00	1.00					1.00	0.93	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		2905		1693	3288					1503	3021	
Flt Permitted		1.00		0.41	1.00					0.95	1.00	
Satd. Flow (perm)		2905		722	3288					1503	3021	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	266	172	186	214	0	0	0	0	116	495	397
RTOR Reduction (vph)	0	103	0	0	0	0	0	0	0	0	141	0
Lane Group Flow (vph)	0	335	0	186	214	0	0	0	0	116	751	0
Confl. Peds. (#/hr)	18		3	3		18	1					1
Heavy Vehicles (%)	0%	4%	1%	1%	4%	0%	0%	0%	0%	10%	2%	1%
Turn Type				D.P+P						Split		
Protected Phases		8		7	7 8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		33.0		53.0	56.0					37.0	37.0	
Effective Green, g (s)		33.0		53.0	56.0					37.0	37.0	
Actuated g/C Ratio		0.32		0.52	0.55					0.36	0.36	
Clearance Time (s)		4.0		3.0						5.0	5.0	
Lane Grp Cap (vph)		940		566	1805					545	1096	
v/s Ratio Prot		c0.12		c0.06	0.07					0.08	c0.25	
v/s Ratio Perm				0.11								
v/c Ratio		0.36		0.33	0.12					0.21	0.68	
Uniform Delay, d1		26.4		13.5	11.1					22.4	27.6	
Progression Factor		1.00		2.22	2.15					1.00	1.00	
Incremental Delay, d2		1.1		1.4	0.1					0.9	3.5	
Delay (s)		27.4		31.2	23.9					23.3	31.0	
Level of Service		C		C	C					C	C	
Approach Delay (s)		27.4			27.3			0.0			30.2	
Approach LOS		C			C			A			C	

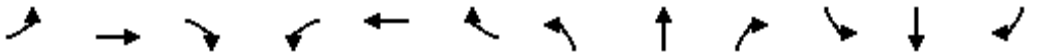
Intersection Summary			
HCM Average Control Delay	28.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	102.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	141	222	0	0	307	113	73	511	221	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	9	12	13	12	13	12	12	12
Total Lost time (s)	4.0	4.0			4.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.96		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1674	3196			2850		1767	1782	1560			
Flt Permitted	0.36	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	629	3196			2850		1767	1782	1560			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	148	234	0	0	323	119	77	538	233	0	0	0
RTOR Reduction (vph)	0	0	0	0	37	0	0	0	164	0	0	0
Lane Group Flow (vph)	148	234	0	0	405	0	77	538	69	0	0	0
Confl. Peds. (#/hr)	9		13	13		9			1	1		
Confl. Bikes (#/hr)	3					3						
Heavy Vehicles (%)	2%	7%	0%	0%	3%	1%	0%	1%	0%	0%	0%	0%
Turn Type	pm+pt						custom		Perm			
Protected Phases	4	1 4			1		2	2				
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	59.0	63.0			26.0		30.0	30.0	30.0			
Effective Green, g (s)	59.0	63.0			26.0		30.0	30.0	30.0			
Actuated g/C Ratio	0.58	0.62			0.25		0.29	0.29	0.29			
Clearance Time (s)	4.0				4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	702	1974			726		520	524	459			
v/s Ratio Prot	c0.07	0.07			c0.14		0.04	c0.30				
v/s Ratio Perm	0.05								0.04			
v/c Ratio	0.21	0.12			0.56		0.15	1.03	0.15			
Uniform Delay, d1	10.3	8.0			33.0		26.6	36.0	26.6			
Progression Factor	0.42	0.43			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.7	0.1			3.1		0.6	46.3	0.7			
Delay (s)	4.9	3.6			36.1		27.2	82.3	27.3			
Level of Service	A	A			D		C	F	C			
Approach Delay (s)		4.1			36.1			62.2			0.0	
Approach LOS		A			D			E			A	

Intersection Summary			
HCM Average Control Delay	42.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	102.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	61.0%	ICU Level of Service	B
Analysis Period (min)	15		

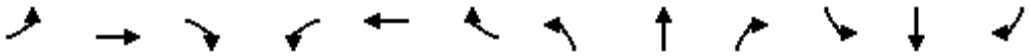
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	488	455	77	507	0	0	0	0	11	434	285
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	11	12	12	12	12	10	10	12
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	1.00
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.93		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3098		1710	3306					1596	3192	1530
Flt Permitted		1.00		0.12	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3098		207	3306					1596	3192	1530
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	508	474	80	528	0	0	0	0	11	452	297
RTOR Reduction (vph)	0	169	0	0	0	0	0	0	0	0	0	196
Lane Group Flow (vph)	0	813	0	80	528	0	0	0	0	11	452	101
Confl. Peds. (#/hr)	8		8	8		8	3					3
Confl. Bikes (#/hr)	9					9			61	61		
Heavy Vehicles (%)	0%	1%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type				pm+pt						Split		Prot
Protected Phases		8		7	7 8					6	6	6
Permitted Phases				7 8								
Actuated Green, G (s)		36.0		54.0	58.0					34.0	34.0	34.0
Effective Green, g (s)		36.0		54.0	58.0					34.0	34.0	34.0
Actuated g/C Ratio		0.36		0.54	0.58					0.34	0.34	0.34
Clearance Time (s)		4.0		4.0						4.0	4.0	4.0
Lane Grp Cap (vph)		1115		382	1917					543	1085	520
v/s Ratio Prot		c0.26		0.04	c0.16					0.01	c0.14	0.07
v/s Ratio Perm				0.08								
v/c Ratio		0.73		0.21	0.28					0.02	0.42	0.19
Uniform Delay, d1		27.8		13.9	10.5					21.9	25.4	23.3
Progression Factor		1.00		1.01	1.19					1.00	1.00	1.00
Incremental Delay, d2		4.2		0.9	0.3					0.1	1.2	0.8
Delay (s)		32.0		15.0	12.8					22.0	26.6	24.2
Level of Service		C		B	B					C	C	C
Approach Delay (s)		32.0			13.1			0.0			25.5	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM Average Control Delay	25.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	89.6%	ICU Level of Service	E
Analysis Period (min)	15		

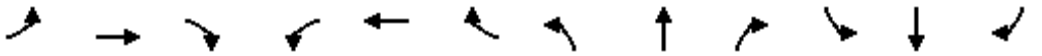
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	398	101	0	0	142	6	441	456	55	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	10	12	11	11	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	0.91	0.91			0.95		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.99		1.00	1.00	0.85			
Flt Protected	0.95	0.97			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1469	3110			3168		1555	1653	1530			
Flt Permitted	0.66	0.72			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	1014	2315			3168		1555	1653	1530			
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	410	104	0	0	146	6	455	470	57	0	0	0
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	36	0	0	0
Lane Group Flow (vph)	205	309	0	0	149	0	455	470	21	0	0	0
Confl. Peds. (#/hr)	13		6	6		13			8	8		
Confl. Bikes (#/hr)	1					1			2	2		
Heavy Vehicles (%)	2%	1%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%
Turn Type	pm+pt						custom		custom			
Protected Phases	4	1 4			1		2	2	2			
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Effective Green, g (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Actuated g/C Ratio	0.51	0.51			0.15		0.37	0.37	0.37			
Clearance Time (s)	4.0				4.0		4.0	4.0	4.0			
Lane Grp Cap (vph)	681	1467			475		575	612	566			
v/s Ratio Prot	c0.11	0.08			c0.05		c0.29	0.28	0.01			
v/s Ratio Perm	0.05	0.03										
v/c Ratio	0.30	0.21			0.31		0.79	0.77	0.04			
Uniform Delay, d1	14.0	13.4			37.9		28.1	27.7	20.1			
Progression Factor	0.25	0.26			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.7	0.2			1.7		10.7	9.0	0.1			
Delay (s)	4.3	3.8			39.6		38.7	36.7	20.2			
Level of Service	A	A			D		D	D	C			
Approach Delay (s)		4.0			39.6			36.7			0.0	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM Average Control Delay	26.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	89.6%	ICU Level of Service	E
Analysis Period (min)	15		

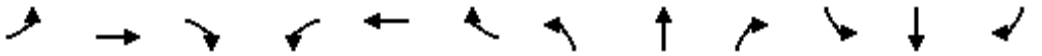
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	78	219	102	149	263	117	80	663	83	101	875	64
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	9	10	9	9	10	9
Total Lost time (s)		4.0			4.0		4.0	3.5	4.0	4.0	3.5	4.0
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		0.99			0.99		1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.96			0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		2940			2929		1508	3069	1309	1508	3099	1298
Flt Permitted		0.73			0.72		0.16	1.00	1.00	0.27	1.00	1.00
Satd. Flow (perm)		2159			2151		261	3069	1309	433	3099	1298
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	81	228	106	155	274	122	83	691	86	105	911	67
RTOR Reduction (vph)	0	40	0	0	31	0	0	0	53	0	0	33
Lane Group Flow (vph)	0	375	0	0	520	0	83	691	33	105	911	34
Confl. Peds. (#/hr)	35		30	30		35	34		8	8		34
Confl. Bikes (#/hr)	1					1	1					1
Heavy Vehicles (%)	1%	4%	0%	1%	3%	3%	2%	4%	2%	2%	3%	2%
Turn Type	pm+pt			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		35.0			27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)		36.0			28.0		36.0	33.5	33.0	36.0	33.5	33.0
Actuated g/C Ratio		0.42			0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)		5.0			5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)		970			709		169	1210	508	234	1221	504
v/s Ratio Prot		c0.03					c0.02	0.23		0.02	c0.29	
v/s Ratio Perm		0.14			c0.24		0.18		0.03	0.17		0.03
v/c Ratio		0.39			0.73		0.49	0.57	0.07	0.45	0.75	0.07
Uniform Delay, d1		16.9			25.2		16.6	20.1	16.3	15.8	22.1	16.3
Progression Factor		1.00			1.00		1.31	0.68	0.54	1.11	1.17	1.77
Incremental Delay, d2		1.2			6.6		9.3	1.8	0.2	4.5	3.1	0.2
Delay (s)		18.0			31.8		30.9	15.6	9.1	22.0	28.9	29.2
Level of Service		B			C		C	B	A	C	C	C
Approach Delay (s)		18.0			31.8			16.5			28.3	
Approach LOS		B			C			B			C	

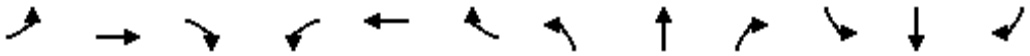
Intersection Summary			
HCM Average Control Delay	24.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	73.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	76	327	0	0	410	85	52	43	33	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.98			0.97				
Flt Protected		0.99			1.00			0.98				
Satd. Flow (prot)		1731			1707			1653				
Flt Permitted		0.84			1.00			0.98				
Satd. Flow (perm)		1462			1707			1653				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	84	363	0	0	456	94	58	48	37	0	0	0
RTOR Reduction (vph)	0	0	0	0	11	0	0	19	0	0	0	0
Lane Group Flow (vph)	0	447	0	0	539	0	0	124	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		38.0			38.0			19.0				
Effective Green, g (s)		38.0			38.0			19.0				
Actuated g/C Ratio		0.58			0.58			0.29				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		855			998			483				
v/s Ratio Prot					c0.32							
v/s Ratio Perm		0.31						0.07				
v/c Ratio		0.52			0.54			0.26				
Uniform Delay, d1		8.1			8.2			17.6				
Progression Factor		1.00			0.72			1.00				
Incremental Delay, d2		2.3			1.9			1.3				
Delay (s)		10.4			7.8			18.9				
Level of Service		B			A			B				
Approach Delay (s)		10.4			7.8			18.9			0.0	
Approach LOS		B			A			B			A	

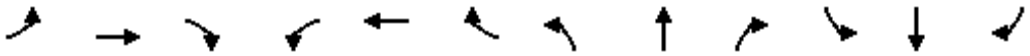
Intersection Summary			
HCM Average Control Delay	10.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	21	384	39	37	356	48	30	112	37	52	148	43
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	10	12	12	10	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			0.98	
Flpb, ped/bikes		1.00			1.00			0.99			1.00	
Frt		0.99			0.99			0.97			0.97	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1955			1941			2968			2983	
Flt Permitted		0.97			0.94			0.88			0.86	
Satd. Flow (perm)		1901			1828			2648			2598	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	23	427	43	41	396	53	33	124	41	58	164	48
RTOR Reduction (vph)	0	5	0	0	6	0	0	24	0	0	28	0
Lane Group Flow (vph)	0	488	0	0	484	0	0	174	0	0	242	0
Confl. Peds. (#/hr)	32		25	25		32	59		24	24		59
Confl. Bikes (#/hr)	3		2	2		3	4		2	2		4
Heavy Vehicles (%)	0%	3%	0%	3%	3%	0%	0%	0%	7%	4%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0			27.0			27.0	
Effective Green, g (s)		30.0			30.0			27.0			27.0	
Actuated g/C Ratio		0.46			0.46			0.42			0.42	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		877			844			1100			1079	
v/s Ratio Prot												
v/s Ratio Perm		0.26			c0.26			0.07			c0.09	
v/c Ratio		0.56			0.57			0.16			0.22	
Uniform Delay, d1		12.7			12.8			11.9			12.2	
Progression Factor		0.61			0.41			1.11			0.44	
Incremental Delay, d2		2.4			2.5			0.3			0.5	
Delay (s)		10.1			7.8			13.5			5.8	
Level of Service		B			A			B			A	
Approach Delay (s)		10.1			7.8			13.5			5.8	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM Average Control Delay	9.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	74.1%	ICU Level of Service	D
Analysis Period (min)	15		

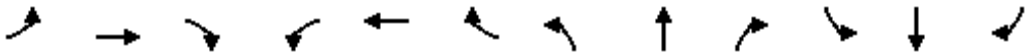
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	51	330	49	78	448	82	45	217	97	79	215	61
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	9	10	10	9	10	10	12	10	10	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		0.99	1.00		0.99	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.95		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1509	3036		1573	3078		1587	2962		1585	3071	
Flt Permitted	0.33	1.00		0.46	1.00		0.56	1.00		0.54	1.00	
Satd. Flow (perm)	529	3036		760	3078		944	2962		905	3071	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	57	367	54	87	498	91	50	241	108	88	239	68
RTOR Reduction (vph)	0	18	0	0	23	0	0	50	0	0	31	0
Lane Group Flow (vph)	57	403	0	87	566	0	50	299	0	88	276	0
Confl. Peds. (#/hr)	20		31	31		20	16		20	20		16
Confl. Bikes (#/hr)							1		3	3		1
Heavy Vehicles (%)	5%	3%	0%	0%	1%	0%	0%	2%	2%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	179	1028		257	1042		508	1595		487	1654	
v/s Ratio Prot		0.13			c0.18			c0.10			0.09	
v/s Ratio Perm	0.11			0.11			0.05			0.10		
v/c Ratio	0.32	0.39		0.34	0.54		0.10	0.19		0.18	0.17	
Uniform Delay, d1	15.9	16.4		16.1	17.4		7.3	7.7		7.7	7.6	
Progression Factor	0.69	0.67		0.94	0.93		0.95	0.98		1.10	1.10	
Incremental Delay, d2	4.1	1.0		3.5	2.0		0.4	0.3		0.8	0.2	
Delay (s)	15.1	11.9		18.5	18.2		7.3	7.8		9.3	8.6	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		12.3			18.3			7.7			8.7	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	12.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.8%	ICU Level of Service	A
Analysis Period (min)	15		

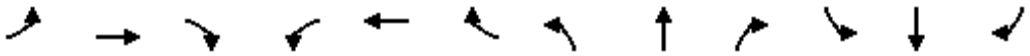
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	348	78	83	399	48	45	226	57	46	279	64
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	9	10	9	9	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			0.98	
Flpb, ped/bikes	0.98	1.00		0.99	1.00			0.99			1.00	
Frt	1.00	0.97		1.00	0.98			0.97			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1508	3018		1430	3722			3485			3521	
Flt Permitted	0.46	1.00		0.48	1.00			0.86			0.88	
Satd. Flow (perm)	730	3018		715	3722			3031			3122	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	62	366	82	87	420	51	47	238	60	48	294	67
RTOR Reduction (vph)	0	29	0	0	14	0	0	27	0	0	25	0
Lane Group Flow (vph)	62	419	0	87	457	0	0	318	0	0	384	0
Confl. Peds. (#/hr)	38		17	17		38	125		53	53		125
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	3%	0%	7%	2%	0%	0%	6%	10%	2%	5%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Effective Green, g (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48			0.40			0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	348	1439		341	1775			1212			1249	
v/s Ratio Prot		c0.14			0.12							
v/s Ratio Perm	0.08			0.12				0.10			c0.12	
v/c Ratio	0.18	0.29		0.26	0.26			0.26			0.31	
Uniform Delay, d1	9.7	10.3		10.1	10.1			13.1			13.3	
Progression Factor	1.62	1.77		1.11	1.10			0.69			0.73	
Incremental Delay, d2	1.1	0.5		1.6	0.3			0.5			0.6	
Delay (s)	16.8	18.8		12.9	11.5			9.4			10.3	
Level of Service	B	B		B	B			A			B	
Approach Delay (s)		18.5			11.7			9.4			10.3	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM Average Control Delay	12.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.2%	ICU Level of Service	B
Analysis Period (min)	15		

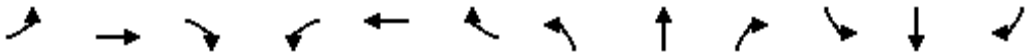
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	86	294	92	88	280	88	116	79	45	45	79	115
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	16	12	12	16	12
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		0.95			1.00			1.00	
Frt		1.00	0.85		0.97			0.97			0.94	
Flt Protected		0.99	1.00		0.99			0.98			0.99	
Satd. Flow (prot)		1670	1436		3087			1885			1835	
Flt Permitted		0.80	1.00		0.79			0.68			0.91	
Satd. Flow (perm)		1347	1436		2471			1319			1679	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	96	327	102	98	311	98	129	88	50	50	88	128
RTOR Reduction (vph)	0	0	49	0	32	0	0	13	0	0	51	0
Lane Group Flow (vph)	0	423	53	0	475	0	0	254	0	0	215	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		34.0	34.0		34.0			21.0			21.0	
Effective Green, g (s)		34.0	34.0		34.0			21.0			21.0	
Actuated g/C Ratio		0.52	0.52		0.52			0.32			0.32	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Grp Cap (vph)		705	751		1293			426			542	
v/s Ratio Prot												
v/s Ratio Perm		c0.31	0.04		0.19			c0.19			0.13	
v/c Ratio		0.60	0.07		0.37			0.60			0.40	
Uniform Delay, d1		10.8	7.7		9.2			18.4			17.1	
Progression Factor		1.87	4.77		0.52			1.00			1.00	
Incremental Delay, d2		3.7	0.2		0.8			6.0			2.2	
Delay (s)		23.8	36.8		5.6			24.5			19.2	
Level of Service		C	D		A			C			B	
Approach Delay (s)		26.3			5.6			24.5			19.2	
Approach LOS		C			A			C			B	

Intersection Summary			
HCM Average Control Delay	18.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	78.3%	ICU Level of Service	D
Analysis Period (min)	15		

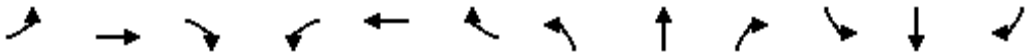
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	55	281	28	25	315	58	26	130	46	62	145	63
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	15	8	16	8	8	16	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.98			0.97			0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1443	3026		1566	3019			3581			3598	
Flt Permitted	0.50	1.00		0.55	1.00			0.90			0.84	
Satd. Flow (perm)	753	3026		899	3019			3234			3071	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	61	312	31	28	350	64	29	144	51	69	161	70
RTOR Reduction (vph)	0	11	0	0	23	0	0	30	0	0	41	0
Lane Group Flow (vph)	61	332	0	28	391	0	0	194	0	0	259	0
Confl. Peds. (#/hr)	24		47	47		24	9		36	36		9
Confl. Bikes (#/hr)			4	4			1					1
Heavy Vehicles (%)	9%	4%	0%	0%	3%	0%	0%	1%	10%	0%	0%	8%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	30.0	30.0		30.0	30.0			27.0			27.0	
Effective Green, g (s)	30.0	30.0		30.0	30.0			27.0			27.0	
Actuated g/C Ratio	0.46	0.46		0.46	0.46			0.42			0.42	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	348	1397		415	1393			1343			1276	
v/s Ratio Prot		0.11			c0.13							
v/s Ratio Perm	0.08			0.03				0.06			c0.08	
v/c Ratio	0.18	0.24		0.07	0.28			0.14			0.20	
Uniform Delay, d1	10.3	10.6		9.7	10.8			11.8			12.1	
Progression Factor	0.66	0.66		0.82	0.65			0.95			0.41	
Incremental Delay, d2	0.9	0.3		0.2	0.2			0.2			0.3	
Delay (s)	7.7	7.3		8.1	7.3			11.4			5.2	
Level of Service	A	A		A	A			B			A	
Approach Delay (s)		7.4			7.4			11.4			5.2	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM Average Control Delay	7.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

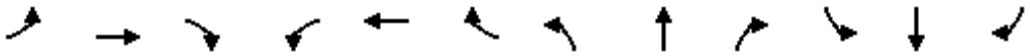


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	47	450	26	83	487	213	23	118	109	323	248	78
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.99			0.96			0.93			0.98	
Flt Protected		1.00			0.99			1.00			0.98	
Satd. Flow (prot)		3281			3168			3089			3181	
Flt Permitted		0.78			0.80			0.91			0.71	
Satd. Flow (perm)		2557			2539			2816			2306	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	52	500	29	92	541	237	26	131	121	359	276	87
RTOR Reduction (vph)	0	6	0	0	60	0	0	65	0	0	16	0
Lane Group Flow (vph)	0	575	0	0	810	0	0	213	0	0	706	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0			30.0			17.0	
Effective Green, g (s)		25.0			25.0			30.0			17.0	
Actuated g/C Ratio		0.38			0.38			0.46			0.26	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		983			977			1342			603	
v/s Ratio Prot								c0.02				
v/s Ratio Perm		0.23			c0.32			0.05			c0.31	
v/c Ratio		0.59			0.83			0.16			1.27dl	
Uniform Delay, d1		15.9			18.1			10.2			24.0	
Progression Factor		1.48			1.00			1.00			0.81	
Incremental Delay, d2		2.5			8.1			0.3			93.0	
Delay (s)		26.1			26.2			10.4			112.4	
Level of Service		C			C			B			F	
Approach Delay (s)		26.1			26.2			10.4			112.4	
Approach LOS		C			C			B			F	

Intersection Summary			
HCM Average Control Delay	49.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	83.7%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

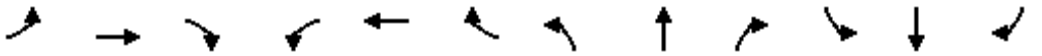
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	875	129	46	762	0	79	0	35	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	10	10	12	12	12	12	12	12	12
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			1.00				
Frt		0.98			1.00			0.96				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		3039			3090			1619				
Flt Permitted		1.00			0.81			0.79				
Satd. Flow (perm)		3039			2507			1329				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	972	143	51	847	0	88	0	39	0	0	0
RTOR Reduction (vph)	0	16	0	0	0	0	0	18	0	0	0	0
Lane Group Flow (vph)	0	1099	0	0	898	0	0	109	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	custom			Perm			Perm			Perm		
Protected Phases		4 5 6 11			8			2			2	
Permitted Phases	4 6 11			8			2			2		
Actuated Green, G (s)		65.0			33.0			16.0				
Effective Green, g (s)		58.0			33.0			16.0				
Actuated g/C Ratio		0.64			0.37			0.18				
Clearance Time (s)					5.0			5.0				
Lane Grp Cap (vph)		1958			919			236				
v/s Ratio Prot		c0.36										
v/s Ratio Perm					c0.36			c0.08				
v/c Ratio		0.56			0.98			0.46				
Uniform Delay, d1		8.9			28.1			33.1				
Progression Factor		0.12			1.42			1.00				
Incremental Delay, d2		0.3			23.6			6.4				
Delay (s)		1.4			63.5			39.5				
Level of Service		A			E			D				
Approach Delay (s)		1.4			63.5			39.5			0.0	
Approach LOS		A			E			D			A	

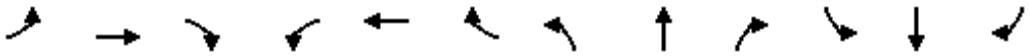
Intersection Summary			
HCM Average Control Delay	29.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	72.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	218	633	24	108	586	178	59	4	103	205	10	206
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	10	12	12	12	12	16	12	12	12	12
Total Lost time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85		0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (prot)	1550	3192		1660	3320	1485		1783		1660	1748	1485
Flt Permitted	0.31	1.00		0.34	1.00	1.00		0.88		0.44	1.00	1.00
Satd. Flow (perm)	502	3192		593	3320	1485		1591		773	1748	1485
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	242	703	27	120	651	198	66	4	114	228	11	229
RTOR Reduction (vph)	0	2	0	0	0	90	0	89	0	0	0	132
Lane Group Flow (vph)	242	728	0	120	651	108	0	95	0	228	11	97
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	55.2	43.0		48.1	38.9	48.9		11.8		24.8	24.8	38.1
Effective Green, g (s)	55.2	43.0		48.1	38.9	48.9		11.8		24.8	24.8	38.1
Actuated g/C Ratio	0.61	0.48		0.53	0.43	0.54		0.13		0.28	0.28	0.42
Clearance Time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Vehicle Extension (s)	4.0	3.0		4.0	3.0	3.0		4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	463	1525		426	1435	807		209		312	482	629
v/s Ratio Prot	c0.08	0.23		0.03	0.20	0.01				c0.08	0.01	0.02
v/s Ratio Perm	c0.24			0.12		0.06		0.06		c0.12		0.04
v/c Ratio	0.52	0.48		0.28	0.45	0.13		0.45		0.73	0.02	0.15
Uniform Delay, d1	8.9	15.9		10.6	18.0	10.1		36.1		28.4	23.8	16.0
Progression Factor	2.61	1.89		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	1.2	0.9		0.5	1.0	0.1		2.1		8.5	0.0	0.2
Delay (s)	24.3	30.9		11.1	19.1	10.2		38.2		36.9	23.8	16.2
Level of Service	C	C		B	B	B		D		D	C	B
Approach Delay (s)		29.3			16.3			38.2			26.4	
Approach LOS		C			B			D			C	

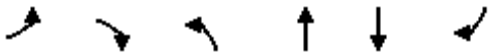
Intersection Summary			
HCM Average Control Delay	24.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	60.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	511	431	2	323	0	0	0	0	18	0	548
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	568	479	2	359	0	0	0	0	20	0	609
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		498										
pX, platoon unblocked												
vC, conflicting volume	359			568			752	931	284	647	931	179
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	359			568			752	931	284	647	931	179
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	94	100	27
cM capacity (veh/h)	1189			994			79	263	710	353	263	829

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	284	284	479	122	239	20	609
Volume Left	0	0	0	2	0	20	0
Volume Right	0	0	479	0	0	0	609
cSH	1700	1700	1700	994	1700	353	829
Volume to Capacity	0.17	0.17	0.28	0.00	0.14	0.06	0.73
Queue Length 95th (ft)	0	0	0	0	0	4	167
Control Delay (s)	0.0	0.0	0.0	0.2	0.0	15.8	20.3
Lane LOS				A		C	C
Approach Delay (s)	0.0			0.1		20.2	
Approach LOS						C	

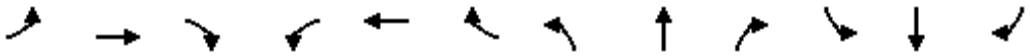
Intersection Summary				
Average Delay	6.2			
Intersection Capacity Utilization	52.0%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	529	0	325	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	588	0	361	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	294	294	361
Volume Left (vph)	294	294	361
Volume Right (vph)	0	0	0
Hadj (s)	0.55	0.55	0.25
Departure Headway (s)	6.1	6.1	5.6
Degree Utilization, x	0.50	0.50	0.56
Capacity (veh/h)	571	573	620
Control Delay (s)	13.9	13.9	15.3
Approach Delay (s)	13.9		15.3
Approach LOS	B		C

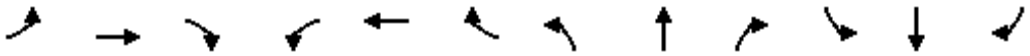
Intersection Summary			
Delay	14.5		
HCM Level of Service	B		
Intersection Capacity Utilization	41.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	475	64	192	501	0	0	0	0	101	21	58
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)		3.0		4.0	4.0						5.0	
Lane Util. Factor		0.95		1.00	0.95						0.95	
Frt		0.98		1.00	1.00						0.95	
Flt Protected		1.00		0.95	1.00						0.97	
Satd. Flow (prot)		3153		1605	3210						3074	
Flt Permitted		1.00		0.34	1.00						0.97	
Satd. Flow (perm)		3153		582	3210						3074	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	528	71	213	557	0	0	0	0	112	23	64
RTOR Reduction (vph)	0	12	0	0	0	0	0	0	0	0	44	0
Lane Group Flow (vph)	0	587	0	213	557	0	0	0	0	0	155	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type				pm+pt						Split		
Protected Phases		4		3	8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		36.0		49.0	49.0						27.0	
Effective Green, g (s)		36.0		49.0	49.0						27.0	
Actuated g/C Ratio		0.42		0.58	0.58						0.32	
Clearance Time (s)		3.0		4.0	4.0						5.0	
Lane Grp Cap (vph)		1335		456	1850						976	
v/s Ratio Prot		0.19		c0.05	0.17						c0.05	
v/s Ratio Perm				c0.21								
v/c Ratio		0.44		0.47	0.30						0.16	
Uniform Delay, d1		17.4		15.7	9.2						20.8	
Progression Factor		1.00		0.35	0.19						1.00	
Incremental Delay, d2		1.1		2.8	0.3						0.3	
Delay (s)		18.4		8.3	2.1						21.2	
Level of Service		B		A	A						C	
Approach Delay (s)		18.4			3.8			0.0			21.2	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	11.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	44.4%	ICU Level of Service	A
Analysis Period (min)	15		

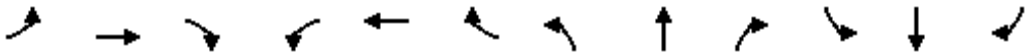
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	95	481	0	0	629	124	64	90	59	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	11	11	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0			3.0			5.0				
Lane Util. Factor	1.00	0.95			0.95			0.91				
Frt	1.00	1.00			0.98			0.96				
Flt Protected	0.95	1.00			1.00			0.99				
Satd. Flow (prot)	1660	3320			3130			4504				
Flt Permitted	0.22	1.00			1.00			0.99				
Satd. Flow (perm)	384	3320			3130			4504				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	106	534	0	0	699	138	71	100	66	0	0	0
RTOR Reduction (vph)	0	0	0	0	19	0	0	45	0	0	0	0
Lane Group Flow (vph)	106	534	0	0	818	0	0	192	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt						Split					
Protected Phases	7	4			8		2	2				
Permitted Phases	4											
Actuated Green, G (s)	48.0	48.0			35.0			27.0				
Effective Green, g (s)	48.0	48.0			35.0			27.0				
Actuated g/C Ratio	0.56	0.56			0.41			0.32				
Clearance Time (s)	5.0	5.0			3.0			5.0				
Lane Grp Cap (vph)	367	1875			1289			1431				
v/s Ratio Prot	0.03	c0.16			c0.26			c0.04				
v/s Ratio Perm	0.13											
v/c Ratio	0.29	0.28			0.63			0.13				
Uniform Delay, d1	18.1	9.6			19.9			20.7				
Progression Factor	0.42	0.31			1.00			1.00				
Incremental Delay, d2	1.8	0.4			2.4			0.2				
Delay (s)	9.4	3.4			22.3			20.9				
Level of Service	A	A			C			C				
Approach Delay (s)		4.4			22.3			20.9			0.0	
Approach LOS		A			C			C			A	

Intersection Summary			
HCM Average Control Delay	15.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	44.4%	ICU Level of Service	A
Analysis Period (min)	15		

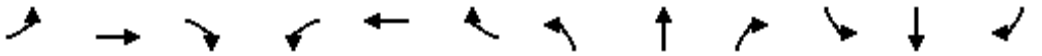
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	114	346	114	91	386	81	129	78	30	30	85	141
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	12	15	12	12	15	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		0.97			0.98			0.98			0.93	
Flt Protected		0.99			0.99			0.97			0.99	
Satd. Flow (prot)		2977			3007			1840			1769	
Flt Permitted		0.66			0.69			0.72			0.95	
Satd. Flow (perm)		1975			2105			1364			1684	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	127	384	127	101	429	90	143	87	33	33	94	157
RTOR Reduction (vph)	0	34	0	0	21	0	0	8	0	0	69	0
Lane Group Flow (vph)	0	604	0	0	599	0	0	255	0	0	215	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		23.0			23.0			32.0			32.0	
Effective Green, g (s)		23.0			23.0			32.0			32.0	
Actuated g/C Ratio		0.35			0.35			0.49			0.49	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		699			745			672			829	
v/s Ratio Prot												
v/s Ratio Perm		c0.31			0.28			c0.19			0.13	
v/c Ratio		0.86			0.80			0.38			0.26	
Uniform Delay, d1		19.6			19.0			10.3			9.6	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		13.5			9.0			1.6			0.8	
Delay (s)		33.0			27.9			11.9			10.4	
Level of Service		C			C			B			B	
Approach Delay (s)		33.0			27.9			11.9			10.4	
Approach LOS		C			C			B			B	

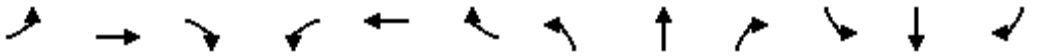
Intersection Summary			
HCM Average Control Delay	24.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	80.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	114	201	88	159	311	65	118	514	64	91	908	174
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	12	10	16	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.95		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1559	2980		1573	3683		1508	3069	1333	1520	3099	1336
Flt Permitted	0.45	1.00		0.53	1.00		0.13	1.00	1.00	0.36	1.00	1.00
Satd. Flow (perm)	739	2980		880	3683		212	3069	1333	573	3099	1336
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	120	212	93	167	327	68	124	541	67	96	956	183
RTOR Reduction (vph)	0	58	0	0	21	0	0	0	43	0	0	116
Lane Group Flow (vph)	120	247	0	167	374	0	124	541	24	96	956	67
Confl. Peds. (#/hr)	19		16	16		19	22		25	25		22
Heavy Vehicles (%)	2%	2%	0%	1%	2%	2%	2%	4%	0%	1%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	32.0	27.0		32.0	27.0		38.0	31.0	31.0	38.0	31.0	31.0
Effective Green, g (s)	30.0	28.0		30.0	28.0		36.0	31.0	31.0	36.0	31.0	31.0
Actuated g/C Ratio	0.35	0.33		0.35	0.33		0.42	0.36	0.36	0.42	0.36	0.36
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	299	982		343	1213		181	1119	486	310	1130	487
v/s Ratio Prot	0.02	0.08		c0.02	0.10		c0.05	0.18		0.02	c0.31	
v/s Ratio Perm	0.12			c0.15			0.24		0.02	0.11		0.05
v/c Ratio	0.40	0.25		0.49	0.31		0.69	0.48	0.05	0.31	0.85	0.14
Uniform Delay, d1	19.7	20.8		20.7	21.3		17.7	20.8	17.5	15.3	24.8	18.1
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.39	1.05	2.38
Incremental Delay, d2	4.0	0.6		4.9	0.7		19.1	1.5	0.2	1.9	5.8	0.4
Delay (s)	23.7	21.5		25.5	21.9		36.7	22.3	17.7	23.2	31.8	43.4
Level of Service	C	C		C	C		D	C	B	C	C	D
Approach Delay (s)		22.1			23.0			24.3			32.9	
Approach LOS		C			C			C			C	

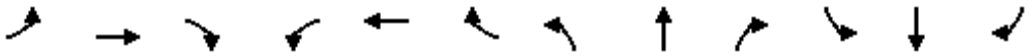
Intersection Summary			
HCM Average Control Delay	27.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	69.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	49	295	30	33	389	24	31	97	39	36	132	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	16	12	12	16	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00	0.98		1.00	0.99
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		0.99	1.00
Satd. Flow (prot)		1962	1466		1993	1480		2015	1506		2002	1511
Flt Permitted		0.90	1.00		0.96	1.00		0.92	1.00		0.93	1.00
Satd. Flow (perm)		1778	1466		1912	1480		1867	1506		1878	1511
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	52	311	32	35	409	25	33	102	41	38	139	68
RTOR Reduction (vph)	0	0	17	0	0	13	0	0	24	0	0	40
Lane Group Flow (vph)	0	363	15	0	444	12	0	135	17	0	177	28
Confl. Peds. (#/hr)	11		20	20		11	1		4	4		1
Confl. Bikes (#/hr)	1		1	1		1			1	1		
Heavy Vehicles (%)	4%	3%	0%	0%	2%	0%	0%	0%	0%	0%	1%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Effective Green, g (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Actuated g/C Ratio		0.46	0.46		0.46	0.46		0.42	0.42		0.42	0.42
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		821	677		882	683		776	626		780	628
v/s Ratio Prot												
v/s Ratio Perm		0.20	0.01		c0.23	0.01		0.07	0.01		c0.09	0.02
v/c Ratio		0.44	0.02		0.50	0.02		0.17	0.03		0.23	0.04
Uniform Delay, d1		11.8	9.5		12.3	9.5		12.0	11.2		12.3	11.3
Progression Factor		1.00	1.00		0.54	0.40		1.04	1.19		1.05	0.97
Incremental Delay, d2		1.7	0.1		2.0	0.0		0.5	0.1		0.6	0.1
Delay (s)		13.6	9.6		8.6	3.9		12.9	13.5		13.5	11.1
Level of Service		B	A		A	A		B	B		B	B
Approach Delay (s)		13.2			8.4			13.0			12.8	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	11.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.8%	ICU Level of Service	E
Analysis Period (min)	15		

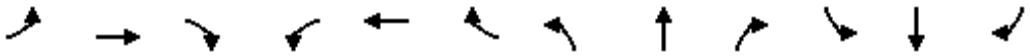
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	75	317	20	51	297	51	10	107	23	109	203	62
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.98		1.00	0.97		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1550	3072		1550	3031		1550	3016		1550	2990	
Flt Permitted	0.95	1.00		0.53	1.00		0.56	1.00		0.66	1.00	
Satd. Flow (perm)	1550	3072		864	3031		912	3016		1077	2990	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	83	352	22	57	330	57	11	119	26	121	226	69
RTOR Reduction (vph)	0	7	0	0	21	0	0	15	0	0	40	0
Lane Group Flow (vph)	83	367	0	57	366	0	11	130	0	121	255	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Prot			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Effective Green, g (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.11	0.49		0.34	0.34		0.42	0.42		0.42	0.42	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	167	1512		292	1026		379	1253		447	1242	
v/s Ratio Prot	c0.05	0.12			c0.12			0.04			0.09	
v/s Ratio Perm				0.07			0.01			c0.11		
v/c Ratio	0.50	0.24		0.20	0.36		0.03	0.10		0.27	0.21	
Uniform Delay, d1	27.3	9.5		15.2	16.2		11.2	11.6		12.5	12.1	
Progression Factor	0.93	0.55		0.83	0.83		0.87	0.86		1.14	1.14	
Incremental Delay, d2	9.8	0.4		1.4	0.9		0.0	0.0		1.5	0.4	
Delay (s)	35.2	5.6		14.0	14.4		9.8	10.0		15.7	14.2	
Level of Service	D	A		B	B		A	A		B	B	
Approach Delay (s)		11.0			14.3			10.0			14.6	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM Average Control Delay	12.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	39.4%	ICU Level of Service	A
Analysis Period (min)	15		

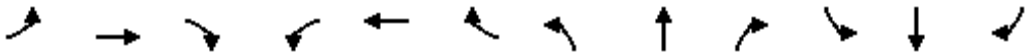
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	63	263	87	239	320	61	104	295	189	55	282	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.96		1.00	0.98			0.95			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1550	2983		1550	3024			3133			3233	
Flt Permitted	0.50	1.00		0.95	1.00			0.79			0.81	
Satd. Flow (perm)	823	2983		1550	3024			2496			2628	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	70	292	97	266	356	68	116	328	210	61	313	56
RTOR Reduction (vph)	0	50	0	0	24	0	0	87	0	0	18	0
Lane Group Flow (vph)	70	339	0	266	400	0	0	567	0	0	412	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Prot			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4						2			6		
Actuated Green, G (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Effective Green, g (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Actuated g/C Ratio	0.31	0.31		0.09	0.45			0.38			0.38	
Clearance Time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	253	918		143	1349			960			1011	
v/s Ratio Prot		c0.11		c0.17	0.13							
v/s Ratio Perm	0.09							c0.23			0.16	
v/c Ratio	0.28	0.37		1.86	0.30			0.59			0.41	
Uniform Delay, d1	17.0	17.6		29.5	11.5			15.9			14.6	
Progression Factor	0.65	0.59		1.28	1.17			1.23			0.70	
Incremental Delay, d2	2.7	1.1		399.5	0.3			2.4			1.2	
Delay (s)	13.7	11.6		437.2	13.7			21.9			11.5	
Level of Service	B	B		F	B			C			B	
Approach Delay (s)		11.9			176.9			21.9			11.5	
Approach LOS		B			F			C			B	

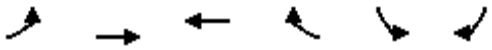
Intersection Summary			
HCM Average Control Delay	65.8	HCM Level of Service	E
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	67.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	26	454	16	73	627	73	54	108	162	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	14	12	10	15	10
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			0.95				
Frt		1.00			0.99			0.93				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		1620			1603			3249				
Flt Permitted		0.94			0.91			0.99				
Satd. Flow (perm)		1532			1466			3249				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	29	504	18	81	697	81	60	120	180	0	0	0
RTOR Reduction (vph)	0	1	0	0	5	0	0	137	0	0	0	0
Lane Group Flow (vph)	0	550	0	0	854	0	0	223	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		41.5			41.5			15.5				
Effective Green, g (s)		41.5			41.5			15.5				
Actuated g/C Ratio		0.64			0.64			0.24				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		3.0			3.0			8.0				
Lane Grp Cap (vph)		978			936			775				
v/s Ratio Prot												
v/s Ratio Perm		0.36			c0.58			0.07				
v/c Ratio		0.56			0.91			0.29				
Uniform Delay, d1		6.6			10.2			20.2				
Progression Factor		1.29			1.00			1.00				
Incremental Delay, d2		2.1			14.6			0.9				
Delay (s)		10.6			24.8			21.1				
Level of Service		B			C			C				
Approach Delay (s)		10.6			24.8			21.1			0.0	
Approach LOS		B			C			C			A	

Intersection Summary			
HCM Average Control Delay	19.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	83.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	142	463	592	38	117	174
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	149	487	623	40	123	183
Pedestrians		5	6		17	
Lane Width (ft)		16.0	16.0		10.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		1	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1319	491			
pX, platoon unblocked	0.84				0.84	0.84
vC, conflicting volume	680				1452	665
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	520				1443	502
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	82				0	61
cM capacity (veh/h)	852				100	471

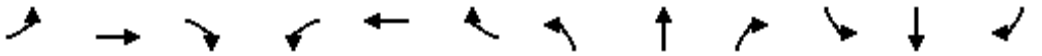
Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	637	663	123	183
Volume Left	149	0	123	0
Volume Right	0	40	0	183
cSH	852	1700	100	471
Volume to Capacity	0.18	0.39	1.24	0.39
Queue Length 95th (ft)	16	0	211	45
Control Delay (s)	4.3	0.0	246.0	17.4
Lane LOS	A		F	C
Approach Delay (s)	4.3	0.0	109.3	
Approach LOS			F	

Intersection Summary			
Average Delay	22.5		
Intersection Capacity Utilization	87.3%	ICU Level of Service	E
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	684	0	1	601	3	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frt	1.00			1.00	0.88	
Flt Protected	1.00			1.00	1.00	
Satd. Flow (prot)	1748			1747	1525	
Flt Permitted	1.00			1.00	1.00	
Satd. Flow (perm)	1748			1747	1525	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	760	0	1	668	3	32
RTOR Reduction (vph)	0	0	0	0	27	0
Lane Group Flow (vph)	760	0	0	669	8	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type			Perm			
Protected Phases	1 2 4			4	3	
Permitted Phases			4			
Actuated Green, G (s)	63.0			31.0	14.0	
Effective Green, g (s)	59.0			31.0	14.0	
Actuated g/C Ratio	0.69			0.36	0.16	
Clearance Time (s)				4.0	4.0	
Lane Grp Cap (vph)	1213			637	251	
v/s Ratio Prot	c0.43				c0.01	
v/s Ratio Perm				0.38		
v/c Ratio	0.63			1.05	0.03	
Uniform Delay, d1	7.0			27.0	29.8	
Progression Factor	0.10			1.00	1.00	
Incremental Delay, d2	0.2			49.6	0.2	
Delay (s)	0.9			76.6	30.1	
Level of Service	A			E	C	
Approach Delay (s)	0.9			76.6	30.1	
Approach LOS	A			E	C	

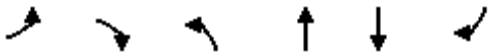
Intersection Summary			
HCM Average Control Delay	36.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	48.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	236	594	30	386	0	0	0	0	17	6	243
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	262	660	33	429	0	0	0	0	19	7	270
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	429			262			1091	1088	461	627	758	429
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	429			262			1091	1088	461	627	758	429
tC, single (s)	4.1			4.2			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			100	100	100	95	98	53
cM capacity (veh/h)	1141			1285			88	212	553	365	330	574

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	175	747	462	26	270
Volume Left	0	0	33	19	0
Volume Right	0	660	0	0	270
cSH	1700	1700	1285	355	574
Volume to Capacity	0.10	0.44	0.03	0.07	0.47
Queue Length 95th (ft)	0	0	2	6	62
Control Delay (s)	0.0	0.0	0.8	15.9	16.7
Lane LOS			A	C	C
Approach Delay (s)	0.0		0.8	16.6	
Approach LOS				C	

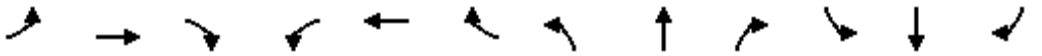
Intersection Summary				
Average Delay	3.2			
Intersection Capacity Utilization	57.6%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	253	0	417	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	281	0	463	0	0	0

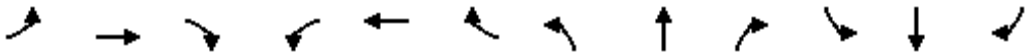
Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	141	141	463
Volume Left (vph)	141	141	463
Volume Right (vph)	0	0	0
Hadj (s)	0.55	0.55	0.25
Departure Headway (s)	6.3	6.3	5.0
Degree Utilization, x	0.25	0.25	0.64
Capacity (veh/h)	543	544	702
Control Delay (s)	10.1	10.1	16.3
Approach Delay (s)	10.1		16.3
Approach LOS	B		C

Intersection Summary			
Delay	14.0		
HCM Level of Service	B		
Intersection Capacity Utilization	38.7%	ICU Level of Service	A
Analysis Period (min)	15		



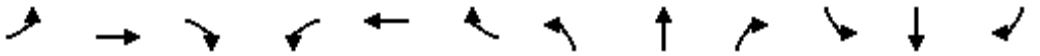
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	522	337	303	746	0	0	0	0	281	269	372
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	13	12	12	12	12	10	10	11
Total Lost time (s)		6.0	6.0		6.0					6.0	6.0	6.0
Lane Util. Factor		0.95	1.00		0.95					0.86	0.81	0.86
Frpb, ped/bikes		1.00	0.98		1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	0.95	0.85
Flt Protected		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (prot)		3179	1232		3425					1359	3806	1133
Flt Permitted		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (perm)		3179	1232		3425					1359	3806	1133
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	549	355	319	785	0	0	0	0	296	283	392
RTOR Reduction (vph)	0	0	216	0	0	0	0	0	0	0	53	113
Lane Group Flow (vph)	0	549	139	0	1104	0	0	0	0	163	559	83
Confl. Peds. (#/hr)	4		6	6		4						
Heavy Vehicles (%)	0%	4%	6%	1%	2%	0%	0%	0%	0%	1%	1%	1%
Parking (#/hr)			0									0
Turn Type			Perm	Split						Split		custom
Protected Phases		2		10 12 14	10 12 14					4	4	
Permitted Phases			2									4 2
Actuated Green, G (s)		39.0	39.0		67.6					23.0	23.0	68.0
Effective Green, g (s)		39.0	39.0		67.6					23.0	23.0	68.0
Actuated g/C Ratio		0.24	0.24		0.42					0.14	0.14	0.42
Clearance Time (s)		6.0	6.0							6.0	6.0	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		775	300		1447					195	547	482
v/s Ratio Prot		c0.17			c0.32					0.12	c0.15	
v/s Ratio Perm			0.11									0.07
v/c Ratio		0.71	0.46		0.76					0.84	1.02	0.17
Uniform Delay, d1		55.3	51.6		39.4					66.7	68.5	28.5
Progression Factor		1.00	1.00		0.07					1.00	1.00	1.00
Incremental Delay, d2		5.4	5.1		0.2					25.5	44.1	0.2
Delay (s)		60.7	56.7		3.1					92.1	112.6	28.7
Level of Service		E	E		A					F	F	C
Approach Delay (s)		59.1			3.1			0.0			92.2	
Approach LOS		E			A			A			F	

Intersection Summary			
HCM Average Control Delay	49.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	32.4
Intersection Capacity Utilization	79.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



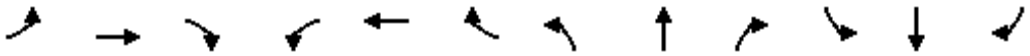
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	290	514	0	0	735	142	313	204	197	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	13	12	12	11	12	13	13	14	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0				
Lane Util. Factor	1.00	0.95			0.95	1.00	0.91	0.91				
Frt	1.00	1.00			1.00	0.85	1.00	0.94				
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (prot)	1605	3431			3210	1485	1561	3058				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (perm)	1605	3431			3210	1485	1561	3058				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	322	571	0	0	817	158	348	227	219	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	67	0	72	0	0	0	0
Lane Group Flow (vph)	322	571	0	0	817	91	271	451	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Split					Perm	Split					
Protected Phases	2 4 8	2 4 8			10		12	12				
Permitted Phases						10						
Actuated Green, G (s)	84.4	84.4			36.6	36.6	12.0	12.0				
Effective Green, g (s)	84.4	84.4			36.6	36.6	12.0	12.0				
Actuated g/C Ratio	0.53	0.53			0.23	0.23	0.08	0.08				
Clearance Time (s)					6.0	6.0	6.0	6.0				
Vehicle Extension (s)					3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	847	1810			734	340	117	229				
v/s Ratio Prot	c0.20	0.17			c0.25		c0.17	0.15				
v/s Ratio Perm						0.06						
v/c Ratio	0.38	0.32			1.11	0.27	2.32	1.97				
Uniform Delay, d1	22.3	21.4			61.7	50.7	74.0	74.0				
Progression Factor	0.06	0.06			1.00	1.00	1.00	1.00				
Incremental Delay, d2	0.2	0.1			68.8	0.4	618.2	451.4				
Delay (s)	1.4	1.3			130.5	51.1	692.2	525.4				
Level of Service	A	A			F	D	F	F				
Approach Delay (s)		1.4			117.6			582.3			0.0	
Approach LOS		A			F			F			A	

Intersection Summary			
HCM Average Control Delay	217.2	HCM Level of Service	F
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	29.0
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	138	308	134	186	414	106	104	504	93	106	803	120
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	14	12	10	10	12	9	10	12
Total Lost time (s)	4.0	4.0	5.0	4.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1579	1600	1372	1594	1789		1578	2999		1537	3001	
Flt Permitted	0.15	1.00	1.00	0.36	1.00		0.14	1.00		0.31	1.00	
Satd. Flow (perm)	255	1600	1372	610	1789		229	2999		501	3001	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	145	324	141	196	436	112	109	531	98	112	845	126
RTOR Reduction (vph)	0	0	98	0	10	0	0	17	0	0	13	0
Lane Group Flow (vph)	145	324	43	196	538	0	109	612	0	112	958	0
Confl. Peds. (#/hr)	28		8	8		28	59		11	11		59
Confl. Bikes (#/hr)	3					3	1		2	2		1
Heavy Vehicles (%)	1%	5%	2%	0%	4%	0%	1%	4%	0%	0%	3%	3%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	34.1	27.1	27.1	34.1	27.1		39.6	34.1		39.6	34.1	
Effective Green, g (s)	32.1	28.1	27.1	32.1	27.1		37.6	34.1		37.6	34.1	
Actuated g/C Ratio	0.36	0.32	0.31	0.36	0.31		0.42	0.38		0.42	0.38	
Clearance Time (s)	3.0	5.0	5.0	3.0	5.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	182	507	419	287	547		166	1153		265	1154	
v/s Ratio Prot	c0.05	0.20		0.05	c0.30		c0.03	0.20		0.02	c0.32	
v/s Ratio Perm	0.23		0.03	0.20			0.25			0.16		
v/c Ratio	0.80	0.64	0.10	0.68	0.98		0.66	0.53		0.42	0.83	
Uniform Delay, d1	22.9	26.0	22.1	23.2	30.6		18.1	21.1		16.3	24.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	21.0	6.1	0.5	6.6	34.5		9.0	1.8		1.1	7.0	
Delay (s)	43.9	32.0	22.6	29.7	65.0		27.1	22.9		17.4	31.7	
Level of Service	D	C	C	C	E		C	C		B	C	
Approach Delay (s)		32.7			55.7			23.5			30.2	
Approach LOS		C			E			C			C	

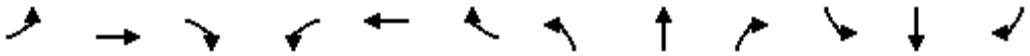
Intersection Summary			
HCM Average Control Delay	35.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	88.7	Sum of lost time (s)	17.0
Intersection Capacity Utilization	86.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	38	394	59	112	635	61	36	57	44	30	88	67
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	10	10	10	12	15	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.97		0.99			0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.96			0.95	
Flt Protected		1.00	1.00		0.99	1.00		0.99			0.99	
Satd. Flow (prot)		1971	1467		1624	1381		1853			1874	
Flt Permitted		0.65	1.00		0.79	1.00		0.91			0.95	
Satd. Flow (perm)		1291	1467		1289	1381		1702			1794	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	40	415	62	118	668	64	38	60	46	32	93	71
RTOR Reduction (vph)	0	0	30	0	0	18	0	26	0	0	32	0
Lane Group Flow (vph)	0	455	32	0	786	46	0	118	0	0	164	0
Confl. Peds. (#/hr)	12		20	20		12	8		2	2		8
Confl. Bikes (#/hr)	1		2	2		1			1	1		
Heavy Vehicles (%)	3%	3%	0%	0%	3%	0%	0%	0%	0%	0%	1%	3%
Turn Type	Perm		Perm	Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Effective Green, g (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Actuated g/C Ratio		0.49	0.49		0.49	0.49		0.42			0.42	
Clearance Time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		636	722		635	680		707			745	
v/s Ratio Prot												
v/s Ratio Perm		0.35	0.02		c0.61	0.03		0.07			c0.09	
v/c Ratio		0.72	0.04		1.24	0.07		0.17			0.22	
Uniform Delay, d1		12.9	8.6		16.5	8.7		11.9			12.2	
Progression Factor		1.00	1.00		1.89	2.78		1.00			1.96	
Incremental Delay, d2		6.8	0.1		108.3	0.0		0.5			0.7	
Delay (s)		19.7	8.7		139.5	24.1		12.4			24.6	
Level of Service		B	A		F	C		B			C	
Approach Delay (s)		18.4			130.8			12.4			24.6	
Approach LOS		B			F			B			C	

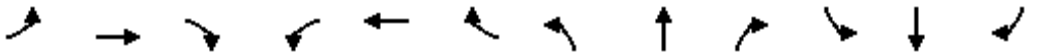
Intersection Summary			
HCM Average Control Delay	74.6	HCM Level of Service	E
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	89.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	58	313	40	110	692	20	34	108	43	16	175	66
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.94		1.00	0.97		1.00	0.97		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.97	
Flt Protected		0.99	1.00		0.99	1.00		0.99	1.00		1.00	
Satd. Flow (prot)		1756	1443		1724	1487		1713	1489		1713	
Flt Permitted		0.18	1.00		0.66	1.00		0.89	1.00		0.98	
Satd. Flow (perm)		325	1443		1143	1487		1551	1489		1687	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	61	329	42	116	728	21	36	114	45	17	184	69
RTOR Reduction (vph)	0	0	24	0	0	6	0	0	23	0	19	0
Lane Group Flow (vph)	0	390	18	0	844	15	0	150	22	0	251	0
Confl. Peds. (#/hr)	19		25	25		19	3		6	6		3
Confl. Bikes (#/hr)	1		2	2		1			1	1		
Heavy Vehicles (%)	0%	2%	0%	0%	4%	0%	0%	5%	0%	0%	0%	2%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Effective Green, g (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Actuated g/C Ratio		0.35	0.35		0.35	0.35		0.49	0.49		0.49	
Clearance Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Grp Cap (vph)		115	511		404	526		764	733		831	
v/s Ratio Prot												
v/s Ratio Perm		c1.20	0.01		0.74	0.01		0.10	0.01		c0.15	
v/c Ratio		3.39	0.04		2.09	0.03		0.20	0.03		0.30	
Uniform Delay, d1		21.0	13.7		21.0	13.7		9.3	8.5		9.8	
Progression Factor		1.65	2.43		0.98	0.85		0.16	0.22		1.09	
Incremental Delay, d2		1092.9	0.1		494.2	0.0		0.1	0.0		0.9	
Delay (s)		1127.5	33.4		514.8	11.7		1.5	1.9		11.6	
Level of Service		F	C		F	B		A	A		B	
Approach Delay (s)		1021.1			502.6			1.6			11.6	
Approach LOS		F			F			A			B	

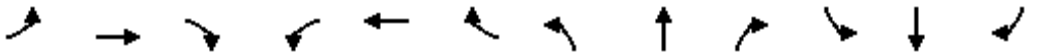
Intersection Summary			
HCM Average Control Delay	499.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.59		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	99.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	298	35	76	8	14	11	38	246	8	30	547	789
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.95		0.98			1.00			1.00	0.94
Flpb, ped/bikes		0.98	1.00		0.99			1.00			1.00	1.00
Frt		1.00	0.85		0.96			1.00			1.00	0.85
Flt Protected		0.96	1.00		0.99			0.99			1.00	1.00
Satd. Flow (prot)		1855	1440		1767			1995			1975	1382
Flt Permitted		0.75	1.00		0.92			0.82			0.97	1.00
Satd. Flow (perm)		1455	1440		1640			1653			1930	1382
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	331	39	84	9	16	12	42	273	9	33	608	877
RTOR Reduction (vph)	0	0	49	0	9	0	0	2	0	0	0	303
Lane Group Flow (vph)	0	370	35	0	28	0	0	322	0	0	641	574
Confl. Peds. (#/hr)	37		53	53		37	39		54	54		39
Confl. Bikes (#/hr)							2					2
Heavy Vehicles (%)	4%	0%	1%	0%	0%	0%	0%	1%	0%	0%	3%	4%
Turn Type	pm+pt		Perm	Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		27.0	27.0		17.0			32.0			32.0	32.0
Effective Green, g (s)		27.0	27.0		17.0			32.0			32.0	32.0
Actuated g/C Ratio		0.42	0.42		0.26			0.49			0.49	0.49
Clearance Time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		654	598		429			814			950	680
v/s Ratio Prot		c0.07										
v/s Ratio Perm		0.17	0.02		0.02			0.20			0.33	c0.42
v/c Ratio		0.57	0.06		0.07			0.40			0.67	0.84
Uniform Delay, d1		14.5	11.4		18.0			10.4			12.5	14.3
Progression Factor		1.18	1.96		1.00			0.41			0.76	1.13
Incremental Delay, d2		0.3	0.0		0.3			0.6			3.5	11.3
Delay (s)		17.4	22.3		18.3			4.9			13.0	27.5
Level of Service		B	C		B			A			B	C
Approach Delay (s)		18.3			18.3			4.9			21.4	
Approach LOS		B			B			A			C	

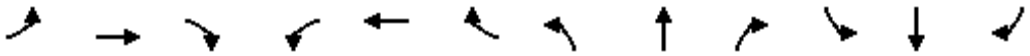
Intersection Summary			
HCM Average Control Delay	18.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	94.7%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



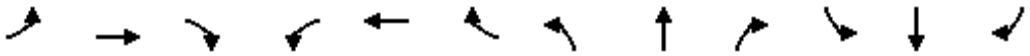
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	923	289	438	1163	0	0	0	0	513	284	334
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	11	8	8	8	11	12	14
Total Lost time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Lane Util. Factor		0.91		1.00	0.95					0.91	0.86	0.91
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.96		1.00	1.00					1.00	0.98	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.98	1.00
Satd. Flow (prot)		4577		1621	3320					1489	2913	1442
Flt Permitted		1.00		0.09	1.00					0.95	0.98	1.00
Satd. Flow (perm)		4577		155	3320					1489	2913	1442
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	972	304	461	1224	0	0	0	0	540	299	352
RTOR Reduction (vph)	0	47	0	0	0	0	0	0	0	0	9	62
Lane Group Flow (vph)	0	1229	0	461	1224	0	0	0	0	308	603	209
Confl. Peds. (#/hr)	15		11	11		15						
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	0%	3%	3%	2%	3%	0%	0%	0%	0%	1%	3%	3%
Turn Type				pm+pt						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Actuated Green, G (s)		39.5		74.9	74.9					28.1	28.1	28.1
Effective Green, g (s)		39.5		74.9	74.9					28.1	28.1	28.1
Actuated g/C Ratio		0.34		0.65	0.65					0.24	0.24	0.24
Clearance Time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Vehicle Extension (s)		7.0		3.5	7.0					3.5	3.5	3.5
Lane Grp Cap (vph)		1572		495	2162					364	712	352
v/s Ratio Prot		0.27		c0.25	0.37							
v/s Ratio Perm				c0.36						0.21	0.21	0.14
v/c Ratio		0.78		0.93	0.57					0.85	0.85	0.59
Uniform Delay, d1		33.9		32.7	11.1					41.4	41.4	38.4
Progression Factor		1.00		0.78	2.03					1.00	1.00	1.00
Incremental Delay, d2		3.9		14.8	0.5					16.7	9.4	2.8
Delay (s)		37.8		40.3	23.0					58.1	50.8	41.2
Level of Service		D		D	C					E	D	D
Approach Delay (s)		37.8			27.7			0.0			50.5	
Approach LOS		D			C			A			D	

Intersection Summary			
HCM Average Control Delay	37.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	110.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	341	1095	0	0	1194	269	406	333	321	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	11	12	12	12	12	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0		6.0				
Lane Util. Factor	0.97	0.95			0.95	1.00		0.91				
Frpb, ped/bikes	1.00	1.00			1.00	0.98		1.00				
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00				
Frt	1.00	1.00			1.00	0.85		0.95				
Flt Protected	0.95	1.00			1.00	1.00		0.98				
Satd. Flow (prot)	3144	3353			3241	1489		4513				
Flt Permitted	0.09	1.00			1.00	1.00		0.98				
Satd. Flow (perm)	289	3353			3241	1489		4513				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	359	1153	0	0	1257	283	427	351	338	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	82	0	67	0	0	0	0
Lane Group Flow (vph)	359	1153	0	0	1257	201	0	1049	0	0	0	0
Confl. Peds. (#/hr)	7		5	5		7						
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	2%	2%	0%	0%	2%	1%	2%	1%	3%	0%	0%	0%
Turn Type	pm+pt					Perm	Perm					
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8					
Actuated Green, G (s)	73.2	73.2			53.2	53.2		29.8				
Effective Green, g (s)	73.2	73.2			53.2	53.2		29.8				
Actuated g/C Ratio	0.64	0.64			0.46	0.46		0.26				
Clearance Time (s)	6.0	6.0			6.0	6.0		6.0				
Vehicle Extension (s)	3.5	7.0			7.0	7.0		5.0				
Lane Grp Cap (vph)	532	2134			1499	689		1169				
v/s Ratio Prot	c0.08	0.34			c0.39							
v/s Ratio Perm	0.35					0.13		0.23				
v/c Ratio	0.67	0.54			0.84	0.29		0.90				
Uniform Delay, d1	23.8	11.6			27.1	19.2		41.1				
Progression Factor	1.51	0.14			0.87	1.15		1.00				
Incremental Delay, d2	2.0	0.6			3.2	0.6		9.8				
Delay (s)	38.0	2.1			26.9	22.6		50.9				
Level of Service	D	A			C	C		D				
Approach Delay (s)		10.7			26.1			50.9			0.0	
Approach LOS		B			C			D			A	

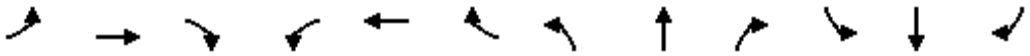
Intersection Summary			
HCM Average Control Delay	27.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	110.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	132	705	399	102	954	75	227	179	66	80	162	121
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	11	12	12	10	10	13	10	10	10
Total Lost time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		0.99	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.96		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1565	3273	1313	1601	3286		1578	3002		1540	2941	
Flt Permitted	0.11	1.00	1.00	0.37	1.00		0.39	1.00		0.59	1.00	
Satd. Flow (perm)	174	3273	1313	623	3286		652	3002		961	2941	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	139	742	420	107	1004	79	239	188	69	84	171	127
RTOR Reduction (vph)	0	0	169	0	5	0	0	38	0	0	107	0
Lane Group Flow (vph)	139	742	251	107	1078	0	239	219	0	84	191	0
Confl. Peds. (#/hr)	11		23	23		11	8		12	12		8
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	2%	1%	3%	3%	3%	0%	1%	1%	2%	3%	0%	1%
Parking (#/hr)			0									
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	64.9	52.4	68.8	43.4	34.4		38.1	26.5		26.3	18.2	
Effective Green, g (s)	64.9	52.4	68.8	43.4	34.4		38.1	26.5		26.3	18.2	
Actuated g/C Ratio	0.56	0.46	0.60	0.38	0.30		0.33	0.23		0.23	0.16	
Clearance Time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0		3.0	7.0		3.0	7.0	
Lane Grp Cap (vph)	425	1491	786	312	983		348	692		261	465	
v/s Ratio Prot	c0.08	c0.23	0.05	0.03	c0.33		c0.10	0.07		0.02	0.06	
v/s Ratio Perm	0.11		0.15	0.10			c0.13			0.05		
v/c Ratio	0.33	0.50	0.32	0.34	1.10		0.69	0.32		0.32	0.41	
Uniform Delay, d1	17.4	22.0	11.5	23.9	40.3		30.6	36.7		36.2	43.6	
Progression Factor	0.77	0.74	1.65	1.00	1.00		1.02	1.04		1.00	1.00	
Incremental Delay, d2	1.6	0.9	0.2	0.7	58.9		5.3	0.9		0.7	2.1	
Delay (s)	15.1	17.3	19.1	24.5	99.2		36.5	39.2		36.9	45.7	
Level of Service	B	B	B	C	F		D	D		D	D	
Approach Delay (s)		17.7			92.5			37.9			43.7	
Approach LOS		B			F			D			D	

Intersection Summary			
HCM Average Control Delay	50.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	80.8%	ICU Level of Service	D
Analysis Period (min)	15		

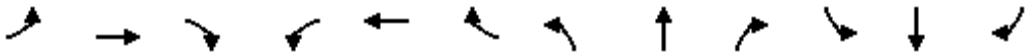
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	46	250	367	91	430	107	362	340	84	206	408	56
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	12	11	12	12	11	13	12	10	11	12
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.91		1.00	0.97		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1708	2926		1653	3269		1620	3402		1580	3183	
Flt Permitted	0.36	1.00		0.22	1.00		0.32	1.00		0.49	1.00	
Satd. Flow (perm)	639	2926		379	3269		544	3402		822	3183	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	48	263	386	96	453	113	381	358	88	217	429	59
RTOR Reduction (vph)	0	215	0	0	18	0	0	19	0	0	9	0
Lane Group Flow (vph)	48	434	0	96	548	0	381	427	0	217	479	0
Confl. Peds. (#/hr)	12		3	3		12	5					5
Heavy Vehicles (%)	0%	2%	2%	0%	1%	1%	2%	1%	0%	1%	2%	0%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	39.4	32.7		46.2	36.1		56.2	44.2		40.1	32.1	
Effective Green, g (s)	39.4	32.7		46.2	36.1		56.2	44.2		40.1	32.1	
Actuated g/C Ratio	0.34	0.28		0.40	0.31		0.49	0.38		0.35	0.28	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.5	7.0		3.5	7.0		3.5	7.0		3.5	7.0	
Lane Grp Cap (vph)	281	832		264	1026		454	1308		339	888	
v/s Ratio Prot	0.01	0.15		c0.03	c0.17		c0.15	0.13		0.04	0.15	
v/s Ratio Perm	0.05			0.11			c0.26			0.18		
v/c Ratio	0.17	0.52		0.36	0.53		0.84	0.33		0.64	0.54	
Uniform Delay, d1	25.7	34.6		23.2	32.5		20.8	24.9		28.8	35.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.96	
Incremental Delay, d2	0.3	2.3		1.0	2.0		13.1	0.7		4.0	2.2	
Delay (s)	26.1	36.9		24.3	34.5		33.9	25.6		32.7	36.1	
Level of Service	C	D		C	C		C	C		C	D	
Approach Delay (s)		36.2			33.0			29.4			35.1	
Approach LOS		D			C			C			D	

Intersection Summary			
HCM Average Control Delay	33.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.0%	ICU Level of Service	D
Analysis Period (min)	15		

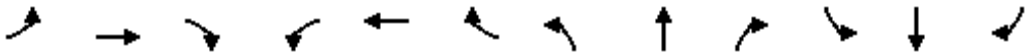
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	101	670	135	10	741	89	102	281	9	194	578	174
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	9	11	12	9	9	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.98		1.00	1.00		1.00	0.97	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3040			3060		1452	3227		1522	2872	
Flt Permitted		0.53			0.94		0.21	1.00		0.55	1.00	
Satd. Flow (perm)		1620			2874		317	3227		883	2872	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	112	744	150	11	823	99	113	312	10	216	642	193
RTOR Reduction (vph)	0	22	0	0	14	0	0	4	0	0	44	0
Lane Group Flow (vph)	0	984	0	0	919	0	113	318	0	216	791	0
Confl. Peds. (#/hr)	4		2	2		4	8		4	4		8
Confl. Bikes (#/hr)							2					2
Heavy Vehicles (%)	1%	2%	2%	0%	2%	6%	6%	2%	0%	1%	3%	3%
Turn Type	pm+pt			Perm			pm+pt			pm+pt		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			17.0		28.0	24.0		28.0	24.0	
Effective Green, g (s)		25.0			17.0		28.0	24.0		28.0	24.0	
Actuated g/C Ratio		0.38			0.26		0.43	0.37		0.43	0.37	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		710			752		206	1192		420	1060	
v/s Ratio Prot		c0.09					c0.03	0.10		0.03	c0.28	
v/s Ratio Perm		c0.45			0.32		0.20			0.19		
v/c Ratio		1.39			1.22		0.55	0.27		0.51	0.75	
Uniform Delay, d1		20.0			24.0		12.3	14.3		12.5	17.9	
Progression Factor		1.00			1.42		1.03	0.57		1.00	1.00	
Incremental Delay, d2		182.2			101.1		9.6	0.5		4.4	4.8	
Delay (s)		202.2			135.3		22.2	8.7		17.0	22.7	
Level of Service		F			F		C	A		B	C	
Approach Delay (s)		202.2			135.3			12.2			21.5	
Approach LOS		F			F			B			C	

Intersection Summary			
HCM Average Control Delay	104.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.4%	ICU Level of Service	F
Analysis Period (min)	15		

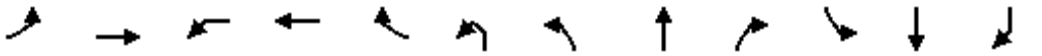
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	67	261	136	126	410	27	70	450	84	33	662	66
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.99		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1708	1910		1601	2019		1676	3214		1435	3274	
Flt Permitted	0.32	1.00		0.37	1.00		0.31	1.00		0.42	1.00	
Satd. Flow (perm)	576	1910		621	2019		552	3214		640	3274	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	69	269	140	130	423	28	72	464	87	34	682	68
RTOR Reduction (vph)	0	29	0	0	4	0	0	24	0	0	12	0
Lane Group Flow (vph)	69	380	0	130	447	0	72	527	0	34	738	0
Confl. Peds. (#/hr)	3		20	20		3	2		3	3		2
Confl. Bikes (#/hr)			1	1			2		2	2		2
Heavy Vehicles (%)	0%	0%	1%	6%	0%	0%	2%	3%	6%	19%	3%	2%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.48	0.48		0.48	0.48	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	213	705		229	745		263	1533		305	1561	
v/s Ratio Prot		0.20			c0.22			0.16			c0.23	
v/s Ratio Perm	0.12			0.21			0.13			0.05		
v/c Ratio	0.32	0.54		0.57	0.60		0.27	0.34		0.11	0.47	
Uniform Delay, d1	14.7	16.1		16.4	16.6		10.2	10.6		9.4	11.5	
Progression Factor	1.00	1.00		1.34	1.36		1.00	1.00		1.14	0.92	
Incremental Delay, d2	4.0	2.9		0.9	0.3		2.6	0.6		0.3	0.5	
Delay (s)	18.7	19.1		22.9	22.9		12.8	11.3		11.1	11.0	
Level of Service	B	B		C	C		B	B		B	B	
Approach Delay (s)		19.0			22.9			11.4			11.0	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM Average Control Delay	15.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	73.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	848	495	922	41	3	10	9	46	15	0	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	10	10	10	12	12	16	12	12	16	12
Total Lost time (s)		5.0		5.0				4.0			4.0	
Lane Util. Factor		0.95		0.95				1.00			1.00	
Frpb, ped/bikes		1.00		1.00				0.99			0.99	
Flpb, ped/bikes		1.00		1.00				1.00			1.00	
Frt		1.00		1.00				0.91			0.95	
Flt Protected		1.00		0.98				0.99			0.97	
Satd. Flow (prot)		3160		3077				1812			1858	
Flt Permitted		0.81		0.58				0.96			0.85	
Satd. Flow (perm)		2546		1799				1749			1633	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	2	893	521	971	43	3	11	9	48	16	0	3
RTOR Reduction (vph)	0	0	0	3	0	0	0	38	0	0	4	0
Lane Group Flow (vph)	0	895	0	1532	0	0	0	33	0	0	20	0
Confl. Peds. (#/hr)	7		4		7		7		2	2		7
Confl. Bikes (#/hr)							2		2	2		2
Heavy Vehicles (%)	0%	1%	2%	1%	6%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Perm		custom				Perm			Perm		
Protected Phases		8	7	4				2			6	
Permitted Phases	8		4 7				2			6		
Actuated Green, G (s)		18.0		27.0				14.0			14.0	
Effective Green, g (s)		18.0		27.0				14.0			14.0	
Actuated g/C Ratio		0.28		0.42				0.22			0.22	
Clearance Time (s)		5.0		5.0				4.0			4.0	
Lane Grp Cap (vph)		705		865				377			352	
v/s Ratio Prot				c0.16								
v/s Ratio Perm		0.35		c0.57				c0.02			0.01	
v/c Ratio		1.27		2.48dl				0.09			0.06	
Uniform Delay, d1		23.5		19.0				20.4			20.3	
Progression Factor		1.42		0.61				1.00			1.00	
Incremental Delay, d2		122.3		350.1				0.5			0.3	
Delay (s)		155.7		361.7				20.9			20.6	
Level of Service		F		F				C			C	
Approach Delay (s)		155.7		361.7				20.9			20.6	
Approach LOS		F		F				C			C	

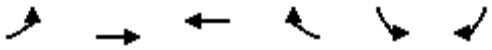
Intersection Summary			
HCM Average Control Delay	268.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.22		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	118.0%	ICU Level of Service	H
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group



Movement	SBR2	NEL	NER
Lane Configurations			
Volume (vph)	5	3	311
Ideal Flow (vphpl)	1800	1800	1800
Lane Width	12	12	12
Total Lost time (s)		5.0	
Lane Util. Factor		1.00	
Frpb, ped/bikes		1.00	
Flpb, ped/bikes		1.00	
Frt		0.87	
Flt Protected		1.00	
Satd. Flow (prot)		1559	
Flt Permitted		1.00	
Satd. Flow (perm)		1559	
Peak-hour factor, PHF	0.95	0.95	0.95
Adj. Flow (vph)	5	3	327
RTOR Reduction (vph)	0	0	0
Lane Group Flow (vph)	0	330	0
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Heavy Vehicles (%)	0%	0%	0%
Turn Type			
Protected Phases		3	
Permitted Phases			
Actuated Green, G (s)		10.0	
Effective Green, g (s)		10.0	
Actuated g/C Ratio		0.15	
Clearance Time (s)		5.0	
Lane Grp Cap (vph)		240	
v/s Ratio Prot		c0.21	
v/s Ratio Perm			
v/c Ratio		1.38	
Uniform Delay, d1		27.5	
Progression Factor		0.83	
Incremental Delay, d2		190.6	
Delay (s)		213.5	
Level of Service		F	
Approach Delay (s)		213.5	
Approach LOS		F	

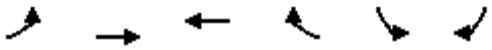
Intersection Summary



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	256	942	1242	176	120	222
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frt		1.00	0.98		1.00	0.85
Flt Protected		0.99	1.00		0.95	1.00
Satd. Flow (prot)		3285	3258		1660	1485
Flt Permitted		0.51	1.00		0.95	1.00
Satd. Flow (perm)		1706	3258		1660	1485
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	284	1047	1380	196	133	247
RTOR Reduction (vph)	0	0	17	0	0	40
Lane Group Flow (vph)	0	1331	1559	0	133	207
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		40.0	40.0		17.0	17.0
Effective Green, g (s)		40.0	40.0		17.0	17.0
Actuated g/C Ratio		0.62	0.62		0.26	0.26
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1050	2005		434	388
v/s Ratio Prot			0.48		0.08	
v/s Ratio Perm		c0.78				c0.14
v/c Ratio		2.63dl	0.78		0.31	0.53
Uniform Delay, d1		12.5	9.2		19.3	20.6
Progression Factor		1.27	0.61		1.03	1.01
Incremental Delay, d2		121.2	1.4		1.0	3.0
Delay (s)		137.0	7.0		21.0	23.7
Level of Service		F	A		C	C
Approach Delay (s)		137.0	7.0		22.8	
Approach LOS		F	A		C	

Intersection Summary			
HCM Average Control Delay	61.5	HCM Level of Service	E
HCM Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	94.5%	ICU Level of Service	F
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group



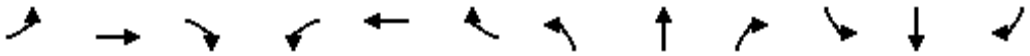
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	79	986	1334	194	270	86
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	12	10	11	12	10	10
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frpb, ped/bikes		1.00	1.00		1.00	0.99
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.98		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3120	3139		1506	1343
Flt Permitted		0.61	1.00		0.95	1.00
Satd. Flow (perm)		1899	3139		1506	1343
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	83	1038	1404	204	284	91
RTOR Reduction (vph)	0	0	18	0	0	18
Lane Group Flow (vph)	0	1121	1590	0	284	73
Confl. Peds. (#/hr)	2			2		1
Heavy Vehicles (%)	1%	2%	2%	10%	6%	5%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		34.0	34.0		23.0	23.0
Effective Green, g (s)		34.0	34.0		23.0	23.0
Actuated g/C Ratio		0.52	0.52		0.35	0.35
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		993	1642		533	475
v/s Ratio Prot			0.51		c0.19	
v/s Ratio Perm		c0.59				0.05
v/c Ratio		1.13	0.97		0.53	0.15
Uniform Delay, d1		15.5	15.0		16.7	14.3
Progression Factor		1.10	1.48		1.75	2.06
Incremental Delay, d2		59.4	2.6		3.0	0.5
Delay (s)		76.5	24.7		32.3	30.1
Level of Service		E	C		C	C
Approach Delay (s)		76.5	24.7		31.8	
Approach LOS		E	C		C	

Intersection Summary			
HCM Average Control Delay	44.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	102.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



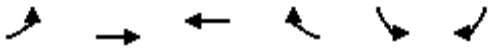
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	862	251	528	1414	195	158
Ideal Flow (vphpl)	2300	1800	1800	2300	1800	1800
Lane Width	15	12	14	16	15	12
Total Lost time (s)	5.0		5.0	5.0	5.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	0.99	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.97		1.00	1.00	0.94	
Flt Protected	1.00		0.95	1.00	0.97	
Satd. Flow (prot)	2405		1788	2506	1733	
Flt Permitted	1.00		0.13	1.00	0.97	
Satd. Flow (perm)	2405		243	2506	1733	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	880	256	539	1443	199	161
RTOR Reduction (vph)	16	0	0	0	45	0
Lane Group Flow (vph)	1120	0	539	1443	315	0
Confl. Peds. (#/hr)						1
Heavy Vehicles (%)	2%	2%	2%	4%	7%	0%
Turn Type			Perm			
Protected Phases	4			8	2	
Permitted Phases			8			
Actuated Green, G (s)	31.0		31.0	31.0	24.0	
Effective Green, g (s)	31.0		31.0	31.0	24.0	
Actuated g/C Ratio	0.48		0.48	0.48	0.37	
Clearance Time (s)	5.0		5.0	5.0	5.0	
Lane Grp Cap (vph)	1147		116	1195	640	
v/s Ratio Prot	0.47			0.58	c0.18	
v/s Ratio Perm			c2.22			
v/c Ratio	0.98		4.65	1.21	0.49	
Uniform Delay, d1	16.6		17.0	17.0	15.8	
Progression Factor	1.46		1.00	1.00	1.00	
Incremental Delay, d2	4.2		1660.5	101.5	2.7	
Delay (s)	28.5		1677.5	118.5	18.5	
Level of Service	C		F	F	B	
Approach Delay (s)	28.5			542.4	18.5	
Approach LOS	C			F	B	

Intersection Summary			
HCM Average Control Delay	320.3	HCM Level of Service	F
HCM Volume to Capacity ratio	2.84		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	115.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	1984	37	108	935	1	59	0	149	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	15	13	11	11	12	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0	4.0	3.0	3.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00			
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1881	3431	1479	1589	3320	1530		1938	1500			
Flt Permitted	0.28	1.00	1.00	0.08	1.00	1.00		0.76	1.00			
Satd. Flow (perm)	546	3431	1479	127	3320	1530		1545	1500			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	2204	41	120	1039	1	66	0	166	0	0	0
RTOR Reduction (vph)	0	0	10	0	0	0	0	0	138	0	0	0
Lane Group Flow (vph)	1	2204	31	120	1039	1	0	66	28	0	0	0
Heavy Vehicles (%)	0%	3%	0%	4%	3%	0%	0%	0%	2%	0%	0%	0%
Turn Type	Perm		Perm	custom		custom	Perm		Perm	Perm		
Protected Phases		4		3	3 8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)	49.7	49.7	49.7	67.9	67.9	67.9		9.1	9.1			
Effective Green, g (s)	49.7	49.7	49.7	67.9	67.9	67.9		9.1	9.1			
Actuated g/C Ratio	0.58	0.58	0.58	0.80	0.80	0.80		0.11	0.11			
Clearance Time (s)	4.0	4.0	4.0	3.0		4.0		4.0	4.0			
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0			
Lane Grp Cap (vph)	319	2006	865	363	2652	1222		165	161			
v/s Ratio Prot		c0.64		0.06	c0.31							
v/s Ratio Perm	0.00		0.02	0.21		0.00		c0.04	0.02			
v/c Ratio	0.00	1.10	0.04	0.33	0.39	0.00		0.40	0.17			
Uniform Delay, d1	7.3	17.6	7.5	16.9	2.5	1.7		35.4	34.5			
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00			
Incremental Delay, d2	0.0	52.8	0.1	0.5	0.1	0.0		1.6	0.5			
Delay (s)	7.4	70.5	7.6	17.4	2.6	1.7		37.0	35.0			
Level of Service	A	E	A	B	A	A		D	D			
Approach Delay (s)		69.3			4.1			35.6			0.0	
Approach LOS		E			A			D			A	

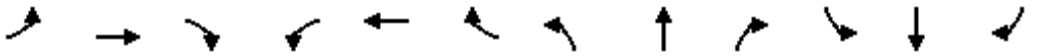
Intersection Summary			
HCM Average Control Delay	46.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	79.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	11	932	813	29	71	14
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10
Total Lost time (s)		5.0	5.0		3.0	
Lane Util. Factor		0.95	0.95		1.00	
Frt		1.00	0.99		0.98	
Flt Protected		1.00	1.00		0.96	
Satd. Flow (prot)		3097	3083		1530	
Flt Permitted		0.94	1.00		0.96	
Satd. Flow (perm)		2913	3083		1530	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	12	1036	903	32	79	16
RTOR Reduction (vph)	0	0	3	0	8	0
Lane Group Flow (vph)	0	1048	932	0	87	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Perm					
Protected Phases		4	8 2 11		5	
Permitted Phases	4					
Actuated Green, G (s)		33.0	64.0		7.0	
Effective Green, g (s)		33.0	64.0		7.0	
Actuated g/C Ratio		0.37	0.71		0.08	
Clearance Time (s)		5.0			3.0	
Lane Grp Cap (vph)		1068	2192		119	
v/s Ratio Prot			c0.30		c0.06	
v/s Ratio Perm		c0.36				
v/c Ratio		0.98	0.43		0.73	
Uniform Delay, d1		28.2	5.4		40.6	
Progression Factor		1.00	0.01		1.00	
Incremental Delay, d2		23.4	0.2		32.1	
Delay (s)		51.6	0.3		72.7	
Level of Service		D	A		E	
Approach Delay (s)		51.6	0.3		72.7	
Approach LOS		D	A		E	

Intersection Summary			
HCM Average Control Delay	29.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	47.9%	ICU Level of Service	A
Analysis Period (min)	15		

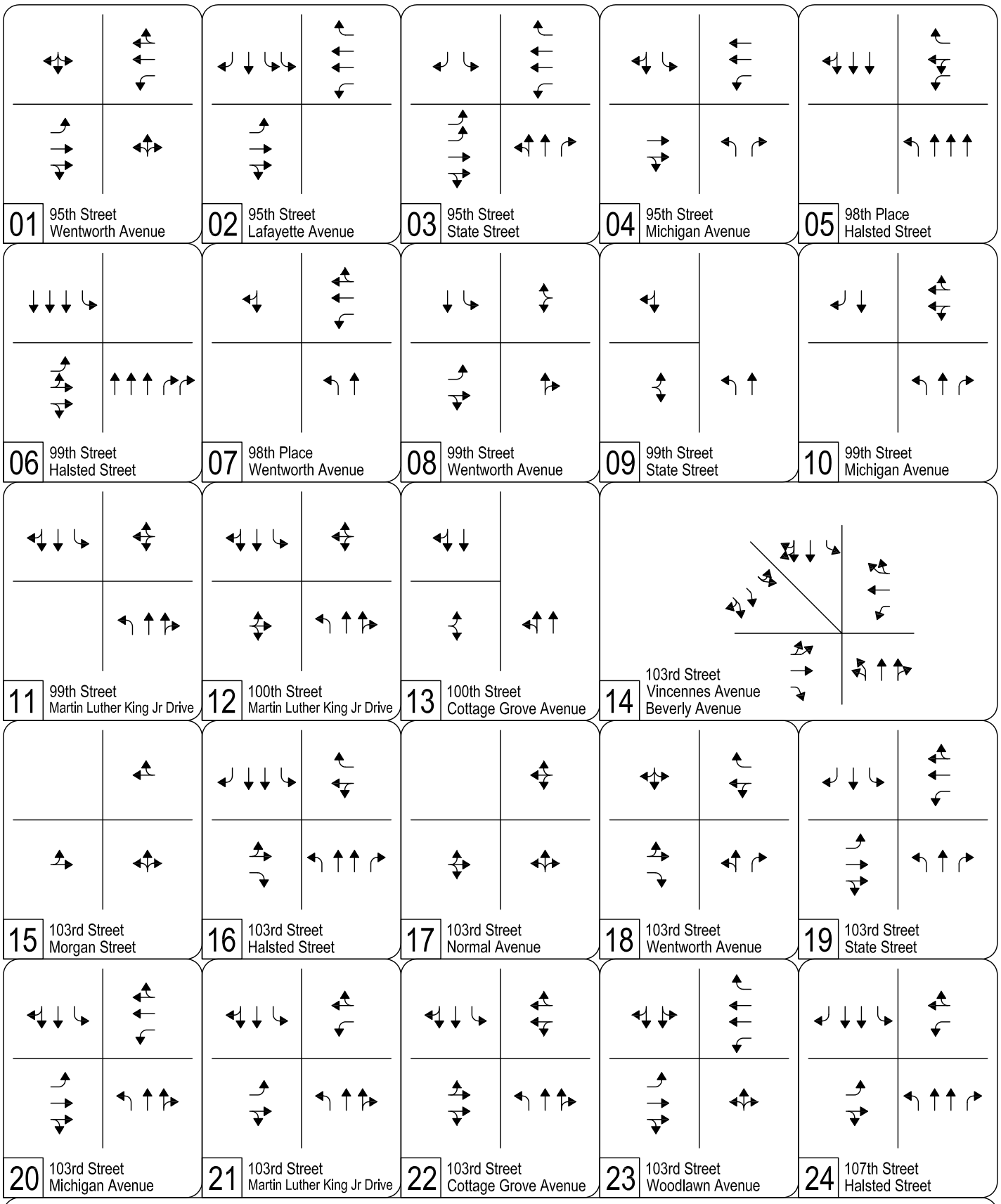
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	107	496	0	1	565	38	3	2	28	192	0	143
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12	12	11	12	11
Total Lost time (s)		4.0			4.0			3.0			3.0	3.0
Lane Util. Factor		1.00			0.95			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			0.94			1.00	0.98
Flpb, ped/bikes		1.00			1.00			1.00			0.99	1.00
Frt		1.00			0.99			0.88			1.00	0.85
Flt Protected		0.99			1.00			1.00			0.95	1.00
Satd. Flow (prot)		1763			3340			1467			1670	1348
Flt Permitted		0.77			0.95			0.93			0.88	1.00
Satd. Flow (perm)		1373			3190			1370			1545	1348
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	119	551	0	1	628	42	3	2	31	213	0	159
RTOR Reduction (vph)	0	0	0	0	6	0	0	28	0	0	0	107
Lane Group Flow (vph)	0	670	0	0	665	0	0	8	0	0	213	52
Confl. Peds. (#/hr)	60		44	44		60	14		10	10		14
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	0%	1%	0%	0%	1%	3%	20%	0%	0%	1%	0%	7%
Turn Type	Perm			Prot			Perm			pm+pt		Perm
Protected Phases		4		3	3 4			1		2	1 2	
Permitted Phases	4				3		1	1		1 2		1 2
Actuated Green, G (s)		31.0			45.0			9.0			25.0	28.0
Effective Green, g (s)		31.0			45.0			9.0			25.0	28.0
Actuated g/C Ratio		0.36			0.53			0.11			0.29	0.33
Clearance Time (s)		4.0						3.0				
Lane Grp Cap (vph)		501			1714			145			478	444
v/s Ratio Prot					c0.06						c0.08	
v/s Ratio Perm		c0.49			0.14			0.01			c0.05	0.04
v/c Ratio		1.34			0.39			0.06			0.45	0.12
Uniform Delay, d1		27.0			11.8			34.2			24.4	19.9
Progression Factor		1.00			1.28			1.00			1.00	1.00
Incremental Delay, d2		164.9			0.1			0.8			3.0	0.5
Delay (s)		191.9			15.3			34.9			27.4	20.4
Level of Service		F			B			C			C	C
Approach Delay (s)		191.9			15.3			34.9			24.4	
Approach LOS		F			B			C			C	

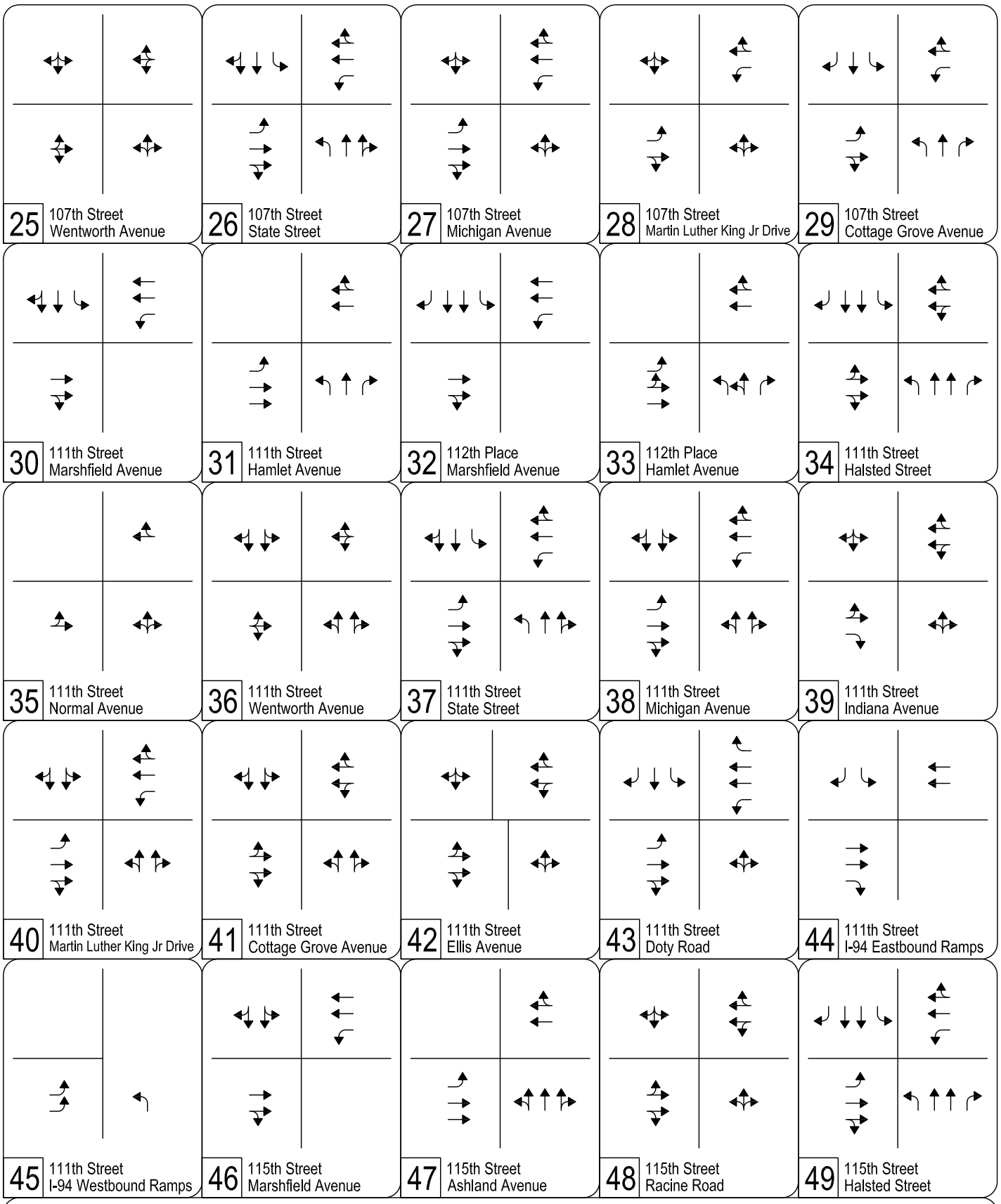
Intersection Summary			
HCM Average Control Delay	85.3	HCM Level of Service	F
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	79.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



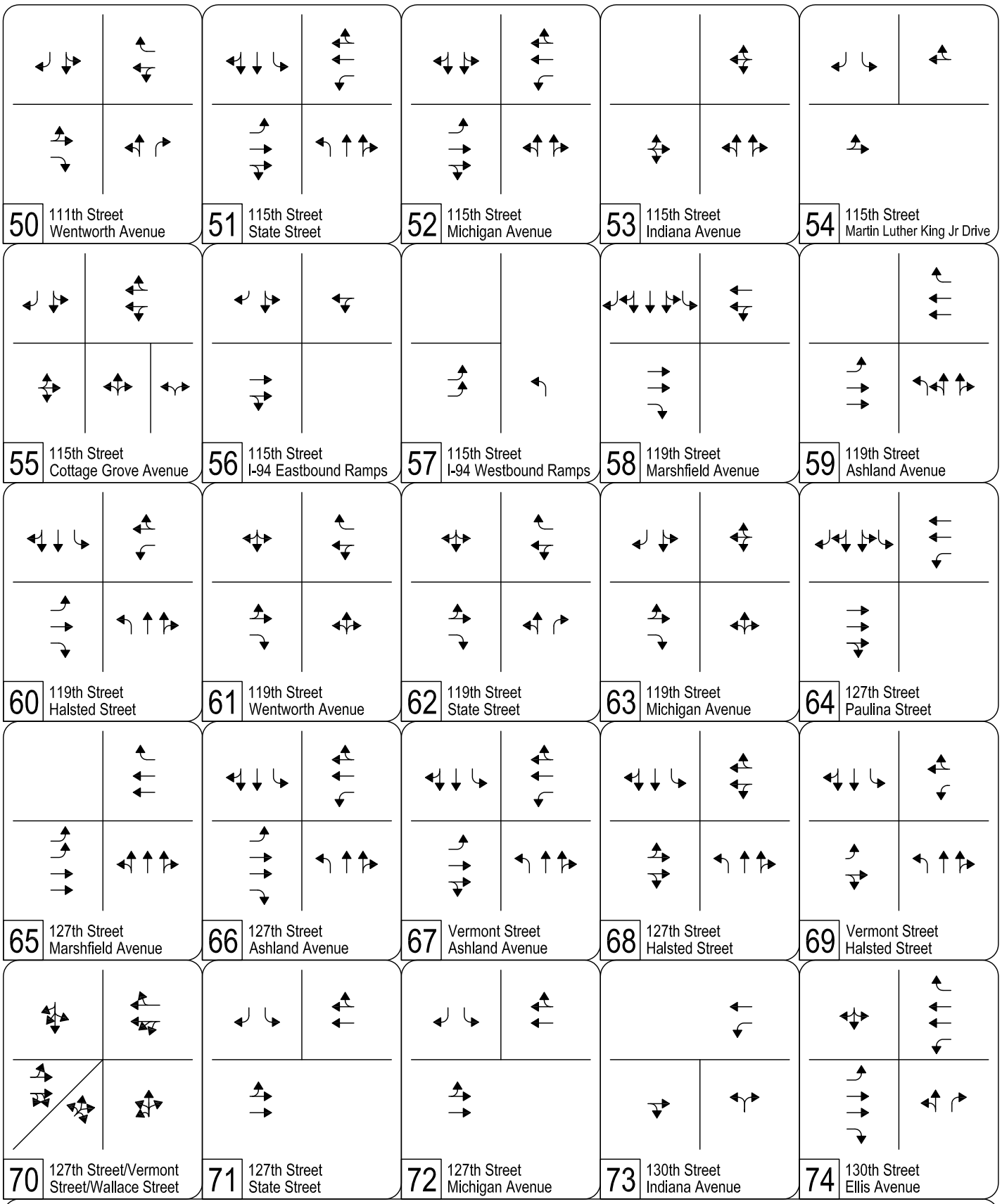
UPRR ROW Option Alternative (2030) Intersection Lane Geometry

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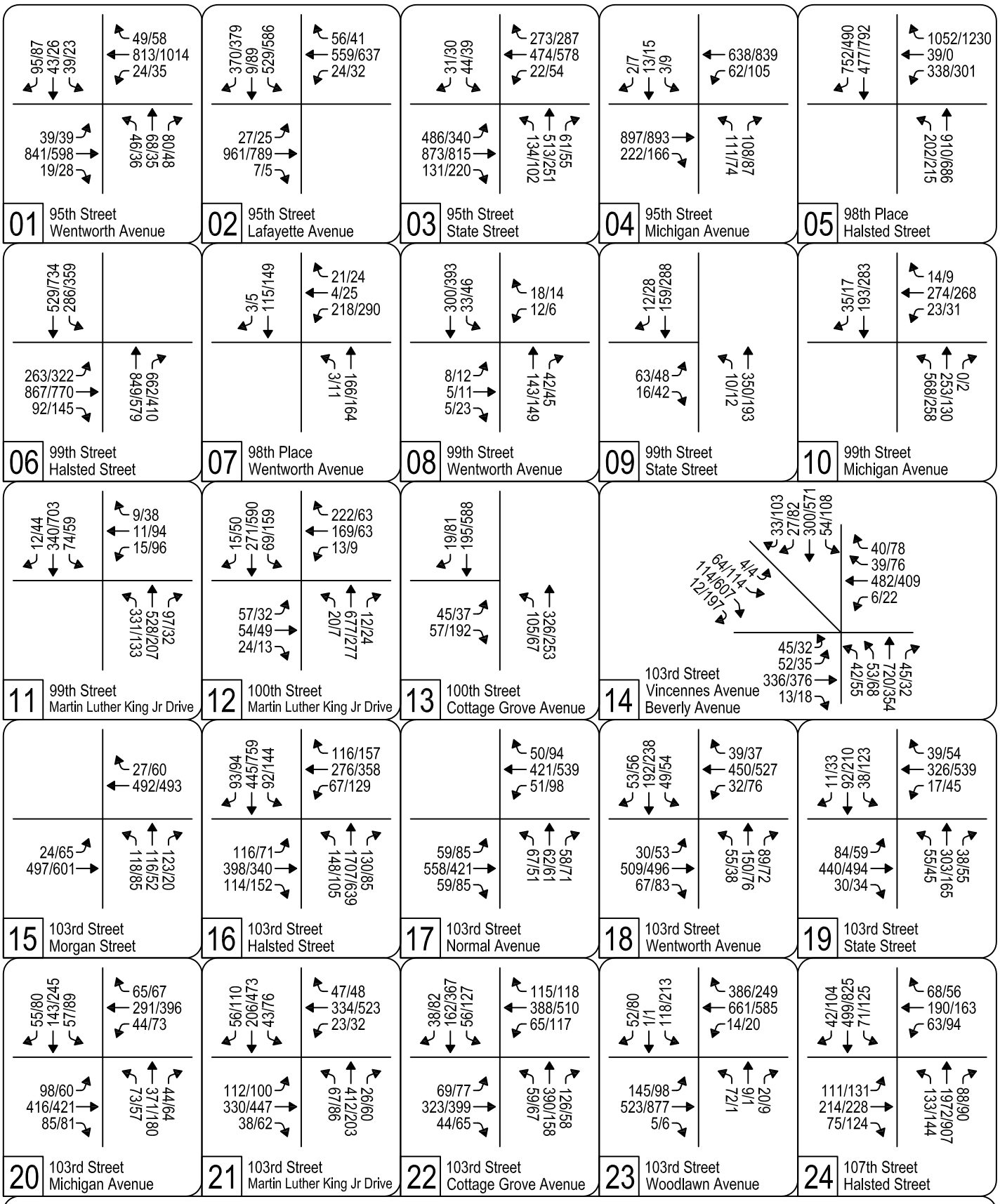
UPRR ROW Option Alternative (2030) Intersection Lane Geometry

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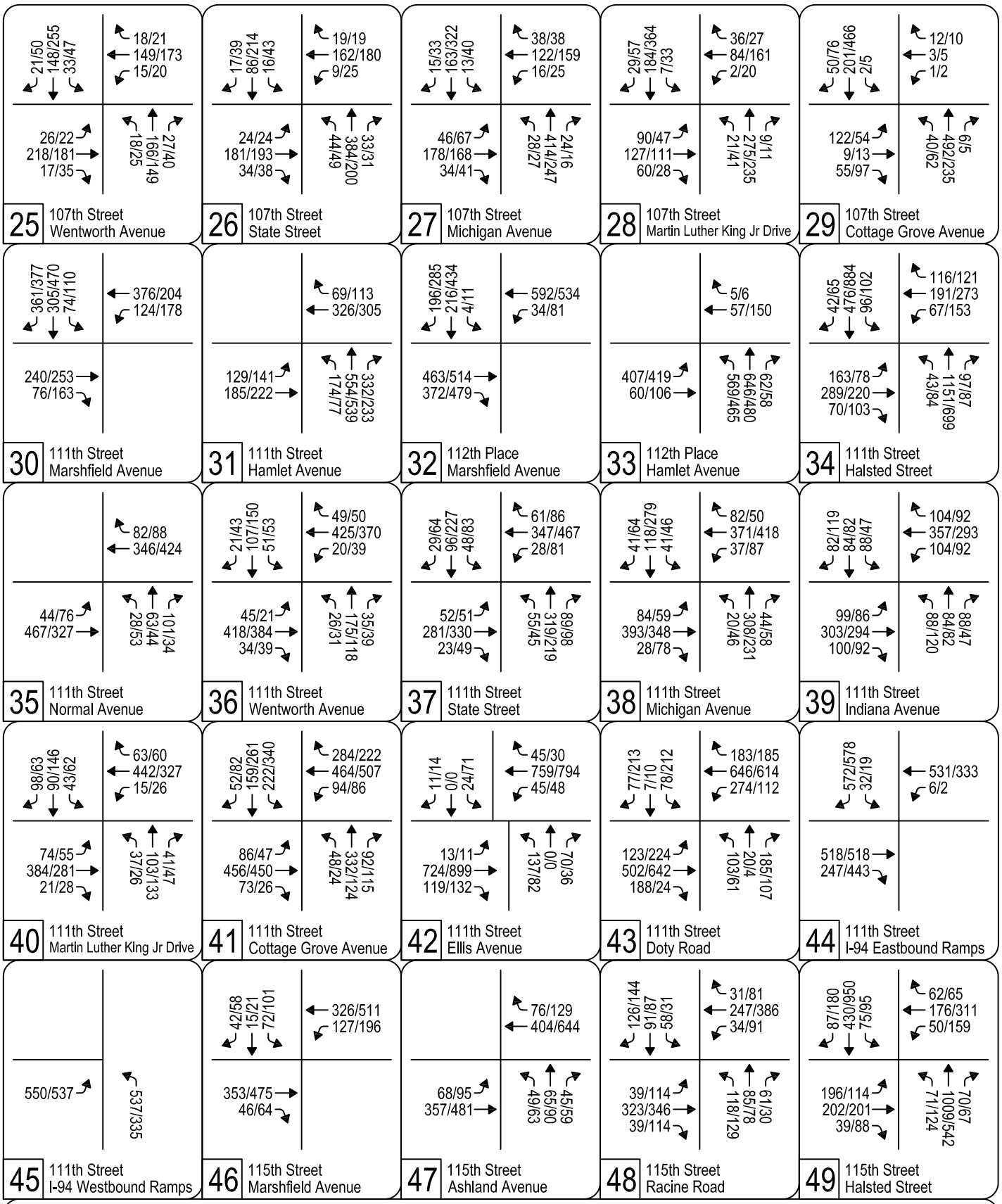
UPRR ROW Option Alternative (2030) Intersection Lane Geometry

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UPRR ROW Option Alternative (2030) Intersection Traffic Volumes

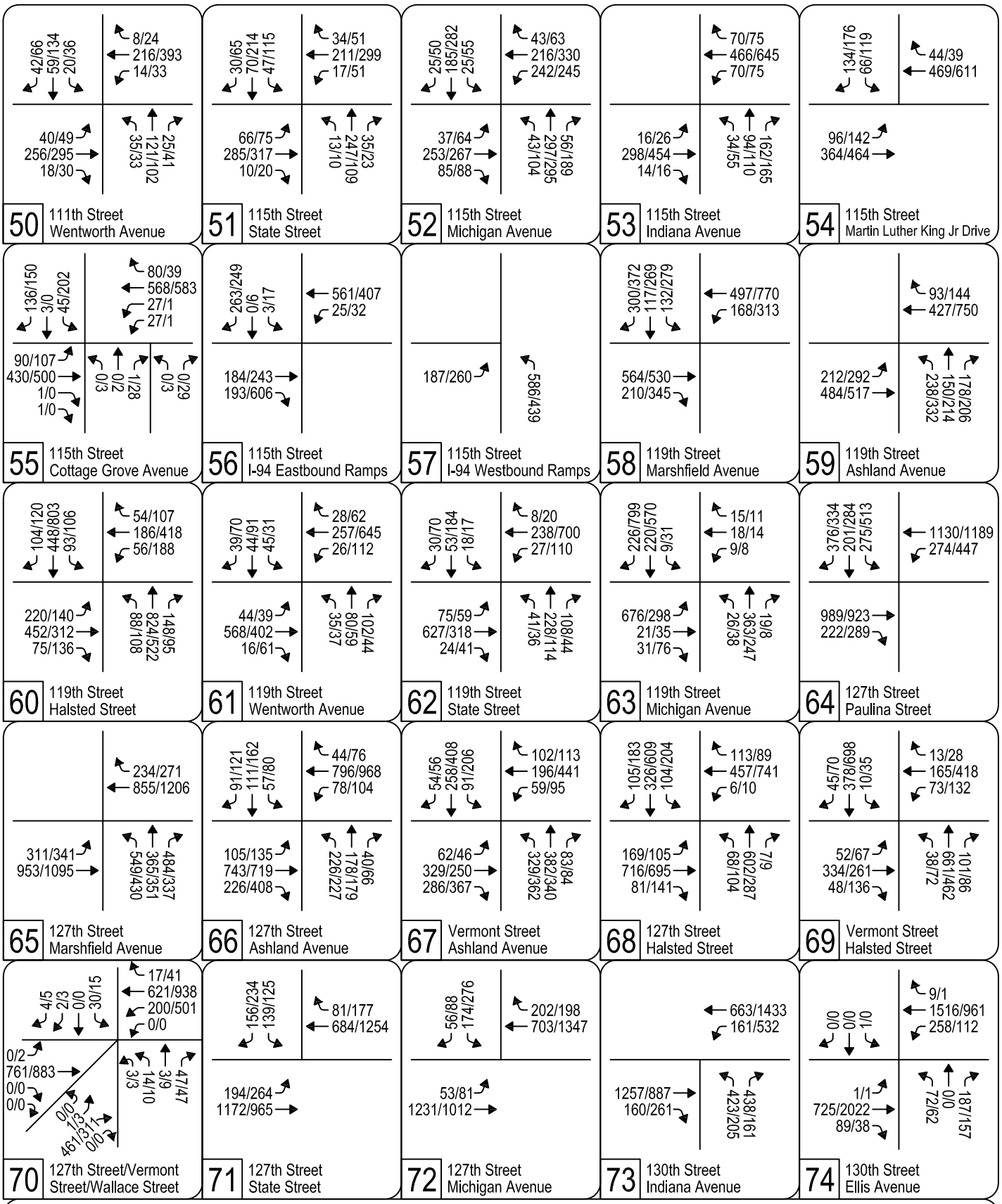
Legend: AM/PM Peak Hour Volumes



UPRR ROW Option Alternative (2030) Intersection Traffic Volumes

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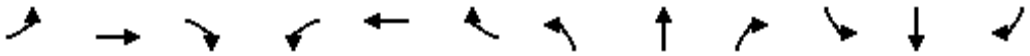
Legend: AM/PM Peak Hour Volumes



UPRR ROW Option Alternative (2030) Intersection Traffic Volumes

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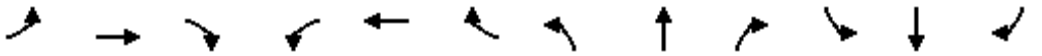
Legend: AM/PM Peak Hour Volumes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	841	19	24	813	49	46	68	80	39	43	95
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	16	10	10	16	8	15	8	8	14	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			0.99			0.99	
Flpb, ped/bikes	0.99	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	0.99			0.94			0.93	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1417	2976		1592	2979			1755			1673	
Flt Permitted	0.25	1.00		0.25	1.00			0.90			0.91	
Satd. Flow (perm)	369	2976		417	2979			1596			1531	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	41	885	20	25	856	52	48	72	84	41	45	100
RTOR Reduction (vph)	0	2	0	0	7	0	0	39	0	0	59	0
Lane Group Flow (vph)	41	903	0	25	901	0	0	165	0	0	127	0
Confl. Peds. (#/hr)	61		11	11		61	3		5	5		3
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	11%	7%	0%	0%	6%	2%	2%	7%	4%	5%	7%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			22.0			22.0	
Effective Green, g (s)	34.0	34.0		34.0	34.0			23.0			23.0	
Actuated g/C Ratio	0.52	0.52		0.52	0.52			0.35			0.35	
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0			5.0	
Lane Grp Cap (vph)	193	1557		218	1558			565			542	
v/s Ratio Prot		c0.30			0.30							
v/s Ratio Perm	0.11			0.06				c0.10			0.08	
v/c Ratio	0.21	0.58		0.11	0.58			0.29			0.23	
Uniform Delay, d1	8.3	10.6		7.9	10.6			15.1			14.8	
Progression Factor	1.00	1.00		0.83	1.16			1.00			1.00	
Incremental Delay, d2	2.5	1.6		0.9	1.4			1.3			1.0	
Delay (s)	10.8	12.2		7.5	13.6			16.4			15.8	
Level of Service	B	B		A	B			B			B	
Approach Delay (s)		12.1			13.5			16.4			15.8	
Approach LOS		B			B			B			B	

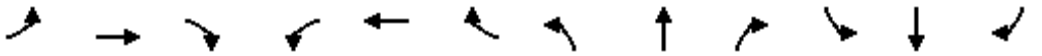
Intersection Summary			
HCM Average Control Delay	13.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	27	961	7	24	559	56	0	0	0	529	9	370
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00				0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.67				1.00	1.00	0.96
Flpb, ped/bikes	0.91	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	778	3285		1710	3138	512				3100	1440	1399
Flt Permitted	0.43	1.00		0.14	1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	352	3285		248	3138	512				3100	1440	1399
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	28	1012	7	25	588	59	0	0	0	557	9	389
RTOR Reduction (vph)	0	1	0	0	0	26	0	0	0	0	0	172
Lane Group Flow (vph)	28	1018	0	25	588	33	0	0	0	557	9	217
Confl. Peds. (#/hr)	354		13	13		354	22		22	22		22
Confl. Bikes (#/hr)	4					4			1	1		
Heavy Vehicles (%)	100%	4%	0%	0%	9%	100%	0%	0%	0%	7%	25%	5%
Turn Type	pm+pt			pm+pt		Perm				Split		Perm
Protected Phases	7	4		3	8					6	6	
Permitted Phases	4			8		8						6
Actuated Green, G (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Effective Green, g (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Actuated g/C Ratio	0.33	0.33		0.56	0.56	0.56				0.23	0.23	0.23
Clearance Time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Grp Cap (vph)	162	1087		634	1762	288				715	332	323
v/s Ratio Prot	0.02	c0.31		0.01	c0.19					c0.18	0.01	
v/s Ratio Perm	0.04			0.01		0.06						0.16
v/c Ratio	0.17	0.94		0.04	0.33	0.12				0.78	0.03	0.67
Uniform Delay, d1	31.6	42.2		15.1	15.4	13.4				46.9	38.7	45.5
Progression Factor	0.80	0.82		0.29	0.63	1.53				1.00	1.00	1.00
Incremental Delay, d2	2.0	14.1		0.1	0.3	0.5				8.2	0.2	10.7
Delay (s)	27.2	48.9		4.5	10.0	20.9				55.1	38.9	56.2
Level of Service	C	D		A	A	C				E	D	E
Approach Delay (s)		48.3			10.7			0.0			55.4	
Approach LOS		D			B			A			E	

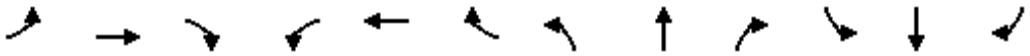
Intersection Summary			
HCM Average Control Delay	41.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	52.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	486	873	131	22	474	273	134	513	61	44	0	31
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.65		1.00	0.94	1.00		0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.98		1.00	1.00	0.85		1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (prot)	3190	3107		1555	2923	944		3300	1417	855		734
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (perm)	3190	3107		1555	2923	944		3300	1417	855		734
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	512	919	138	23	499	287	141	540	64	46	0	33
RTOR Reduction (vph)	0	9	0	0	0	158	0	0	25	0	0	31
Lane Group Flow (vph)	512	1049	0	23	499	129	0	681	39	46	0	2
Confl. Peds. (#/hr)	425		21	21		425	6		34	34		6
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	4%	8%	3%	10%	17%	5%	1%	3%	2%	100%	0%	100%
Turn Type	Prot			Prot		Perm	Split		Perm	Prot		custom
Protected Phases	7	4		3	8		2	2		6		
Permitted Phases						8			2			6
Actuated Green, G (s)	43.0	65.0		9.0	31.0	31.0		30.0	30.0	8.0		8.0
Effective Green, g (s)	43.0	65.0		9.0	31.0	31.0		30.0	30.0	8.0		8.0
Actuated g/C Ratio	0.33	0.50		0.07	0.24	0.24		0.23	0.23	0.06		0.06
Clearance Time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	1055	1554		108	697	225		762	327	53		45
v/s Ratio Prot	0.16	c0.34		0.01	c0.17			c0.21		c0.05		
v/s Ratio Perm						0.14			0.03			0.00
v/c Ratio	0.49	0.67		0.21	0.72	0.57		0.89	0.12	0.87		0.05
Uniform Delay, d1	34.7	24.5		57.2	45.5	43.6		48.5	39.5	60.5		57.4
Progression Factor	0.75	0.20		1.00	1.00	1.00		0.95	0.90	1.00		1.00
Incremental Delay, d2	0.7	1.1		4.5	6.2	10.1		14.9	0.7	76.0		0.4
Delay (s)	26.9	6.0		61.6	51.7	53.8		60.7	36.2	136.5		57.8
Level of Service	C	A		E	D	D		E	D	F		E
Approach Delay (s)		12.8			52.7			58.6			103.6	
Approach LOS		B			D			E			F	

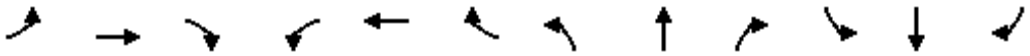
Intersection Summary			
HCM Average Control Delay	35.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	897	222	62	638	0	111	0	108	3	13	2
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	11	11	8	12	12	12	14	15	12
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes		0.99		1.00	1.00		1.00		0.98	1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00		1.00		1.00	0.99	1.00	
Frt		0.97		1.00	1.00		1.00		0.85	1.00	0.98	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		2860		1650	3005		1390		1465	1803	1943	
Flt Permitted		1.00		0.15	1.00		0.75		1.00	0.95	1.00	
Satd. Flow (perm)		2860		267	3005		1093		1465	1803	1943	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	997	247	69	709	0	123	0	120	3	14	2
RTOR Reduction (vph)	0	22	0	0	0	0	0	0	77	0	1	0
Lane Group Flow (vph)	0	1222	0	69	709	0	123	0	43	3	15	0
Confl. Peds. (#/hr)	49		15	15		49			12	12		
Heavy Vehicles (%)	0%	6%	14%	0%	10%	0%	23%	0%	2%	0%	0%	0%
Turn Type				Perm			custom		custom	Perm		
Protected Phases		4			8						6	
Permitted Phases				8			2		2	6		
Actuated Green, G (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Effective Green, g (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Actuated g/C Ratio		0.60		0.60	0.60		0.32		0.32	0.32	0.32	
Clearance Time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)		1716		160	1803		350		469	577	622	
v/s Ratio Prot		c0.43			0.24						0.01	
v/s Ratio Perm				0.26			c0.11		0.03	0.00		
v/c Ratio		0.71		0.43	0.39		0.35		0.09	0.01	0.02	
Uniform Delay, d1		14.0		10.8	10.5		26.0		23.8	23.2	23.3	
Progression Factor		1.00		1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		2.5		8.3	0.6		2.8		0.4	0.0	0.1	
Delay (s)		16.5		19.1	11.1		28.8		24.2	23.2	23.4	
Level of Service		B		B	B		C		C	C	C	
Approach Delay (s)		16.5			11.8			26.5			23.3	
Approach LOS		B			B			C			C	

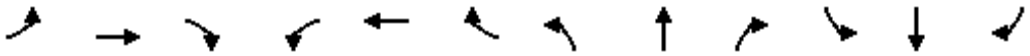
Intersection Summary			
HCM Average Control Delay	16.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	338	39	1052	202	910	0	0	477	752
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	12	10	10	12	12	11	12
Total Lost time (s)				4.0	4.0	5.0	3.0	4.0			4.0	
Lane Util. Factor				0.95	0.95	1.00	1.00	0.91			0.91	
Frpb, ped/bikes				1.00	1.00	0.99	1.00	1.00			0.98	
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00			1.00	
Frt				1.00	1.00	0.85	1.00	1.00			0.91	
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (prot)				1525	1629	1479	1550	4368			3940	
Flt Permitted				0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (perm)				1525	1629	1479	1550	4368			3940	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	345	40	1073	206	929	0	0	487	767
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	345	40	1073	206	929	0	0	1254	0
Confl. Peds. (#/hr)	2					2	12		8	8		12
Heavy Vehicles (%)	0%	0%	0%	3%	5%	2%	3%	5%	0%	0%	5%	8%
Turn Type				Perm		Perm	Prot					
Protected Phases					8		5	2			6	
Permitted Phases				8		8						
Actuated Green, G (s)				30.0	30.0	30.0	32.0	66.0			31.0	
Effective Green, g (s)				31.0	31.0	30.0	32.0	66.0			31.0	
Actuated g/C Ratio				0.30	0.30	0.29	0.30	0.63			0.30	
Clearance Time (s)				5.0	5.0	5.0	3.0	4.0			4.0	
Lane Grp Cap (vph)				450	481	423	472	2746			1163	
v/s Ratio Prot							c0.13	0.21			c0.32	
v/s Ratio Perm				0.23	0.02	c0.73						
v/c Ratio				0.77	0.08	2.54	0.44	0.34			1.91dr	
Uniform Delay, d1				33.7	26.7	37.5	29.3	9.2			37.0	
Progression Factor				1.00	1.00	1.00	0.66	2.38			1.00	
Incremental Delay, d2				11.8	0.3	698.4	2.0	0.2			50.2	
Delay (s)				45.5	27.1	735.9	21.3	22.1			87.2	
Level of Service				D	C	F	C	C			F	
Approach Delay (s)		0.0			553.1			22.0			87.2	
Approach LOS		A			F			C			F	

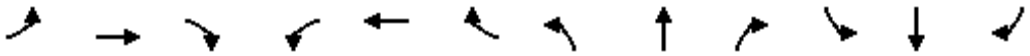
Intersection Summary			
HCM Average Control Delay	244.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.33		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.0%	ICU Level of Service	F
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group



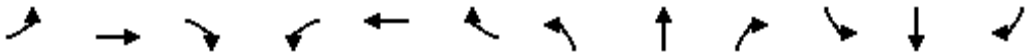
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	263	867	92	0	0	0	0	849	662	286	529	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	13	12	12	12	12	12	10	10	8	12	12	12
Total Lost time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Util. Factor	0.91	0.91						0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00						1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00						1.00	1.00	1.00	1.00	
Frt	1.00	0.99						1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1497	3184						4368	2187	1583	4636	
Flt Permitted	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1497	3184						4368	2187	1583	4636	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	271	894	95	0	0	0	0	875	682	295	545	0
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	244	1009	0	0	0	0	0	875	682	295	545	0
Confl. Peds. (#/hr)	4		14	14		4	4		3	3		4
Heavy Vehicles (%)	7%	1%	0%	0%	0%	0%	0%	5%	4%	8%	6%	0%
Turn Type	Perm								Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Actuated Green, G (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Effective Green, g (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Actuated g/C Ratio	0.32	0.32						0.27	0.27	0.30	0.59	
Clearance Time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Grp Cap (vph)	485	1031						1165	583	467	2737	
v/s Ratio Prot								0.20		c0.19	0.12	
v/s Ratio Perm	0.16	0.32							c0.31			
v/c Ratio	0.50	0.98						0.75	1.17	0.63	0.20	
Uniform Delay, d1	28.7	35.1						35.3	38.5	32.1	10.0	
Progression Factor	1.00	1.00						0.43	0.46	1.06	0.42	
Incremental Delay, d2	3.7	23.4						0.4	78.3	2.2	0.1	
Delay (s)	32.4	58.5						15.7	96.0	36.1	4.3	
Level of Service	C	E						B	F	D	A	
Approach Delay (s)		53.5			0.0			50.9			15.5	
Approach LOS		D			A			D			B	

Intersection Summary			
HCM Average Control Delay	43.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



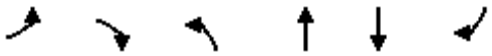
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	218	4	21	3	166	0	0	115	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	14	12	12	16	12
Total Lost time (s)				4.0	4.0		4.0	4.0			-3.0	
Lane Util. Factor				1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes				1.00	0.98		1.00	1.00			1.00	
Flpb, ped/bikes				1.00	1.00		1.00	1.00			1.00	
Frt				1.00	0.87		1.00	1.00			1.00	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1578	2709		1285	1882			1961	
Flt Permitted				0.95	1.00		0.58	1.00			1.00	
Satd. Flow (perm)				1578	2709		782	1882			1961	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	242	4	23	3	184	0	0	128	3
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	242	9	0	3	184	0	0	130	0
Confl. Peds. (#/hr)	2		2	2		2	3					3
Heavy Vehicles (%)	0%	0%	0%	8%	25%	5%	33%	2%	0%	0%	3%	33%
Turn Type				Perm			pm+pt					
Protected Phases					8		7	2			6	
Permitted Phases				8			2					
Actuated Green, G (s)				27.0	27.0		50.0	50.0			40.0	
Effective Green, g (s)				27.0	27.0		50.0	50.0			46.0	
Actuated g/C Ratio				0.32	0.32		0.59	0.59			0.54	
Clearance Time (s)				4.0	4.0		4.0	4.0			3.0	
Lane Grp Cap (vph)				501	861		501	1107			1061	
v/s Ratio Prot					0.00		0.00	c0.10			0.07	
v/s Ratio Perm				c0.15			0.00					
v/c Ratio				0.48	0.01		0.01	0.17			0.12	
Uniform Delay, d1				23.4	19.9		10.0	8.0			9.6	
Progression Factor				1.00	1.00		1.06	1.18			1.00	
Incremental Delay, d2				3.3	0.0		0.0	0.3			0.2	
Delay (s)				26.7	19.9		10.6	9.8			9.8	
Level of Service				C	B		B	A			A	
Approach Delay (s)		0.0			26.0			9.8			9.8	
Approach LOS		A			C			A			A	

Intersection Summary			
HCM Average Control Delay	17.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



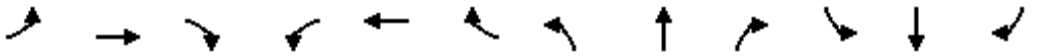
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	8	5	5	12	0	18	0	143	42	33	300	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	16	15	12	8	12	8	12	12	12	10	13	12
Total Lost time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99			1.00			1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00			1.00		1.00	1.00	
Frt	1.00	0.93			0.92			0.97		1.00	1.00	
Flt Protected	0.95	1.00			0.98			1.00		0.95	1.00	
Satd. Flow (prot)	1938	1809			1620			1686		1595	1755	
Flt Permitted	0.74	1.00			0.93			1.00		0.60	1.00	
Satd. Flow (perm)	1502	1809			1543			1686		1005	1755	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	8	5	5	13	0	19	0	151	44	35	316	0
RTOR Reduction (vph)	0	3	0	0	13	0	0	12	0	0	0	0
Lane Group Flow (vph)	8	7	0	0	19	0	0	183	0	35	316	0
Confl. Peds. (#/hr)			3	3			5		2	2		5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	3%	0%	6%	0%
Turn Type	Perm			Perm						pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Effective Green, g (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Actuated g/C Ratio	0.32	0.32			0.32			0.47		0.59	0.59	
Clearance Time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Grp Cap (vph)	477	575			490			793		640	1032	
v/s Ratio Prot		0.00						0.11		0.00	c0.18	
v/s Ratio Perm	0.01				c0.01					0.03		
v/c Ratio	0.02	0.01			0.04			0.23		0.05	0.31	
Uniform Delay, d1	19.9	19.9			20.0			13.4		8.5	8.8	
Progression Factor	1.00	1.00			1.00			1.00		1.01	0.92	
Incremental Delay, d2	0.1	0.0			0.1			0.7		0.2	0.7	
Delay (s)	20.0	19.9			20.2			14.0		8.8	8.9	
Level of Service	B	B			C			B		A	A	
Approach Delay (s)		19.9			20.2			14.0			8.9	
Approach LOS		B			C			B			A	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.21		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



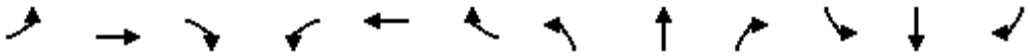
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	63	16	10	350	159	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	14	12	13	12	10	12
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.97		1.00	1.00	0.99	
Flt Protected	0.96		0.95	1.00	1.00	
Satd. Flow (prot)	1787		1767	1765	1634	
Flt Permitted	0.96		0.64	1.00	1.00	
Satd. Flow (perm)	1787		1187	1765	1634	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	70	18	11	389	177	13
RTOR Reduction (vph)	12	0	0	0	4	0
Lane Group Flow (vph)	76	0	11	389	186	0
Confl. Peds. (#/hr)		2				
Heavy Vehicles (%)	0%	0%	0%	2%	2%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.0		36.0	36.0	36.0	
Effective Green, g (s)	21.0		36.0	36.0	36.0	
Actuated g/C Ratio	0.32		0.55	0.55	0.55	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	577		657	978	905	
v/s Ratio Prot	c0.04			c0.22	0.11	
v/s Ratio Perm			0.01			
v/c Ratio	0.13		0.02	0.40	0.21	
Uniform Delay, d1	15.6		6.5	8.3	7.3	
Progression Factor	1.00		0.32	0.52	1.16	
Incremental Delay, d2	0.5		0.0	1.1	0.4	
Delay (s)	16.0		2.2	5.4	8.9	
Level of Service	B		A	A	A	
Approach Delay (s)	16.0			5.3	8.9	
Approach LOS	B			A	A	

Intersection Summary			
HCM Average Control Delay	7.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	39.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	23	274	14	568	253	0	0	193	35
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	14	16	12	12	15	12	12	13	10
Total Lost time (s)					4.0		4.0	4.0			3.0	3.0
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Frt					0.99		1.00	1.00			1.00	0.85
Flt Protected					1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3738		1660	1752			1603	1298
Flt Permitted					1.00		0.57	1.00			1.00	1.00
Satd. Flow (perm)					3738		1002	1752			1603	1298
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	26	304	16	631	281	0	0	214	39
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	0	0	0	22
Lane Group Flow (vph)	0	0	0	0	342	0	631	281	0	0	214	17
Confl. Peds. (#/hr)									30	30		
Heavy Vehicles (%)	0%	0%	0%	11%	2%	0%	3%	13%	0%	0%	16%	10%
Turn Type				Split			pm+pt					Perm
Protected Phases				8	8		7	2			6	
Permitted Phases							2					6
Actuated Green, G (s)					26.0		51.0	51.0			38.0	38.0
Effective Green, g (s)					26.0		51.0	51.0			38.0	38.0
Actuated g/C Ratio					0.31		0.60	0.60			0.45	0.45
Clearance Time (s)					4.0		4.0	4.0			3.0	3.0
Lane Grp Cap (vph)					1143		679	1051			717	580
v/s Ratio Prot					c0.09		c0.11	0.16			0.13	
v/s Ratio Perm							c0.45					0.01
v/c Ratio					0.30		0.93	0.27			0.30	0.03
Uniform Delay, d1					22.5		17.0	8.1			15.0	13.2
Progression Factor					1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2					0.7		21.0	0.6			1.1	0.1
Delay (s)					23.2		38.0	8.7			16.1	13.3
Level of Service					C		D	A			B	B
Approach Delay (s)		0.0			23.2			29.0			15.6	
Approach LOS		A			C			C			B	

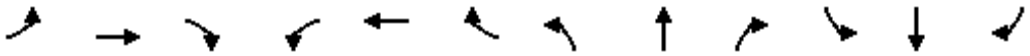
Intersection Summary			
HCM Average Control Delay	25.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	15	11	9	331	528	97	74	340	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	15	12	12	12	12	12	13	12
Total Lost time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.97		1.00	0.98		1.00	1.00	
Flt Protected					0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1803		1692	3236		1707	3352	
Flt Permitted					0.98		0.50	1.00		0.31	1.00	
Satd. Flow (perm)					1803		892	3236		564	3352	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	17	12	10	368	587	108	82	378	13
RTOR Reduction (vph)	0	0	0	0	7	0	0	20	0	0	3	0
Lane Group Flow (vph)	0	0	0	0	32	0	368	675	0	82	388	0
Confl. Peds. (#/hr)	2					2	6		20	20		6
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	0%	0%	0%	11%	0%	1%	3%	0%	0%	5%	0%
Turn Type				Split			pm+pt			pm+pt		
Protected Phases				8	8		5	2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)					23.0		41.0	34.0		41.0	34.0	
Effective Green, g (s)					23.0		41.0	34.0		41.0	34.0	
Actuated g/C Ratio					0.31		0.55	0.45		0.55	0.45	
Clearance Time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Grp Cap (vph)					553		562	1467		415	1520	
v/s Ratio Prot					c0.02		c0.06	0.21		0.02	0.12	
v/s Ratio Perm							c0.30			0.09		
v/c Ratio					0.06		0.65	0.46		0.20	0.26	
Uniform Delay, d1					18.4		13.8	14.2		12.4	12.7	
Progression Factor					1.00		0.69	0.74		1.00	1.00	
Incremental Delay, d2					0.2		5.4	0.9		1.1	0.4	
Delay (s)					18.6		14.9	11.4		13.4	13.1	
Level of Service					B		B	B		B	B	
Approach Delay (s)		0.0			18.6			12.6			13.1	
Approach LOS		A			B			B			B	

Intersection Summary			
HCM Average Control Delay	12.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	15		

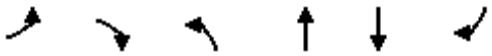
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	57	54	24	13	169	222	20	677	12	69	271	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	16	12	12	10	11	12	12	11	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.93		1.00	1.00		1.00	0.99	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1946			1626		1596	3232		1641	3131	
Flt Permitted		0.68			0.99		0.57	1.00		0.33	1.00	
Satd. Flow (perm)		1354			1613		955	3232		574	3131	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	60	57	25	14	178	234	21	713	13	73	285	16
RTOR Reduction (vph)	0	10	0	0	59	0	0	2	0	0	5	0
Lane Group Flow (vph)	0	132	0	0	367	0	21	724	0	73	296	0
Confl. Peds. (#/hr)									6	6		
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	0%	0%	12%	2%	2%	0%	2%	0%	4%	5%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Effective Green, g (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Actuated g/C Ratio		0.33			0.33		0.56	0.56		0.56	0.56	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		451			538		535	1810		321	1753	
v/s Ratio Prot								c0.22			0.09	
v/s Ratio Perm		0.10			c0.23		0.02			0.13		
v/c Ratio		0.29			0.68		0.04	0.40		0.23	0.17	
Uniform Delay, d1		18.5			21.6		7.4	9.4		8.3	8.0	
Progression Factor		1.00			1.00		1.00	1.00		0.18	0.07	
Incremental Delay, d2		1.6			6.9		0.1	0.7		1.6	0.2	
Delay (s)		20.1			28.4		7.6	10.0		3.1	0.8	
Level of Service		C			C		A	B		A	A	
Approach Delay (s)		20.1			28.4			9.9			1.2	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM Average Control Delay	13.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.9%	ICU Level of Service	C
Analysis Period (min)	15		

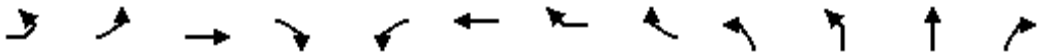
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	45	57	105	326	195	19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	50	63	117	362	217	21

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	113	237	241	144	93
Volume Left (vph)	50	117	0	0	0
Volume Right (vph)	63	0	0	0	21
Hadj (s)	-0.16	0.33	0.08	0.09	-0.07
Departure Headway (s)	5.3	5.4	5.1	5.4	5.2
Degree Utilization, x	0.17	0.36	0.35	0.22	0.14
Capacity (veh/h)	628	653	684	641	660
Control Delay (s)	9.3	10.1	9.6	8.7	7.9
Approach Delay (s)	9.3	9.9		8.4	
Approach LOS	A	A		A	

Intersection Summary			
Delay	9.4		
HCM Level of Service	A		
Intersection Capacity Utilization	35.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	45	52	336	13	6	482	39	40	42	53	720	45
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	0.95	
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.97			1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Frt		1.00	1.00	0.85	1.00	1.00	0.85			1.00	0.99	
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	
Satd. Flow (prot)		1575	1731	1530	1710	1731	1487			1710	3290	
Flt Permitted		0.11	1.00	1.00	0.54	1.00	1.00			0.39	1.00	
Satd. Flow (perm)		187	1731	1530	971	1731	1487			700	3290	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	50	58	373	14	7	536	43	44	47	59	800	50
RTOR Reduction (vph)	0	0	0	7	0	0	31	0	0	0	5	0
Lane Group Flow (vph)	0	108	373	7	7	536	56	0	0	106	845	0
Confl. Peds. (#/hr)		5					5					6
Heavy Vehicles (%)	8%	9%	4%	0%	0%	4%	0%	0%	0%	0%	3%	0%
Turn Type	Perm	pm+pt		Perm	Perm		Perm		Perm	Perm		
Protected Phases		7	4			8					2	
Permitted Phases	4	4		4	8		8		2	2		
Actuated Green, G (s)		50.0	50.0	50.0	32.0	32.0	32.0			25.0	25.0	
Effective Green, g (s)		50.0	50.0	50.0	32.0	32.0	32.0			25.0	25.0	
Actuated g/C Ratio		0.48	0.48	0.48	0.30	0.30	0.30			0.24	0.24	
Clearance Time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Grp Cap (vph)		281	824	729	296	528	453			167	783	
v/s Ratio Prot		0.05	c0.22			c0.31					c0.26	
v/s Ratio Perm		0.13		0.00	0.01		0.04			0.15		
v/c Ratio		0.38	0.45	0.01	0.02	1.02	0.12			0.63	1.08	
Uniform Delay, d1		20.3	18.4	14.5	25.6	36.5	26.4			35.9	40.0	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Incremental Delay, d2		3.9	1.8	0.0	0.1	43.0	0.6			17.0	55.9	
Delay (s)		24.2	20.2	14.5	25.7	79.5	26.9			52.9	95.9	
Level of Service		C	C	B	C	E	C			D	F	
Approach Delay (s)			20.9			71.7					91.1	
Approach LOS			C			E					F	

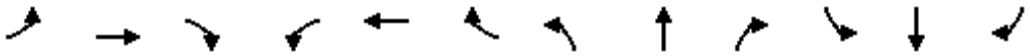
Intersection Summary			
HCM Average Control Delay	62.9	HCM Level of Service	E
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	79.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations								
Volume (vph)	54	300	27	33	4	64	114	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5				4.5	4.5	
Lane Util. Factor	1.00	0.95				1.00	0.88	
Frpb, ped/bikes	1.00	1.00				1.00	1.00	
Flpb, ped/bikes	1.00	1.00				1.00	1.00	
Frt	1.00	0.97				1.00	0.85	
Flt Protected	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1706	3279				1710	2621	
Flt Permitted	0.16	1.00				0.95	1.00	
Satd. Flow (perm)	293	3279				1710	2621	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	60	333	30	37	4	71	127	13
RTOR Reduction (vph)	0	8	0	0	0	0	7	0
Lane Group Flow (vph)	60	392	0	0	0	75	133	0
Confl. Peds. (#/hr)	6							
Heavy Vehicles (%)	0%	2%	0%	0%	0%	0%	3%	0%
Turn Type	Perm				Split		Perm	
Protected Phases		6			9	9		
Permitted Phases	6						9	
Actuated Green, G (s)	24.5	24.5				17.5	17.5	
Effective Green, g (s)	24.5	24.5				17.5	17.5	
Actuated g/C Ratio	0.23	0.23				0.17	0.17	
Clearance Time (s)	4.5	4.5				4.5	4.5	
Lane Grp Cap (vph)	68	765				285	437	
v/s Ratio Prot		0.12				0.04		
v/s Ratio Perm	0.20						c0.05	
v/c Ratio	0.88	0.51				0.26	0.31	
Uniform Delay, d1	38.9	35.1				38.1	38.4	
Progression Factor	1.00	1.00				1.00	1.00	
Incremental Delay, d2	79.4	2.4				2.2	1.8	
Delay (s)	118.3	37.5				40.4	40.2	
Level of Service	F	D				D	D	
Approach Delay (s)		48.0				40.3		
Approach LOS		D				D		

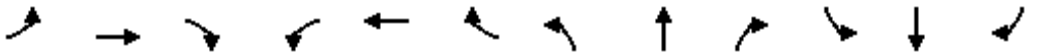
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	497	0	0	492	27	118	116	123	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	11	11	16	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.99			0.95				
Flt Protected		1.00			1.00			0.98				
Satd. Flow (prot)		1653			1929			1769				
Flt Permitted		0.96			1.00			0.98				
Satd. Flow (perm)		1598			1929			1769				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	552	0	0	547	30	131	129	137	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	579	0	0	577	0	0	397	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		31.0			31.0			26.0				
Effective Green, g (s)		31.0			31.0			26.0				
Actuated g/C Ratio		0.48			0.48			0.40				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		762			920			708				
v/s Ratio Prot					0.30							
v/s Ratio Perm		c0.36						0.22				
v/c Ratio		0.76			0.63			0.56				
Uniform Delay, d1		13.9			12.7			15.1				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		7.0			3.2			3.2				
Delay (s)		21.0			15.9			18.3				
Level of Service		C			B			B				
Approach Delay (s)		21.0			15.9			18.3			0.0	
Approach LOS		C			B			B			A	

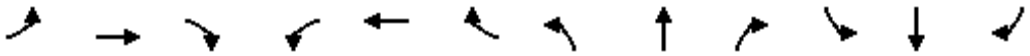
Intersection Summary			
HCM Average Control Delay	18.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	76.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	116	398	114	67	276	116	148	1707	130	92	445	93
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	9	9	10	9
Total Lost time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.96	1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1924	1426		1923	1396	1500	3099	1284	1425	2956	1265
Flt Permitted		0.65	1.00		0.54	1.00	0.40	1.00	1.00	0.09	1.00	1.00
Satd. Flow (perm)		1265	1426		1040	1396	631	3099	1284	142	2956	1265
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	122	419	120	71	291	122	156	1797	137	97	468	98
RTOR Reduction (vph)	0	0	71	0	0	72	0	0	30	0	0	59
Lane Group Flow (vph)	0	541	49	0	362	50	156	1797	107	97	468	39
Confl. Peds. (#/hr)	42		39	39		42	20		8	8		20
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	6%	4%	3%	0%	6%	5%	6%	3%	4%	8%	8%	4%
Turn Type	pm+pt		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		43.0	43.0		43.0	43.0	52.7	44.0	44.0	49.3	42.3	42.3
Effective Green, g (s)		43.0	43.0		43.0	43.0	52.7	44.0	44.0	49.3	42.3	42.3
Actuated g/C Ratio		0.41	0.41		0.41	0.41	0.50	0.42	0.42	0.47	0.40	0.40
Clearance Time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		518	584		426	572	389	1299	538	152	1191	510
v/s Ratio Prot							c0.03	c0.58		c0.04	0.16	
v/s Ratio Perm		c0.43	0.03		0.35	0.04	0.17		0.08	0.26		0.03
v/c Ratio		1.04	0.08		0.85	0.09	0.40	1.38	0.20	0.64	0.39	0.08
Uniform Delay, d1		31.0	19.0		28.1	19.0	14.9	30.5	19.3	23.3	22.2	19.3
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.25	0.75	0.39
Incremental Delay, d2		51.6	0.3		18.7	0.3	0.7	177.4	0.8	8.2	0.9	0.3
Delay (s)		82.6	19.2		46.8	19.3	15.6	207.9	20.2	37.4	17.7	7.9
Level of Service		F	B		D	B	B	F	C	D	B	A
Approach Delay (s)		71.1			39.9			181.2			19.2	
Approach LOS		E			D			F			B	

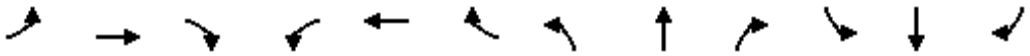
Intersection Summary			
HCM Average Control Delay	117.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.17		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	116.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	558	59	51	421	50	67	62	58	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		0.99			0.99			0.96				
Flt Protected		1.00			1.00			0.98				
Satd. Flow (prot)		1630			1628			1775				
Flt Permitted		0.92			0.89			0.98				
Satd. Flow (perm)		1501			1455			1775				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	66	620	66	57	468	56	74	69	64	0	0	0
RTOR Reduction (vph)	0	5	0	0	6	0	0	25	0	0	0	0
Lane Group Flow (vph)	0	747	0	0	575	0	0	182	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		38.0			38.0			19.0				
Effective Green, g (s)		38.0			38.0			19.0				
Actuated g/C Ratio		0.58			0.58			0.29				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		878			851			519				
v/s Ratio Prot												
v/s Ratio Perm		c0.50			0.40			0.10				
v/c Ratio		0.85			0.68			0.35				
Uniform Delay, d1		11.2			9.3			18.1				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		10.1			4.3			1.9				
Delay (s)		21.3			13.6			20.0				
Level of Service		C			B			C				
Approach Delay (s)		21.3			13.6			20.0			0.0	
Approach LOS		C			B			C			A	

Intersection Summary			
HCM Average Control Delay	18.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.8%	ICU Level of Service	C
Analysis Period (min)	15		

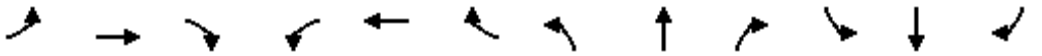
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	509	67	32	450	39	55	150	89	49	192	53
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	11	12	12	15	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.97		1.00	0.95		1.00	0.98		0.98	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		0.99	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.98	
Flt Protected		1.00	1.00		1.00	1.00		0.99	1.00		0.99	
Satd. Flow (prot)		1656	1255		1636	1288		1658	1490		1738	
Flt Permitted		0.96	1.00		0.95	1.00		0.84	1.00		0.92	
Satd. Flow (perm)		1594	1255		1555	1288		1417	1490		1608	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	32	536	71	34	474	41	58	158	94	52	202	56
RTOR Reduction (vph)	0	0	30	0	0	15	0	0	64	0	11	0
Lane Group Flow (vph)	0	568	41	0	508	26	0	216	30	0	299	0
Confl. Peds. (#/hr)	33		15	15		33	68		5	5		68
Confl. Bikes (#/hr)	4					4						
Heavy Vehicles (%)	0%	5%	14%	19%	5%	9%	2%	2%	1%	10%	7%	8%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Effective Green, g (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.32	0.32		0.32	
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Grp Cap (vph)		914	720		892	738		453	477		515	
v/s Ratio Prot												
v/s Ratio Perm		c0.36	0.03		0.33	0.02		0.15	0.02		c0.19	
v/c Ratio		0.62	0.06		0.57	0.03		0.48	0.06		0.58	
Uniform Delay, d1		10.6	7.1		10.1	7.0		20.5	17.7		21.3	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		3.2	0.1		2.6	0.1		3.6	0.3		4.7	
Delay (s)		13.8	7.2		12.8	7.1		24.0	18.0		26.0	
Level of Service		B	A		B	A		C	B		C	
Approach Delay (s)		13.0			12.3			22.2			26.0	
Approach LOS		B			B			C			C	

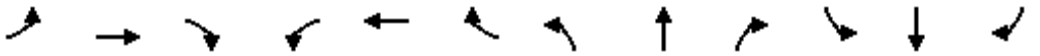
Intersection Summary			
HCM Average Control Delay	16.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	95.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



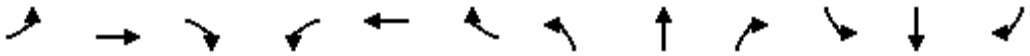
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	84	440	30	17	326	39	55	303	38	38	92	11
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	11	16	8	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.98	1.00	1.00	0.99
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1464	2990		1459	3535		1534	1647	1301	1517	1541	1156
Flt Permitted	0.50	1.00		0.43	1.00		0.69	1.00	1.00	0.45	1.00	1.00
Satd. Flow (perm)	777	2990		656	3535		1116	1647	1301	720	1541	1156
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	93	489	33	19	362	43	61	337	42	42	102	12
RTOR Reduction (vph)	0	7	0	0	14	0	0	0	22	0	0	7
Lane Group Flow (vph)	93	515	0	19	391	0	61	337	20	42	102	5
Confl. Peds. (#/hr)	16		9	9		16	1		5	5		1
Heavy Vehicles (%)	8%	6%	0%	13%	8%	3%	4%	2%	8%	5%	9%	22%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Effective Green, g (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	371	1426		313	1686		446	659	520	288	616	462
v/s Ratio Prot		c0.17			0.11			c0.20			0.07	
v/s Ratio Perm	0.12			0.03			0.05		0.02	0.06		0.00
v/c Ratio	0.25	0.36		0.06	0.23		0.14	0.51	0.04	0.15	0.17	0.01
Uniform Delay, d1	10.1	10.7		9.2	10.0		12.4	14.7	11.9	12.4	12.5	11.7
Progression Factor	1.00	1.00		1.00	1.00		0.60	0.74	0.30	0.53	0.54	0.28
Incremental Delay, d2	1.6	0.7		0.4	0.3		0.6	2.8	0.1	1.1	0.6	0.0
Delay (s)	11.7	11.5		9.5	10.3		8.0	13.7	3.7	7.7	7.3	3.4
Level of Service	B	B		A	B		A	B	A	A	A	A
Approach Delay (s)		11.5			10.3			11.9			7.1	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	10.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



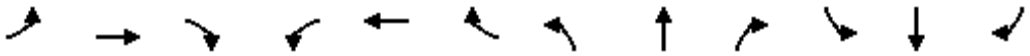
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	98	416	85	44	291	65	73	371	44	57	143	55
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	11	10	11	11	10	11	11	10	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.96	1.00		1.00	1.00		0.98	1.00		0.97	1.00	
Frt	1.00	0.97		1.00	0.97		1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1465	3058		1588	3012		1541	3022		1403	2767	
Flt Permitted	0.52	1.00		0.42	1.00		0.62	1.00		0.46	1.00	
Satd. Flow (perm)	799	3058		697	3012		1007	3022		678	2767	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	103	438	89	46	306	68	77	391	46	60	151	58
RTOR Reduction (vph)	0	0	0	0	0	0	0	12	0	0	34	0
Lane Group Flow (vph)	103	527	0	46	374	0	77	425	0	60	175	0
Confl. Peds. (#/hr)	98		10	10		98	28		52	52		28
Heavy Vehicles (%)	5%	5%	4%	0%	5%	7%	2%	6%	13%	10%	11%	20%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.41	0.41		0.41	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	384	1468		335	1446		416	1249		280	1144	
v/s Ratio Prot		c0.17			0.12			c0.14			0.06	
v/s Ratio Perm	0.13			0.07			0.08			0.09		
v/c Ratio	0.27	0.36		0.14	0.26		0.19	0.34		0.21	0.15	
Uniform Delay, d1	11.6	12.3		10.9	11.6		14.0	15.0		14.2	13.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.7	0.7		0.9	0.4		1.0	0.7		1.7	0.3	
Delay (s)	13.3	12.9		11.7	12.0		15.0	15.8		15.9	14.1	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		13.0			12.0			15.6			14.5	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	112	330	38	23	334	47	67	412	26	43	206	56
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	8	16	12	9	10	10	9	10	10
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1533	1576		1474	1842		1533	3073		1372	2877	
Flt Permitted	0.44	1.00		0.46	1.00		0.58	1.00		0.41	1.00	
Satd. Flow (perm)	709	1576		711	1842		940	3073		597	2877	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	118	347	40	24	352	49	71	434	27	45	217	59
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	118	387	0	24	401	0	71	461	0	45	276	0
Confl. Peds. (#/hr)	7		23	23		7	10		8	8		10
Confl. Bikes (#/hr)	1		2	2		1	1		1	1		1
Heavy Vehicles (%)	4%	8%	10%	0%	9%	5%	0%	3%	0%	12%	7%	6%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	47.0	41.8		40.6	38.6		26.8	22.2		23.6	20.6	
Effective Green, g (s)	47.0	39.8		40.6	36.6		26.8	20.2		23.6	18.6	
Actuated g/C Ratio	0.55	0.47		0.48	0.43		0.32	0.24		0.28	0.22	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	442	738		358	793		328	730		193	630	
v/s Ratio Prot	c0.02	c0.25		0.00	0.22		c0.01	c0.15		0.01	0.10	
v/s Ratio Perm	0.13			0.03			0.06			0.06		
v/c Ratio	0.27	0.52		0.07	0.51		0.22	0.63		0.23	0.44	
Uniform Delay, d1	13.8	15.9		15.0	17.6		21.6	29.1		26.1	28.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	2.7		0.1	2.3		0.3	4.1		0.6	2.2	
Delay (s)	14.1	18.6		15.1	19.9		21.9	33.2		26.8	30.9	
Level of Service	B	B		B	B		C	C		C	C	
Approach Delay (s)		17.5			19.6			31.7			30.3	
Approach LOS		B			B			C			C	

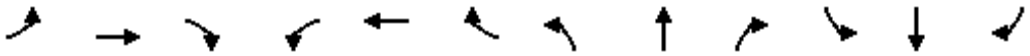
Intersection Summary			
HCM Average Control Delay	24.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	63.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	69	323	44	65	388	115	59	390	126	56	162	38
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	11	11	11	11	12	12	10	10	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		0.99	1.00	
Frt		0.98			0.97		1.00	0.96		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3493			2914		1614	3156		1581	2918	
Flt Permitted		0.78			0.84		0.61	1.00		0.38	1.00	
Satd. Flow (perm)		2745			2468		1041	3156		628	2918	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	77	359	49	72	431	128	66	433	140	62	180	42
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	485	0	0	631	0	66	573	0	62	222	0
Confl. Peds. (#/hr)	20		16	16		20	5		33	33		5
Confl. Bikes (#/hr)	2					2			2	2		
Heavy Vehicles (%)	9%	9%	0%	24%	7%	6%	2%	4%	2%	0%	5%	9%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.0			33.0		32.0	32.0		32.0	32.0	
Effective Green, g (s)		34.0			34.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio		0.45			0.45		0.44	0.44		0.44	0.44	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		1244			1119		458	1389		276	1284	
v/s Ratio Prot								c0.18			0.08	
v/s Ratio Perm		0.18			c0.26		0.06			0.10		
v/c Ratio		0.39			0.56		0.14	0.41		0.22	0.17	
Uniform Delay, d1		13.6			15.1		12.6	14.4		13.0	12.7	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.9			2.1		0.7	0.9		1.9	0.3	
Delay (s)		14.5			17.1		13.2	15.3		14.9	13.0	
Level of Service		B			B		B	B		B	B	
Approach Delay (s)		14.5			17.1			15.1			13.4	
Approach LOS		B			B			B			B	

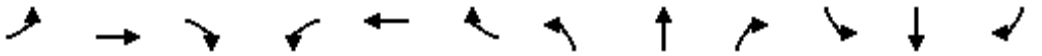
Intersection Summary			
HCM Average Control Delay	15.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	145	523	5	14	661	386	72	9	20	118	1	52
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	12	12	12	12	12	13	13	13
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	1.00		1.00	1.00	0.85		0.97			0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97			0.97	
Satd. Flow (prot)	1574	3144		1629	3257	1457		1611			3105	
Flt Permitted	0.35	1.00		0.42	1.00	1.00		0.69			0.75	
Satd. Flow (perm)	581	3144		720	3257	1457		1158			2398	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	161	581	6	16	734	429	80	10	22	131	1	58
RTOR Reduction (vph)	0	1	0	0	0	150	0	12	0	0	44	0
Lane Group Flow (vph)	161	586	0	16	734	279	0	100	0	0	146	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	46.0	46.0		46.0	46.0	46.0		16.7			16.7	
Effective Green, g (s)	46.0	46.0		46.0	46.0	46.0		16.7			16.7	
Actuated g/C Ratio	0.65	0.65		0.65	0.65	0.65		0.24			0.24	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		8.0			8.0	
Lane Grp Cap (vph)	378	2046		468	2119	948		274			566	
v/s Ratio Prot		0.19			0.23							
v/s Ratio Perm	c0.28			0.02		0.19		c0.09			0.06	
v/c Ratio	0.43	0.29		0.03	0.35	0.29		0.36			0.26	
Uniform Delay, d1	6.0	5.3		4.4	5.6	5.3		22.6			22.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	3.5	0.4		0.1	0.4	0.8		3.5			1.0	
Delay (s)	9.5	5.7		4.5	6.0	6.1		26.1			23.0	
Level of Service	A	A		A	A	A		C			C	
Approach Delay (s)		6.5			6.0			26.1			23.0	
Approach LOS		A			A			C			C	

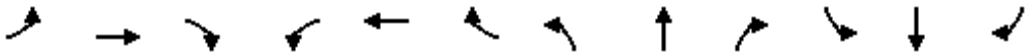
Intersection Summary			
HCM Average Control Delay	8.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	70.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	111	214	75	63	190	68	133	1972	88	71	499	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	9	12	10	10	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.96	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.96		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1548	1499		1547	1586		1493	3069	1271	1452	2983	1301
Flt Permitted	0.38	1.00		0.32	1.00		0.39	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	617	1499		524	1586		612	3069	1271	180	2983	1301
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	117	225	79	66	200	72	140	2076	93	75	525	44
RTOR Reduction (vph)	0	15	0	0	16	0	0	0	18	0	0	26
Lane Group Flow (vph)	117	289	0	66	256	0	140	2076	75	75	525	18
Confl. Peds. (#/hr)	4		9	9		4	6		16	16		6
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	3%	3%	4%	3%	1%	2%	3%	4%	4%	6%	7%	3%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	28.0	21.0		28.0	21.0		42.0	35.0	35.0	42.0	35.0	35.0
Effective Green, g (s)	26.0	22.0		26.0	22.0		40.0	35.0	35.0	40.0	35.0	35.0
Actuated g/C Ratio	0.31	0.26		0.31	0.26		0.47	0.41	0.41	0.47	0.41	0.41
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	254	388		232	410		350	1264	523	174	1228	536
v/s Ratio Prot	c0.03	c0.19		0.02	0.16		0.03	c0.68		c0.03	0.18	
v/s Ratio Perm	0.11			0.07			0.16		0.06	0.17		0.01
v/c Ratio	0.46	0.75		0.28	0.63		0.40	1.64	0.14	0.43	0.43	0.03
Uniform Delay, d1	22.5	28.9		21.9	27.9		13.3	25.0	15.6	18.1	17.8	14.9
Progression Factor	1.00	1.00		1.00	1.00		0.61	0.71	0.49	1.00	1.00	1.00
Incremental Delay, d2	5.9	12.3		3.1	7.0		2.8	292.0	0.5	7.6	1.1	0.1
Delay (s)	28.4	41.2		24.9	34.9		10.9	309.7	8.1	25.7	18.9	15.0
Level of Service	C	D		C	C		B	F	A	C	B	B
Approach Delay (s)		37.6			32.9			279.4			19.5	
Approach LOS		D			C			F			B	

Intersection Summary			
HCM Average Control Delay	184.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	96.6%	ICU Level of Service	F
Analysis Period (min)	15		

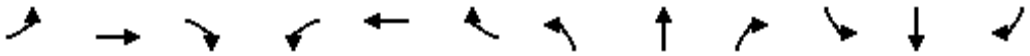
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	26	218	17	15	149	18	18	166	27	33	148	21
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	14	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.99			0.98			0.99	
Flt Protected		1.00			1.00			1.00			0.99	
Satd. Flow (prot)		1850			1836			1902			1931	
Flt Permitted		0.96			0.97			0.97			0.94	
Satd. Flow (perm)		1792			1790			1856			1823	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	27	225	18	15	154	19	19	171	28	34	153	22
RTOR Reduction (vph)	0	4	0	0	6	0	0	8	0	0	6	0
Lane Group Flow (vph)	0	266	0	0	182	0	0	210	0	0	203	0
Confl. Peds. (#/hr)	5		11	11		5	7		34	34		7
Confl. Bikes (#/hr)			3	3								
Heavy Vehicles (%)	4%	2%	0%	20%	1%	0%	12%	3%	8%	0%	3%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.42			0.42			0.46			0.46	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		744			744			857			841	
v/s Ratio Prot												
v/s Ratio Perm		c0.15			0.10			c0.11			0.11	
v/c Ratio		0.36			0.24			0.24			0.24	
Uniform Delay, d1		13.0			12.4			10.6			10.6	
Progression Factor		1.00			0.64			1.05			1.00	
Incremental Delay, d2		1.3			0.8			0.6			0.7	
Delay (s)		14.4			8.7			11.8			11.3	
Level of Service		B			A			B			B	
Approach Delay (s)		14.4			8.7			11.8			11.3	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	11.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.2%	ICU Level of Service	A
Analysis Period (min)	15		

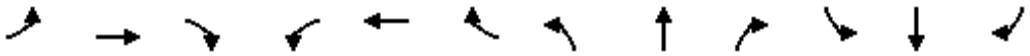
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	181	34	9	162	19	44	384	33	16	86	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.95	1.00		1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1465	2994		1302	3037		1529	3093		1492	2868	
Flt Permitted	0.63	1.00		0.60	1.00		0.68	1.00		0.48	1.00	
Satd. Flow (perm)	965	2994		827	3037		1093	3093		757	2868	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	201	38	10	180	21	49	427	37	18	96	19
RTOR Reduction (vph)	0	24	0	0	13	0	0	10	0	0	8	0
Lane Group Flow (vph)	27	215	0	10	188	0	49	454	0	18	107	0
Confl. Peds. (#/hr)	35		6	6		35	18					18
Confl. Bikes (#/hr)	14		32	32		14	23		7	7		23
Heavy Vehicles (%)	4%	4%	0%	22%	2%	6%	3%	2%	0%	7%	8%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0		39.0	39.0		39.0	39.0	
Effective Green, g (s)	19.0	19.0		19.0	19.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.58	0.58		0.58	0.58	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	282	875		242	888		639	1808		443	1677	
v/s Ratio Prot		c0.07			0.06			c0.15			0.04	
v/s Ratio Perm	0.03			0.01			0.04			0.02		
v/c Ratio	0.10	0.25		0.04	0.21		0.08	0.25		0.04	0.06	
Uniform Delay, d1	16.7	17.5		16.5	17.3		5.9	6.6		5.7	5.8	
Progression Factor	0.73	0.73		0.75	0.74		0.94	0.97		0.49	0.44	
Incremental Delay, d2	0.6	0.6		0.3	0.5		0.2	0.3		0.2	0.1	
Delay (s)	12.9	13.5		12.6	13.4		5.7	6.7		3.0	2.6	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		13.4			13.3			6.6			2.7	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	9.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.7%	ICU Level of Service	A
Analysis Period (min)	15		

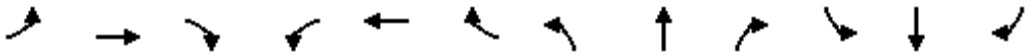
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	46	178	34	16	122	38	28	414	24	13	163	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	9	9	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.98		1.00	0.96			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1556	2952		1515	2868			1878			1807	
Flt Permitted	0.64	1.00		0.60	1.00			0.98			0.96	
Satd. Flow (perm)	1047	2952		965	2868			1839			1749	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	51	198	38	18	136	42	31	460	27	14	181	17
RTOR Reduction (vph)	0	23	0	0	25	0	0	3	0	0	5	0
Lane Group Flow (vph)	51	213	0	18	153	0	0	515	0	0	207	0
Confl. Peds. (#/hr)	10		29	29		10	17		10	10		17
Confl. Bikes (#/hr)									2	2		
Heavy Vehicles (%)	2%	4%	10%	0%	4%	0%	0%	8%	4%	0%	13%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Effective Green, g (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40			0.48			0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	419	1181		386	1147			877			834	
v/s Ratio Prot		c0.07			0.05							
v/s Ratio Perm	0.05			0.02				c0.28			0.12	
v/c Ratio	0.12	0.18		0.05	0.13			0.59			0.25	
Uniform Delay, d1	12.3	12.6		11.9	12.4			12.4			10.1	
Progression Factor	1.02	0.92		0.86	0.88			0.95			1.00	
Incremental Delay, d2	0.6	0.3		0.2	0.2			2.8			0.7	
Delay (s)	13.1	12.0		10.5	11.1			14.5			10.8	
Level of Service	B	B		B	B			B			B	
Approach Delay (s)		12.2			11.0			14.5			10.8	
Approach LOS		B			B			B			B	

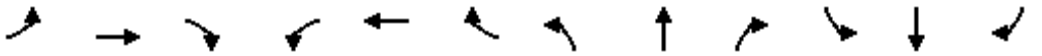
Intersection Summary			
HCM Average Control Delay	12.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



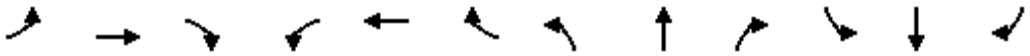
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	90	127	60	2	84	36	21	275	9	7	184	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	16	12	10	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.95		1.00	0.95			1.00			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1605	1879		1587	1870			1971			1933	
Flt Permitted	0.67	1.00		0.57	1.00			0.98			0.99	
Satd. Flow (perm)	1135	1879		950	1870			1928			1916	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	100	141	67	2	93	40	23	306	10	8	204	32
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	100	208	0	2	133	0	0	339	0	0	244	0
Confl. Peds. (#/hr)			8	8			1		8	8		1
Heavy Vehicles (%)	3%	3%	2%	0%	6%	0%	0%	3%	0%	0%	4%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Effective Green, g (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Actuated g/C Ratio	0.31	0.31		0.31	0.31			0.57			0.57	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	349	578		292	575			1097			1091	
v/s Ratio Prot		c0.11			0.07							
v/s Ratio Perm	0.09			0.00				c0.18			0.13	
v/c Ratio	0.29	0.36		0.01	0.23			0.31			0.22	
Uniform Delay, d1	17.1	17.5		15.6	16.8			7.3			6.9	
Progression Factor	0.91	0.90		0.89	0.92			0.96			1.00	
Incremental Delay, d2	2.0	1.7		0.0	0.9			0.7			0.5	
Delay (s)	17.5	17.5		14.0	16.4			7.7			7.4	
Level of Service	B	B		B	B			A			A	
Approach Delay (s)		17.5			16.3			7.7			7.4	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	122	9	55	1	3	12	40	492	6	2	201	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	10	11	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.97		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	0.98	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.87		1.00	0.88		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1603	1672		1710	1422		1491	1631	1392	1649	1907	1427
Flt Permitted	0.75	1.00		0.71	1.00		0.62	1.00	1.00	0.37	1.00	1.00
Satd. Flow (perm)	1260	1672		1279	1422		971	1631	1392	648	1907	1427
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	136	10	61	1	3	13	44	547	7	2	223	56
RTOR Reduction (vph)	0	44	0	0	9	0	0	0	3	0	0	22
Lane Group Flow (vph)	136	27	0	1	7	0	44	547	4	2	223	34
Confl. Peds. (#/hr)	9					9	1		6	6		1
Heavy Vehicles (%)	5%	14%	5%	0%	67%	12%	7%	3%	0%	0%	7%	5%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	17.0	17.0		17.0	17.0		39.0	39.0	39.0	39.0	39.0	39.0
Effective Green, g (s)	18.0	18.0		18.0	18.0		39.0	39.0	39.0	39.0	39.0	39.0
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.60	0.60	0.60	0.60	0.60	0.60
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	349	463		354	394		583	979	835	389	1144	856
v/s Ratio Prot		0.02			0.00			c0.34			0.12	
v/s Ratio Perm	c0.11			0.00			0.05		0.00	0.00		0.02
v/c Ratio	0.39	0.06		0.00	0.02		0.08	0.56	0.01	0.01	0.19	0.04
Uniform Delay, d1	19.0	17.3		17.0	17.1		5.4	7.8	5.2	5.2	5.9	5.3
Progression Factor	1.47	2.42		1.00	1.00		1.17	1.10	1.32	1.00	1.00	1.00
Incremental Delay, d2	3.2	0.2		0.0	0.1		0.2	1.7	0.0	0.0	0.4	0.1
Delay (s)	31.1	42.0		17.0	17.1		6.5	10.3	6.9	5.2	6.3	5.4
Level of Service	C	D		B	B		A	B	A	A	A	A
Approach Delay (s)		34.8			17.1			10.0			6.1	
Approach LOS		C			B			A			A	

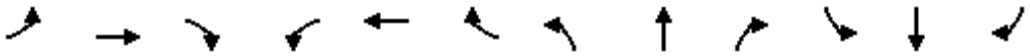
Intersection Summary			
HCM Average Control Delay	13.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	240	76	124	376	0	0	0	0	74	305	361
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)		4.0		3.0	3.0					5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	
Frpb, ped/bikes		0.99		1.00	1.00					1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Frt		0.96		1.00	1.00					1.00	0.92	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		2826		1621	3288					1574	2907	
Flt Permitted		1.00		0.50	1.00					0.95	1.00	
Satd. Flow (perm)		2826		848	3288					1574	2907	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	253	80	131	396	0	0	0	0	78	321	380
RTOR Reduction (vph)	0	30	0	0	0	0	0	0	0	0	214	0
Lane Group Flow (vph)	0	303	0	131	396	0	0	0	0	78	487	0
Confl. Peds. (#/hr)	14		32	32		14	14					14
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	9%	4%	5%	4%	0%	0%	0%	0%	5%	2%	4%
Turn Type				D.P+P						custom		
Protected Phases		8		7	7 8					6	6	
Permitted Phases				8						6		
Actuated Green, G (s)		33.0		56.0	59.0					32.0	32.0	
Effective Green, g (s)		33.0		56.0	59.0					32.0	32.0	
Actuated g/C Ratio		0.33		0.56	0.59					0.32	0.32	
Clearance Time (s)		4.0		3.0						5.0	5.0	
Lane Grp Cap (vph)		933		653	1940					504	930	
v/s Ratio Prot		c0.11		0.05	c0.12					0.05	c0.17	
v/s Ratio Perm				0.07								
v/c Ratio		0.32		0.20	0.20					0.15	0.52	
Uniform Delay, d1		25.1		10.6	9.6					24.3	27.8	
Progression Factor		1.00		1.95	2.06					1.00	1.00	
Incremental Delay, d2		0.9		0.6	0.2					0.7	2.1	
Delay (s)		26.1		21.2	19.8					25.0	29.9	
Level of Service		C		C	B					C	C	
Approach Delay (s)		26.1			20.2			0.0			29.4	
Approach LOS		C			C			A			C	

Intersection Summary			
HCM Average Control Delay	25.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

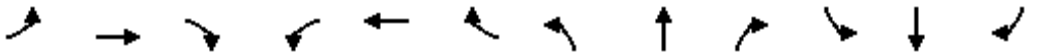
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	129	185	0	0	326	69	174	554	332	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	9	12	13	12	13	12	12	12
Total Lost time (s)	4.0	4.0			4.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.97		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1673	3054			2832		1750	1782	1514			
Flt Permitted	0.34	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	599	3054			2832		1750	1782	1514			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	136	195	0	0	343	73	183	583	349	0	0	0
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	234	0	0	0
Lane Group Flow (vph)	136	195	0	0	398	0	183	583	115	0	0	0
Confl. Peds. (#/hr)	14		16	16		14			1	1		
Confl. Bikes (#/hr)	1					1			1	1		
Heavy Vehicles (%)	2%	12%	0%	0%	5%	4%	1%	1%	3%	0%	0%	0%
Turn Type	pm+pt						custom		Perm			
Protected Phases	4	1 4			1		2	2				
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	54.0	58.0			21.0		33.0	33.0	33.0			
Effective Green, g (s)	54.0	58.0			21.0		33.0	33.0	33.0			
Actuated g/C Ratio	0.54	0.58			0.21		0.33	0.33	0.33			
Clearance Time (s)	4.0				4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	678	1771			595		578	588	500			
v/s Ratio Prot	c0.07	0.06			c0.14		0.10	c0.33				
v/s Ratio Perm	0.04								0.08			
v/c Ratio	0.20	0.11			0.67		0.32	0.99	0.23			
Uniform Delay, d1	11.8	9.4			36.3		25.1	33.4	24.3			
Progression Factor	0.25	0.25			1.00		0.75	0.79	1.91			
Incremental Delay, d2	0.6	0.1			5.9		0.9	27.8	0.7			
Delay (s)	3.5	2.5			42.2		19.8	54.1	47.1			
Level of Service	A	A			D		B	D	D			
Approach Delay (s)		2.9			42.2			46.3			0.0	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM Average Control Delay	37.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

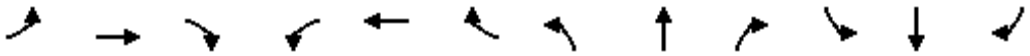
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	463	372	34	592	0	0	0	0	4	216	196
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	11	12	12	12	12	10	10	12
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	1.00
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.93		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3108		1613	3273					1596	3160	1443
Flt Permitted		1.00		0.16	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3108		279	3273					1596	3160	1443
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	482	388	35	617	0	0	0	0	4	225	204
RTOR Reduction (vph)	0	145	0	0	0	0	0	0	0	0	0	135
Lane Group Flow (vph)	0	725	0	35	617	0	0	0	0	4	225	69
Confl. Peds. (#/hr)	22		3	3		22						
Confl. Bikes (#/hr)	4					4			32	32		
Heavy Vehicles (%)	0%	2%	2%	6%	1%	0%	0%	0%	0%	0%	1%	6%
Turn Type				pm+pt						Split		Prot
Protected Phases		8		7	7 8					6	6	6
Permitted Phases				7 8								
Actuated Green, G (s)		36.0		54.0	58.0					34.0	34.0	34.0
Effective Green, g (s)		36.0		54.0	58.0					34.0	34.0	34.0
Actuated g/C Ratio		0.36		0.54	0.58					0.34	0.34	0.34
Clearance Time (s)		4.0		4.0						4.0	4.0	4.0
Lane Grp Cap (vph)		1119		391	1898					543	1074	491
v/s Ratio Prot		c0.23		0.02	c0.19					0.00	c0.07	0.05
v/s Ratio Perm				0.03								
v/c Ratio		0.65		0.09	0.33					0.01	0.21	0.14
Uniform Delay, d1		26.7		12.5	10.9					21.8	23.5	22.9
Progression Factor		1.00		0.54	0.68					0.73	0.79	0.92
Incremental Delay, d2		2.9		0.2	0.2					0.0	0.4	0.5
Delay (s)		29.6		7.0	7.6					16.0	18.8	21.5
Level of Service		C		A	A					B	B	C
Approach Delay (s)		29.6			7.6			0.0			20.1	
Approach LOS		C			A			A			C	

Intersection Summary			
HCM Average Control Delay	20.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.6%	ICU Level of Service	E
Analysis Period (min)	15		

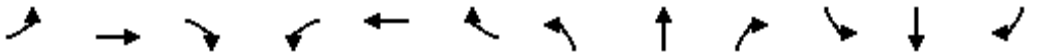
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	407	60	0	0	57	5	569	646	62	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	10	12	11	11	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	0.91	0.91			0.95		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	1.00			
Flpb, ped/bikes	0.99	0.99			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.99		1.00	1.00	0.85			
Flt Protected	0.95	0.96			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1444	3041			3079		1555	1637	1500			
Flt Permitted	0.71	0.74			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	1084	2338			3079		1555	1637	1500			
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	420	62	0	0	59	5	587	666	64	0	0	0
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	38	0	0	0
Lane Group Flow (vph)	210	272	0	0	60	0	587	666	26	0	0	0
Confl. Peds. (#/hr)	30		2	2		30			4	4		
Confl. Bikes (#/hr)	3					3			2	2		
Heavy Vehicles (%)	3%	2%	0%	0%	2%	0%	1%	1%	2%	0%	0%	0%
Turn Type	pm+pt						custom		custom			
Protected Phases	4	1 4			1		2	2	2			
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Effective Green, g (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Actuated g/C Ratio	0.51	0.51			0.15		0.37	0.37	0.37			
Clearance Time (s)	4.0				4.0		4.0	4.0	4.0			
Lane Grp Cap (vph)	682	1445			462		575	606	555			
v/s Ratio Prot	c0.11	0.07			0.02		0.38	c0.41	0.02			
v/s Ratio Perm	c0.05	0.03										
v/c Ratio	0.31	0.19			0.13		1.02	1.10	0.05			
Uniform Delay, d1	14.0	13.3			36.8		31.5	31.5	20.2			
Progression Factor	0.23	0.25			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.8	0.2			0.6		42.9	66.6	0.2			
Delay (s)	4.1	3.5			37.4		74.4	98.1	20.4			
Level of Service	A	A			D		E	F	C			
Approach Delay (s)		3.8			37.4			83.8			0.0	
Approach LOS		A			D			F			A	

Intersection Summary			
HCM Average Control Delay	61.5	HCM Level of Service	E
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.6%	ICU Level of Service	E
Analysis Period (min)	15		

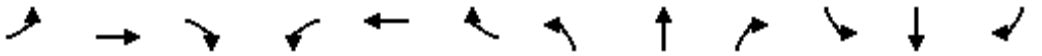
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	163	289	70	67	191	116	43	1151	97	96	476	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	9	10	9	9	10	9
Total Lost time (s)		4.0			4.0		4.0	3.5	4.0	4.0	3.5	4.0
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00			0.98		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.98			0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.98			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		2843			2772		1447	3069	1336	1494	2956	1270
Flt Permitted		0.66			0.78		0.39	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)		1909			2178		600	3069	1336	197	2956	1270
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	170	301	73	70	199	121	45	1199	101	100	496	44
RTOR Reduction (vph)	0	14	0	0	61	0	0	0	38	0	0	27
Lane Group Flow (vph)	0	530	0	0	329	0	45	1199	63	100	496	17
Confl. Peds. (#/hr)	49		20	20		49	26		8	8		26
Confl. Bikes (#/hr)	2					2						
Heavy Vehicles (%)	10%	7%	4%	9%	7%	5%	6%	4%	0%	3%	8%	5%
Turn Type	pm+pt			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		35.0			27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)		36.0			28.0		36.0	33.5	33.0	36.0	33.5	33.0
Actuated g/C Ratio		0.42			0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)		5.0			5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)		874			717		294	1210	519	144	1165	493
v/s Ratio Prot		c0.04					0.01	c0.39		c0.03	0.17	
v/s Ratio Perm		0.21			c0.15		0.06		0.05	0.26		0.01
v/c Ratio		0.61			0.46		0.15	0.99	0.12	0.69	0.43	0.03
Uniform Delay, d1		19.0			22.5		14.7	25.6	16.7	19.1	18.7	16.1
Progression Factor		1.00			1.00		1.32	0.87	1.41	1.83	1.64	3.16
Incremental Delay, d2		3.1			2.1		0.6	17.5	0.3	22.2	1.0	0.1
Delay (s)		22.1			24.6		20.1	39.9	23.8	57.2	31.8	51.1
Level of Service		C			C		C	D	C	E	C	D
Approach Delay (s)		22.1			24.6			38.0			37.1	
Approach LOS		C			C			D			D	

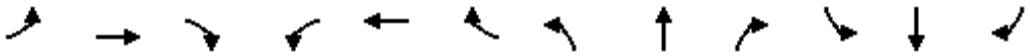
Intersection Summary			
HCM Average Control Delay	33.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	81.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	44	467	0	0	346	82	28	63	101	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.97			0.93				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		1707			1670			1581				
Flt Permitted		0.94			1.00			0.99				
Satd. Flow (perm)		1604			1670			1581				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	49	519	0	0	384	91	31	70	112	0	0	0
RTOR Reduction (vph)	0	0	0	0	13	0	0	61	0	0	0	0
Lane Group Flow (vph)	0	568	0	0	462	0	0	152	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		34.0			34.0			23.0				
Effective Green, g (s)		34.0			34.0			23.0				
Actuated g/C Ratio		0.52			0.52			0.35				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		839			874			559				
v/s Ratio Prot					0.28							
v/s Ratio Perm		c0.35						0.10				
v/c Ratio		0.68			0.53			0.27				
Uniform Delay, d1		11.4			10.2			15.0				
Progression Factor		1.00			0.66			1.00				
Incremental Delay, d2		4.4			1.8			1.2				
Delay (s)		15.8			8.5			16.2				
Level of Service		B			A			B				
Approach Delay (s)		15.8			8.5			16.2			0.0	
Approach LOS		B			A			B			A	

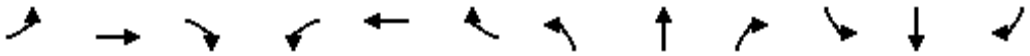
Intersection Summary			
HCM Average Control Delay	13.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	74.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	45	418	34	20	425	49	26	175	35	51	107	21
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.99			0.98			0.98	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1886			1843			3185			3148	
Flt Permitted		0.93			0.97			0.91			0.83	
Satd. Flow (perm)		1759			1795			2928			2639	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	50	464	38	22	472	54	29	194	39	57	119	23
RTOR Reduction (vph)	0	4	0	0	6	0	0	22	0	0	13	0
Lane Group Flow (vph)	0	548	0	0	542	0	0	240	0	0	186	0
Confl. Peds. (#/hr)	29		16	16		29	28		14	14		28
Confl. Bikes (#/hr)	1					1	1					1
Heavy Vehicles (%)	3%	7%	4%	12%	8%	13%	0%	4%	4%	4%	4%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0			27.0			27.0	
Effective Green, g (s)		30.0			30.0			27.0			27.0	
Actuated g/C Ratio		0.46			0.46			0.42			0.42	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		812			828			1216			1096	
v/s Ratio Prot												
v/s Ratio Perm		c0.31			0.30			c0.08			0.07	
v/c Ratio		0.67			0.65			0.20			0.17	
Uniform Delay, d1		13.7			13.5			12.1			11.9	
Progression Factor		0.67			0.55			0.87			0.55	
Incremental Delay, d2		3.5			3.9			0.4			0.3	
Delay (s)		12.7			11.3			10.9			6.9	
Level of Service		B			B			B			A	
Approach Delay (s)		12.7			11.3			10.9			6.9	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	11.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	81.1%	ICU Level of Service	D
Analysis Period (min)	15		

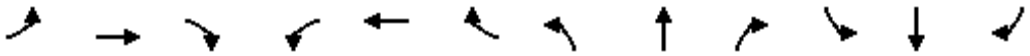
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	52	281	23	28	347	61	55	319	89	48	96	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	9	10	10	9	10	10	12	10	10	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.98		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1503	2933		1584	2945		1497	3034		1594	2899	
Flt Permitted	0.43	1.00		0.53	1.00		0.66	1.00		0.48	1.00	
Satd. Flow (perm)	684	2933		884	2945		1046	3034		809	2899	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	58	312	26	31	386	68	61	354	99	53	107	32
RTOR Reduction (vph)	0	9	0	0	22	0	0	39	0	0	15	0
Lane Group Flow (vph)	58	329	0	31	432	0	61	414	0	53	124	0
Confl. Peds. (#/hr)	25		14	14		25	12		4	4		12
Confl. Bikes (#/hr)	1					1			1	1		
Heavy Vehicles (%)	5%	7%	12%	0%	6%	2%	6%	1%	3%	0%	4%	12%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	232	993		299	997		563	1634		436	1561	
v/s Ratio Prot		0.11			c0.15			c0.14			0.04	
v/s Ratio Perm	0.08			0.04			0.06			0.07		
v/c Ratio	0.25	0.33		0.10	0.43		0.11	0.25		0.12	0.08	
Uniform Delay, d1	15.5	16.0		14.7	16.7		7.4	8.0		7.4	7.2	
Progression Factor	0.58	0.55		0.76	0.79		0.68	0.68		1.30	1.35	
Incremental Delay, d2	2.1	0.7		0.7	1.3		0.4	0.4		0.6	0.1	
Delay (s)	11.1	9.6		11.9	14.5		5.4	5.8		10.2	9.8	
Level of Service	B	A		B	B		A	A		B	A	
Approach Delay (s)		9.8			14.3			5.7			9.9	
Approach LOS		A			B			A			A	

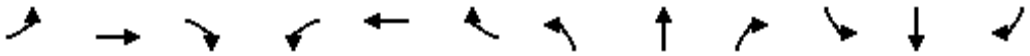
Intersection Summary			
HCM Average Control Delay	9.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	84	393	28	37	371	82	20	308	44	41	118	41
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	9	10	9	9	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00			0.99	
Flpb, ped/bikes	0.97	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.97			0.98			0.97	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1385	3013		1335	3540			3438			3303	
Flt Permitted	0.46	1.00		0.48	1.00			0.94			0.84	
Satd. Flow (perm)	665	3013		672	3540			3226			2808	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	88	414	29	39	391	86	21	324	46	43	124	43
RTOR Reduction (vph)	0	8	0	0	29	0	0	16	0	0	26	0
Lane Group Flow (vph)	88	435	0	39	448	0	0	375	0	0	184	0
Confl. Peds. (#/hr)	53		34	34		53	67		28	28		67
Heavy Vehicles (%)	8%	5%	0%	14%	6%	1%	0%	9%	20%	5%	15%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Effective Green, g (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48			0.40			0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	317	1437		320	1688			1290			1123	
v/s Ratio Prot		c0.14			0.13							
v/s Ratio Perm	0.13			0.06				c0.12			0.07	
v/c Ratio	0.28	0.30		0.12	0.27			0.29			0.16	
Uniform Delay, d1	10.2	10.4		9.4	10.2			13.2			12.5	
Progression Factor	1.59	1.63		0.78	0.77			0.36			0.64	
Incremental Delay, d2	2.1	0.5		0.7	0.3			0.5			0.3	
Delay (s)	18.4	17.5		8.1	8.1			5.3			8.3	
Level of Service	B	B		A	A			A			A	
Approach Delay (s)		17.7			8.1			5.3			8.3	
Approach LOS		B			A			A			A	

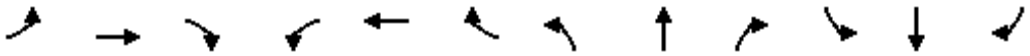
Intersection Summary			
HCM Average Control Delay	10.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	99	303	100	104	357	104	88	84	88	88	84	82
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	16	12	12	16	12
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		0.95			1.00			1.00	
Frt		1.00	0.85		0.97			0.95			0.96	
Flt Protected		0.99	1.00		0.99			0.98			0.98	
Satd. Flow (prot)		1637	1409		3034			1823			1826	
Flt Permitted		0.74	1.00		0.76			0.79			0.78	
Satd. Flow (perm)		1227	1409		2325			1456			1442	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	110	337	111	116	397	116	98	93	98	98	93	91
RTOR Reduction (vph)	0	0	53	0	30	0	0	28	0	0	26	0
Lane Group Flow (vph)	0	447	58	0	599	0	0	261	0	0	256	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		34.0	34.0		34.0			21.0			21.0	
Effective Green, g (s)		34.0	34.0		34.0			21.0			21.0	
Actuated g/C Ratio		0.52	0.52		0.52			0.32			0.32	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Grp Cap (vph)		642	737		1216			470			466	
v/s Ratio Prot												
v/s Ratio Perm		c0.36	0.04		0.26			c0.18			0.18	
v/c Ratio		0.70	0.08		0.49			0.55			0.55	
Uniform Delay, d1		11.6	7.7		10.0			18.1			18.1	
Progression Factor		2.01	5.71		0.41			1.00			1.00	
Incremental Delay, d2		6.0	0.2		1.4			4.7			4.6	
Delay (s)		29.3	44.2		5.5			22.8			22.7	
Level of Service		C	D		A			C			C	
Approach Delay (s)		32.3			5.5			22.8			22.7	
Approach LOS		C			A			C			C	

Intersection Summary			
HCM Average Control Delay	19.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	72.3%	ICU Level of Service	C
Analysis Period (min)	15		

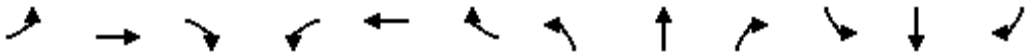
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	74	384	21	15	442	63	37	103	41	43	90	98
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	15	8	16	8	8	16	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00			0.99	
Flpb, ped/bikes	0.99	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.98			0.97			0.94	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1475	3018		1573	3002			3454			3403	
Flt Permitted	0.39	1.00		0.46	1.00			0.87			0.88	
Satd. Flow (perm)	606	3018		768	3002			3030			3014	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	82	427	23	17	491	70	41	114	46	48	100	109
RTOR Reduction (vph)	0	6	0	0	17	0	0	25	0	0	60	0
Lane Group Flow (vph)	82	444	0	17	544	0	0	176	0	0	197	0
Confl. Peds. (#/hr)	22		40	40		22	18		3	3		18
Confl. Bikes (#/hr)			2	2			1					1
Heavy Vehicles (%)	7%	5%	0%	0%	4%	2%	0%	3%	22%	0%	3%	8%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	28.0	28.0		28.0	28.0			29.0			29.0	
Effective Green, g (s)	28.0	28.0		28.0	28.0			29.0			29.0	
Actuated g/C Ratio	0.43	0.43		0.43	0.43			0.45			0.45	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	261	1300		331	1293			1352			1345	
v/s Ratio Prot		0.15			c0.18							
v/s Ratio Perm	0.14			0.02				0.06			c0.07	
v/c Ratio	0.31	0.34		0.05	0.42			0.13			0.15	
Uniform Delay, d1	12.2	12.3		10.8	12.9			10.6			10.7	
Progression Factor	0.97	1.00		1.15	0.99			0.99			0.80	
Incremental Delay, d2	2.4	0.5		0.1	0.5			0.2			0.2	
Delay (s)	14.2	12.8		12.5	13.2			10.7			8.8	
Level of Service	B	B		B	B			B			A	
Approach Delay (s)		13.0			13.2			10.7			8.8	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	12.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

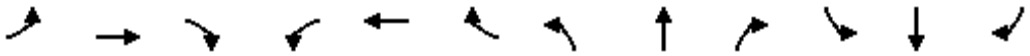


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	86	456	73	94	464	284	48	332	92	222	159	52
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.98			0.95			0.97			0.98	
Flt Protected		0.99			0.99			0.99			0.98	
Satd. Flow (prot)		3177			3075			3146			3118	
Flt Permitted		0.63			0.74			0.88			0.63	
Satd. Flow (perm)		2018			2281			2771			2008	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	96	507	81	104	516	316	53	369	102	247	177	58
RTOR Reduction (vph)	0	16	0	0	99	0	0	33	0	0	17	0
Lane Group Flow (vph)	0	668	0	0	837	0	0	491	0	0	465	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		26.0			26.0			29.0			20.0	
Effective Green, g (s)		26.0			26.0			29.0			20.0	
Actuated g/C Ratio		0.40			0.40			0.45			0.31	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		807			912			1271			618	
v/s Ratio Prot								c0.04				
v/s Ratio Perm		0.33			c0.37			0.14			c0.23	
v/c Ratio		0.83			0.92			0.39			0.96dl	
Uniform Delay, d1		17.5			18.5			12.0			20.3	
Progression Factor		1.74			1.00			1.00			0.89	
Incremental Delay, d2		9.4			15.5			0.9			8.3	
Delay (s)		39.7			34.0			12.9			26.3	
Level of Service		D			C			B			C	
Approach Delay (s)		39.7			34.0			12.9			26.3	
Approach LOS		D			C			B			C	

Intersection Summary			
HCM Average Control Delay	29.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	88.6%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

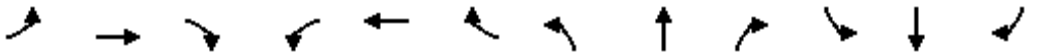
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	724	119	45	759	0	137	0	70	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	10	10	12	12	12	12	10	10	10
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			1.00				
Frt		0.98			1.00			0.95				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		2976			3032			1583				
Flt Permitted		1.00			0.84			0.80				
Satd. Flow (perm)		2976			2543			1310				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	804	132	50	843	0	152	0	78	0	0	0
RTOR Reduction (vph)	0	18	0	0	0	0	0	21	0	0	0	0
Lane Group Flow (vph)	0	918	0	0	893	0	0	209	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	custom			Perm			Perm			Perm		
Protected Phases		4 5 6 11			8			2			2	
Permitted Phases	4 6 11			8			2			2		
Actuated Green, G (s)		65.0			33.0			16.0				
Effective Green, g (s)		58.0			33.0			16.0				
Actuated g/C Ratio		0.64			0.37			0.18				
Clearance Time (s)					5.0			5.0				
Lane Grp Cap (vph)		1918			932			233				
v/s Ratio Prot		c0.31										
v/s Ratio Perm					c0.35			c0.16				
v/c Ratio		0.48			0.96			0.90				
Uniform Delay, d1		8.2			27.8			36.2				
Progression Factor		0.04			1.57			1.00				
Incremental Delay, d2		0.4			18.9			37.6				
Delay (s)		0.7			62.5			73.8				
Level of Service		A			E			E				
Approach Delay (s)		0.7			62.5			73.8			0.0	
Approach LOS		A			E			E			A	

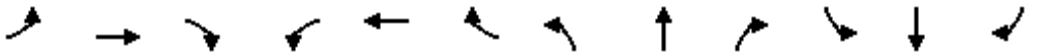
Intersection Summary			
HCM Average Control Delay	35.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	73.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	123	502	188	274	646	183	103	20	185	78	7	77
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	10	12	12	12	12	16	12	12	12	12
Total Lost time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	1.00
Frt	1.00	0.96		1.00	1.00	0.85		0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (prot)	1520	3020		1629	3257	1457		1756		1629	1714	1457
Flt Permitted	0.32	1.00		0.20	1.00	1.00		0.89		0.40	1.00	1.00
Satd. Flow (perm)	508	3020		339	3257	1457		1581		690	1714	1457
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	137	558	209	304	718	203	114	22	206	87	8	86
RTOR Reduction (vph)	0	42	0	0	0	104	0	74	0	0	0	46
Lane Group Flow (vph)	137	725	0	304	718	99	0	268	0	87	8	40
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	40.0	30.6		47.6	35.2	43.8		20.8		32.4	32.4	41.8
Effective Green, g (s)	40.0	30.6		47.6	35.2	43.8		20.8		32.4	32.4	41.8
Actuated g/C Ratio	0.44	0.34		0.53	0.39	0.49		0.23		0.36	0.36	0.46
Clearance Time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Vehicle Extension (s)	4.0	3.0		4.0	3.0	3.0		4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	331	1027		380	1274	709		365		338	617	677
v/s Ratio Prot	0.04	0.24		c0.12	0.22	0.01				c0.02	0.00	0.01
v/s Ratio Perm	0.14			c0.30		0.05		c0.17		0.07		0.02
v/c Ratio	0.41	0.71		0.80	0.56	0.14		0.73		0.26	0.01	0.06
Uniform Delay, d1	15.4	25.8		14.8	21.4	12.7		32.0		21.2	18.5	13.3
Progression Factor	1.91	1.58		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	1.0	3.7		12.0	1.8	0.1		8.0		0.4	0.0	0.1
Delay (s)	30.5	44.5		26.8	23.2	12.8		40.0		21.6	18.5	13.3
Level of Service	C	D		C	C	B		D		C	B	B
Approach Delay (s)		42.3			22.4			40.0			17.5	
Approach LOS		D			C			D			B	

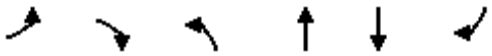
Intersection Summary			
HCM Average Control Delay	31.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	74.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	518	247	6	531	0	0	0	0	32	0	572
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	576	274	7	590	0	0	0	0	36	0	636
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		498										
pX, platoon unblocked												
vC, conflicting volume	590			576			884	1179	288	891	1179	295
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	590			576			884	1179	288	891	1179	295
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	100	100	85	100	8
cM capacity (veh/h)	961			973			19	184	700	231	184	692

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	288	288	274	203	393	36	636
Volume Left	0	0	0	7	0	36	0
Volume Right	0	0	274	0	0	0	636
cSH	1700	1700	1700	973	1700	231	692
Volume to Capacity	0.17	0.17	0.16	0.01	0.23	0.15	0.92
Queue Length 95th (ft)	0	0	0	1	0	13	307
Control Delay (s)	0.0	0.0	0.0	0.4	0.0	23.4	41.6
Lane LOS				A		C	E
Approach Delay (s)	0.0			0.1		40.6	
Approach LOS						E	

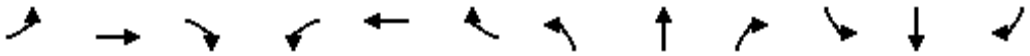
Intersection Summary				
Average Delay	12.9			
Intersection Capacity Utilization	59.7%	ICU Level of Service		B
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	550	0	537	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	611	0	597	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	306	306	597
Volume Left (vph)	306	306	597
Volume Right (vph)	0	0	0
Hadj (s)	0.58	0.58	0.29
Departure Headway (s)	7.0	7.0	5.8
Degree Utilization, x	0.59	0.59	0.95
Capacity (veh/h)	513	513	618
Control Delay (s)	18.3	18.3	49.2
Approach Delay (s)	18.3		49.2
Approach LOS	C		E

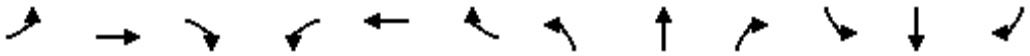
Intersection Summary			
Delay	33.5		
HCM Level of Service	D		
Intersection Capacity Utilization	54.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	353	46	127	326	0	0	0	0	72	15	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)		3.0		4.0	4.0						5.0	
Lane Util. Factor		0.95		1.00	0.95						0.95	
Frt		0.98		1.00	1.00						0.95	
Flt Protected		1.00		0.95	1.00						0.97	
Satd. Flow (prot)		3094		1574	3149						3014	
Flt Permitted		1.00		0.44	1.00						0.97	
Satd. Flow (perm)		3094		730	3149						3014	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	392	51	141	362	0	0	0	0	80	17	47
RTOR Reduction (vph)	0	12	0	0	0	0	0	0	0	0	32	0
Lane Group Flow (vph)	0	431	0	141	362	0	0	0	0	0	112	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type				pm+pt						Split		
Protected Phases		4		3	8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		36.0		49.0	49.0						27.0	
Effective Green, g (s)		36.0		49.0	49.0						27.0	
Actuated g/C Ratio		0.42		0.58	0.58						0.32	
Clearance Time (s)		3.0		4.0	4.0						5.0	
Lane Grp Cap (vph)		1310		520	1815						957	
v/s Ratio Prot		c0.14		c0.03	0.11						c0.04	
v/s Ratio Perm				0.12								
v/c Ratio		0.33		0.27	0.20						0.12	
Uniform Delay, d1		16.4		11.5	8.6						20.6	
Progression Factor		1.00		0.27	0.24						1.00	
Incremental Delay, d2		0.7		1.2	0.2						0.2	
Delay (s)		17.1		4.4	2.3						20.8	
Level of Service		B		A	A						C	
Approach Delay (s)		17.1			2.9			0.0			20.8	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	11.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	34.2%	ICU Level of Service	A
Analysis Period (min)	15		

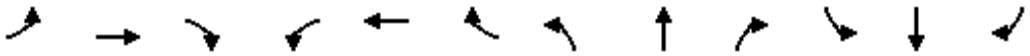
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	68	357	0	0	404	76	49	65	45	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	11	11	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0			3.0			5.0				
Lane Util. Factor	1.00	0.95			0.95			0.91				
Frt	1.00	1.00			0.98			0.96				
Flt Protected	0.95	1.00			1.00			0.98				
Satd. Flow (prot)	1629	3257			3074			4413				
Flt Permitted	0.38	1.00			1.00			0.98				
Satd. Flow (perm)	650	3257			3074			4413				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	76	397	0	0	449	84	54	72	50	0	0	0
RTOR Reduction (vph)	0	0	0	0	18	0	0	34	0	0	0	0
Lane Group Flow (vph)	76	397	0	0	515	0	0	142	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	pm+pt						Split					
Protected Phases	7	4			8		2	2				
Permitted Phases	4											
Actuated Green, G (s)	48.0	48.0			35.0			27.0				
Effective Green, g (s)	48.0	48.0			35.0			27.0				
Actuated g/C Ratio	0.56	0.56			0.41			0.32				
Clearance Time (s)	5.0	5.0			3.0			5.0				
Lane Grp Cap (vph)	482	1839			1266			1402				
v/s Ratio Prot	0.02	c0.12			c0.17			c0.03				
v/s Ratio Perm	0.07											
v/c Ratio	0.16	0.22			0.41			0.10				
Uniform Delay, d1	12.2	9.2			17.7			20.4				
Progression Factor	0.33	0.32			1.00			1.00				
Incremental Delay, d2	0.7	0.3			1.0			0.1				
Delay (s)	4.6	3.2			18.6			20.6				
Level of Service	A	A			B			C				
Approach Delay (s)		3.5			18.6			20.6			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM Average Control Delay	12.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	34.2%	ICU Level of Service	A
Analysis Period (min)	15		

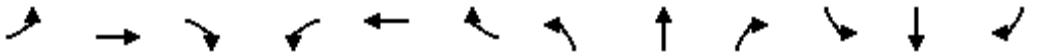
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	323	39	34	247	31	118	85	61	58	91	126
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	12	15	12	12	15	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		0.99			0.99			0.97			0.94	
Flt Protected		1.00			0.99			0.98			0.99	
Satd. Flow (prot)		2982			2979			1787			1750	
Flt Permitted		0.89			0.87			0.75			0.88	
Satd. Flow (perm)		2664			2613			1378			1560	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	43	359	43	38	274	34	131	94	68	64	101	140
RTOR Reduction (vph)	0	12	0	0	13	0	0	17	0	0	47	0
Lane Group Flow (vph)	0	433	0	0	333	0	0	276	0	0	258	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		23.0			23.0			32.0			32.0	
Effective Green, g (s)		23.0			23.0			32.0			32.0	
Actuated g/C Ratio		0.35			0.35			0.49			0.49	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		943			925			678			768	
v/s Ratio Prot												
v/s Ratio Perm		c0.16			0.13			c0.20			0.17	
v/c Ratio		0.46			0.36			0.41			0.34	
Uniform Delay, d1		16.2			15.6			10.5			10.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.6			1.1			1.8			1.2	
Delay (s)		17.8			16.6			12.3			11.2	
Level of Service		B			B			B			B	
Approach Delay (s)		17.8			16.6			12.3			11.2	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	14.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	63.7%	ICU Level of Service	B
Analysis Period (min)	15		

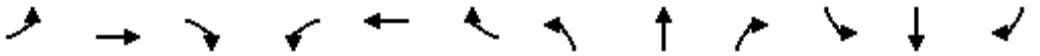
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	196	202	39	50	176	62	71	1009	70	75	430	87
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	12	10	16	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.96
Flpb, ped/bikes	0.99	1.00		1.00	1.00		0.99	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1548	3005		1592	3512		1486	3040	1347	1494	3011	1271
Flt Permitted	0.59	1.00		0.58	1.00		0.43	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	954	3005		975	3512		673	3040	1347	197	3011	1271
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	206	213	41	53	185	65	75	1062	74	79	453	92
RTOR Reduction (vph)	0	19	0	0	41	0	0	0	43	0	0	56
Lane Group Flow (vph)	206	235	0	53	209	0	75	1062	31	79	453	36
Confl. Peds. (#/hr)	31		7	7		31	37		12	12		37
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	2%	4%	0%	0%	6%	2%	3%	5%	0%	3%	6%	4%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	32.0	27.0		32.0	27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)	30.0	28.0		30.0	28.0		36.0	33.0	33.0	36.0	33.0	33.0
Actuated g/C Ratio	0.35	0.33		0.35	0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	365	990		373	1157		323	1180	523	144	1169	493
v/s Ratio Prot	c0.03	0.08		0.01	0.06		0.01	c0.35		c0.03	0.15	
v/s Ratio Perm	c0.17			0.04			0.09		0.02	0.21		0.03
v/c Ratio	0.56	0.24		0.14	0.18		0.23	0.90	0.06	0.55	0.39	0.07
Uniform Delay, d1	21.3	20.7		18.4	20.3		15.0	24.4	16.3	17.5	18.7	16.4
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	2.00	0.61	0.80
Incremental Delay, d2	6.2	0.6		0.8	0.3		1.7	11.0	0.2	12.9	0.9	0.3
Delay (s)	27.5	21.3		19.2	20.7		16.7	35.5	16.5	47.9	12.3	13.4
Level of Service	C	C		B	C		B	D	B	D	B	B
Approach Delay (s)		24.1			20.4			33.1			16.9	
Approach LOS		C			C			C			B	

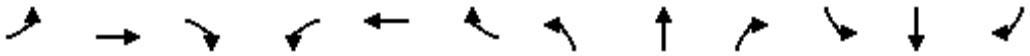
Intersection Summary			
HCM Average Control Delay	26.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	72.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	256	18	14	216	8	35	121	25	20	59	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	16	12	12	16	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00	0.99		1.00	0.98
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		0.99	1.00
Satd. Flow (prot)		1929	1382		1950	1331		1973	1452		1928	1430
Flt Permitted		0.94	1.00		0.98	1.00		0.94	1.00		0.93	1.00
Satd. Flow (perm)		1823	1382		1910	1331		1866	1452		1811	1430
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	42	269	19	15	227	8	37	127	26	21	62	44
RTOR Reduction (vph)	0	0	10	0	0	4	0	0	15	0	0	26
Lane Group Flow (vph)	0	311	9	0	242	4	0	164	11	0	83	18
Confl. Peds. (#/hr)	5		21	21		5	9		1	1		9
Heavy Vehicles (%)	5%	5%	6%	7%	4%	12%	6%	1%	4%	0%	6%	5%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Effective Green, g (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Actuated g/C Ratio		0.46	0.46		0.46	0.46		0.42	0.42		0.42	0.42
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		841	638		882	614		775	603		752	594
v/s Ratio Prot												
v/s Ratio Perm		c0.17	0.01		0.13	0.00		c0.09	0.01		0.05	0.01
v/c Ratio		0.37	0.01		0.27	0.01		0.21	0.02		0.11	0.03
Uniform Delay, d1		11.4	9.5		10.8	9.4		12.2	11.2		11.6	11.3
Progression Factor		1.00	1.00		0.46	0.37		1.16	1.42		0.95	0.86
Incremental Delay, d2		1.3	0.0		0.8	0.0		0.6	0.1		0.3	0.1
Delay (s)		12.6	9.5		5.8	3.5		14.8	15.9		11.3	9.8
Level of Service		B	A		A	A		B	B		B	A
Approach Delay (s)		12.4			5.7			14.9			10.8	
Approach LOS		B			A			B			B	

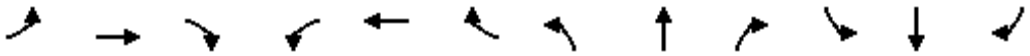
Intersection Summary			
HCM Average Control Delay	10.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	66	285	10	17	211	34	13	247	35	47	70	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.98		1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1520	3025		1520	2976		1520	2983		1520	2904	
Flt Permitted	0.95	1.00		0.55	1.00		0.68	1.00		0.54	1.00	
Satd. Flow (perm)	1520	3025		886	2976		1091	2983		871	2904	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	73	317	11	19	234	38	14	274	39	52	78	33
RTOR Reduction (vph)	0	4	0	0	20	0	0	17	0	0	19	0
Lane Group Flow (vph)	73	324	0	19	252	0	14	296	0	52	92	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Prot			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Effective Green, g (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.11	0.49		0.34	0.34		0.42	0.42		0.42	0.42	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	164	1489		300	1007		453	1239		362	1206	
v/s Ratio Prot	c0.05	0.11			c0.08			c0.10			0.03	
v/s Ratio Perm				0.02			0.01			0.06		
v/c Ratio	0.45	0.22		0.06	0.25		0.03	0.24		0.14	0.08	
Uniform Delay, d1	27.2	9.4		14.5	15.5		11.3	12.3		11.8	11.5	
Progression Factor	0.85	0.49		0.85	0.82		0.54	0.55		1.15	1.16	
Incremental Delay, d2	8.3	0.3		0.4	0.6		0.1	0.4		0.8	0.1	
Delay (s)	31.5	4.9		12.8	13.4		6.2	7.2		14.4	13.4	
Level of Service	C	A		B	B		A	A		B	B	
Approach Delay (s)		9.8			13.4			7.2			13.7	
Approach LOS		A			B			A			B	

Intersection Summary			
HCM Average Control Delay	10.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	37.0%	ICU Level of Service	A
Analysis Period (min)	15		

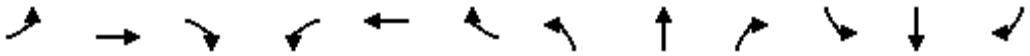
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	37	253	85	242	216	43	43	297	56	25	185	25
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.96		1.00	0.97			0.98			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1520	2926		1520	2964			3171			3188	
Flt Permitted	0.58	1.00		0.95	1.00			0.90			0.89	
Satd. Flow (perm)	921	2926		1520	2964			2857			2857	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	41	281	94	269	240	48	48	330	62	28	206	28
RTOR Reduction (vph)	0	51	0	0	25	0	0	20	0	0	14	0
Lane Group Flow (vph)	41	324	0	269	263	0	0	420	0	0	248	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Prot			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4						2			6		
Actuated Green, G (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Effective Green, g (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Actuated g/C Ratio	0.31	0.31		0.09	0.45			0.38			0.38	
Clearance Time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	283	900		140	1322			1099			1099	
v/s Ratio Prot		c0.11		c0.18	0.09							
v/s Ratio Perm	0.04							c0.15			0.09	
v/c Ratio	0.14	0.36		1.92	0.20			0.38			0.23	
Uniform Delay, d1	16.3	17.5		29.5	10.9			14.4			13.5	
Progression Factor	0.64	0.55		1.32	1.10			1.26			0.81	
Incremental Delay, d2	1.1	1.1		433.0	0.2			0.2			0.5	
Delay (s)	11.5	10.7		472.0	12.3			18.4			11.4	
Level of Service	B	B		F	B			B			B	
Approach Delay (s)		10.8			234.3			18.4			11.4	
Approach LOS		B			F			B			B	

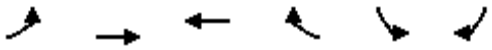
Intersection Summary			
HCM Average Control Delay	87.2	HCM Level of Service	F
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	56.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	16	298	14	70	466	70	34	94	162	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	14	12	10	15	10
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			0.95				
Frt		0.99			0.98			0.92				
Flt Protected		1.00			0.99			0.99				
Satd. Flow (prot)		1587			1566			3164				
Flt Permitted		0.97			0.92			0.99				
Satd. Flow (perm)		1535			1451			3164				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	18	331	16	78	518	78	38	104	180	0	0	0
RTOR Reduction (vph)	0	2	0	0	6	0	0	138	0	0	0	0
Lane Group Flow (vph)	0	363	0	0	668	0	0	184	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		41.9			41.9			15.1				
Effective Green, g (s)		41.9			41.9			15.1				
Actuated g/C Ratio		0.64			0.64			0.23				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		3.0			3.0			8.0				
Lane Grp Cap (vph)		989			935			735				
v/s Ratio Prot												
v/s Ratio Perm		0.24			c0.46			0.06				
v/c Ratio		0.37			0.71			0.25				
Uniform Delay, d1		5.4			7.6			20.3				
Progression Factor		1.70			1.00			1.00				
Incremental Delay, d2		1.0			4.6			0.8				
Delay (s)		10.1			12.3			21.1				
Level of Service		B			B			C				
Approach Delay (s)		10.1			12.3			21.1			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM Average Control Delay	13.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	72.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	96	364	469	44	66	134
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	101	383	494	46	69	141
Pedestrians		3	5		21	
Lane Width (ft)		16.0	16.0		10.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1319	491			
pX, platoon unblocked	0.87				0.87	0.87
vC, conflicting volume	561				1128	541
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	419				1072	396
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	89				63	75
cM capacity (veh/h)	932				185	557

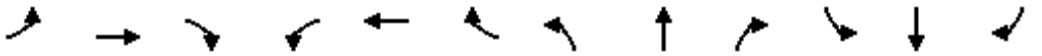
Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	484	540	69	141
Volume Left	101	0	69	0
Volume Right	0	46	0	141
cSH	932	1700	185	557
Volume to Capacity	0.11	0.32	0.37	0.25
Queue Length 95th (ft)	9	0	40	25
Control Delay (s)	3.0	0.0	35.6	13.6
Lane LOS	A		E	B
Approach Delay (s)	3.0	0.0	20.9	
Approach LOS			C	

Intersection Summary			
Average Delay	4.7		
Intersection Capacity Utilization	69.6%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	472	1	27	675	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0			4.0		
Lane Util. Factor	1.00			1.00		
Frt	1.00			1.00		
Flt Protected	1.00			1.00		
Satd. Flow (prot)	1714			1711		
Flt Permitted	1.00			0.97		
Satd. Flow (perm)	1714			1661		
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	524	1	30	750	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	525	0	0	780	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type			Perm			
Protected Phases	1 2 4			4	3	
Permitted Phases			4			
Actuated Green, G (s)	63.0			31.0		
Effective Green, g (s)	59.0			31.0		
Actuated g/C Ratio	0.69			0.36		
Clearance Time (s)				4.0		
Lane Grp Cap (vph)	1190			606		
v/s Ratio Prot	c0.31					
v/s Ratio Perm				c0.47		
v/c Ratio	0.44			1.29		
Uniform Delay, d1	5.7			27.0		
Progression Factor	0.06			1.00		
Incremental Delay, d2	0.1			141.4		
Delay (s)	0.4			168.4		
Level of Service	A			F		
Approach Delay (s)	0.4			168.4	0.0	
Approach LOS	A			F	A	

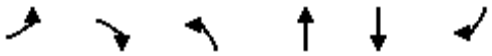
Intersection Summary			
HCM Average Control Delay	100.8	HCM Level of Service	F
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	63.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	184	193	25	561	0	0	0	0	3	0	263
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	204	214	28	623	0	0	0	0	3	0	292
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	623			204			991	991	209	781	883	623
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	623			204			991	991	209	781	883	623
tC, single (s)	4.1			5.5			7.5	6.5	6.9	7.5	6.5	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.9			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			100	100	100	99	100	31
cM capacity (veh/h)	968			985			62	241	803	282	279	424

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	136	283	651	3	292
Volume Left	0	0	28	3	0
Volume Right	0	214	0	0	292
cSH	1700	1700	985	282	424
Volume to Capacity	0.08	0.17	0.03	0.01	0.69
Queue Length 95th (ft)	0	0	2	1	127
Control Delay (s)	0.0	0.0	0.7	17.9	30.3
Lane LOS			A	C	D
Approach Delay (s)	0.0		0.7	30.2	
Approach LOS				D	

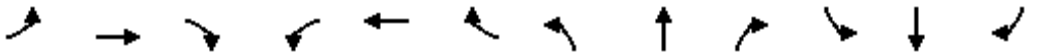
Intersection Summary			
Average Delay	6.9		
Intersection Capacity Utilization	57.9%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	187	0	586	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	208	0	651	0	0	0

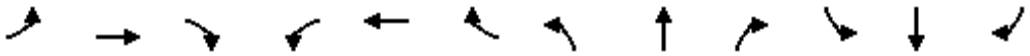
Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	104	104	651
Volume Left (vph)	104	104	651
Volume Right (vph)	0	0	0
Hadj (s)	0.58	0.58	0.29
Departure Headway (s)	6.8	6.8	4.9
Degree Utilization, x	0.20	0.20	0.88
Capacity (veh/h)	511	512	734
Control Delay (s)	10.3	10.3	32.1
Approach Delay (s)	10.3		32.1
Approach LOS	B		D

Intersection Summary			
Delay	26.8		
HCM Level of Service	D		
Intersection Capacity Utilization	46.6%	ICU Level of Service	A
Analysis Period (min)	15		



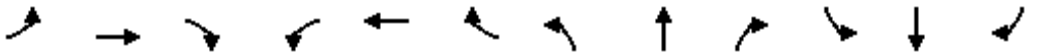
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	564	210	168	497	0	0	0	0	132	117	300
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	13	12	12	12	12	10	10	11
Total Lost time (s)		6.0	6.0		6.0					6.0	6.0	6.0
Lane Util. Factor		0.95	1.00		0.95					0.86	0.81	0.86
Frpb, ped/bikes		1.00	0.98		1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	0.93	0.85
Flt Protected		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (prot)		2978	1202		3372					1346	3693	1122
Flt Permitted		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (perm)		2978	1202		3372					1346	3693	1122
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	594	221	177	523	0	0	0	0	139	123	316
RTOR Reduction (vph)	0	0	124	0	0	0	0	0	0	0	98	93
Lane Group Flow (vph)	0	594	97	0	700	0	0	0	0	76	246	65
Confl. Peds. (#/hr)	5		3	3		5						
Heavy Vehicles (%)	0%	11%	9%	2%	4%	0%	0%	0%	0%	2%	2%	2%
Parking (#/hr)			0									0
Turn Type			Perm	Split						Split		custom
Protected Phases		2		10 12 14	10 12 14					4	4	
Permitted Phases			2									4 2
Actuated Green, G (s)		39.1	39.1		71.1					20.4	20.4	65.5
Effective Green, g (s)		39.1	39.1		71.1					20.4	20.4	65.5
Actuated g/C Ratio		0.24	0.24		0.44					0.13	0.13	0.41
Clearance Time (s)		6.0	6.0							6.0	6.0	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		728	294		1498					172	471	459
v/s Ratio Prot		c0.20			c0.21					0.06	c0.07	
v/s Ratio Perm			0.08									0.06
v/c Ratio		0.82	0.33		0.47					0.44	0.52	0.14
Uniform Delay, d1		57.1	49.7		31.2					64.5	65.3	29.6
Progression Factor		1.00	1.00		0.02					1.00	1.00	1.00
Incremental Delay, d2		9.8	3.0		0.1					1.8	1.1	0.1
Delay (s)		66.9	52.7		0.7					66.3	66.3	29.8
Level of Service		E	D		A					E	E	C
Approach Delay (s)		63.0			0.7			0.0			56.3	
Approach LOS		E			A			A			E	

Intersection Summary			
HCM Average Control Delay	40.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	31.4
Intersection Capacity Utilization	56.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



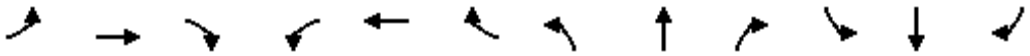
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	212	484	0	0	427	93	238	150	178	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	13	12	12	11	12	13	13	14	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0				
Lane Util. Factor	1.00	0.95			0.95	1.00	0.91	0.91				
Frt	1.00	1.00			1.00	0.85	1.00	0.93				
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (prot)	1574	3366			3149	1457	1531	2975				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (perm)	1574	3366			3149	1457	1531	2975				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	236	538	0	0	474	103	264	167	198	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	77	0	99	0	0	0	0
Lane Group Flow (vph)	236	538	0	0	474	26	216	314	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Split					Perm	Split					
Protected Phases	2 4 8	2 4 8			10		12	12				
Permitted Phases						10						
Actuated Green, G (s)	80.9	80.9			33.6	33.6	18.6	18.6				
Effective Green, g (s)	80.9	80.9			33.6	33.6	18.6	18.6				
Actuated g/C Ratio	0.51	0.51			0.21	0.21	0.12	0.12				
Clearance Time (s)					6.0	6.0	6.0	6.0				
Vehicle Extension (s)					3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	796	1702			661	306	178	346				
v/s Ratio Prot	0.15	c0.16			c0.15		c0.14	0.11				
v/s Ratio Perm						0.02						
v/c Ratio	0.30	0.32			0.72	0.08	1.21	0.91				
Uniform Delay, d1	23.0	23.3			58.8	50.8	70.7	69.9				
Progression Factor	0.07	0.07			1.00	1.00	1.00	1.00				
Incremental Delay, d2	0.1	0.1			3.7	0.1	136.5	26.3				
Delay (s)	1.7	1.7			62.5	50.9	207.2	96.1				
Level of Service	A	A			E	D	F	F				
Approach Delay (s)		1.7			60.4			134.3			0.0	
Approach LOS		A			E			F			A	

Intersection Summary			
HCM Average Control Delay	60.9	HCM Level of Service	E
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	28.9
Intersection Capacity Utilization	51.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	220	452	75	56	186	54	88	824	148	93	448	104
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	14	12	10	10	12	9	10	12
Total Lost time (s)	4.0	4.0	5.0	4.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.99	1.00	1.00	1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1538	1556	1327	1596	1724		1525	2931		1509	2870	
Flt Permitted	0.46	1.00	1.00	0.20	1.00		0.34	1.00		0.12	1.00	
Satd. Flow (perm)	749	1556	1327	340	1724		542	2931		192	2870	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	232	476	79	59	196	57	93	867	156	98	472	109
RTOR Reduction (vph)	0	0	53	0	12	0	0	16	0	0	22	0
Lane Group Flow (vph)	232	476	26	59	241	0	93	1007	0	98	559	0
Confl. Peds. (#/hr)	33		3	3		33	42		8	8		42
Confl. Bikes (#/hr)							1					1
Heavy Vehicles (%)	3%	8%	6%	0%	7%	5%	4%	5%	11%	2%	6%	9%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	36.3	29.3	29.3	33.3	27.8		39.6	34.1		39.6	34.1	
Effective Green, g (s)	34.3	30.3	29.3	31.3	27.8		37.6	34.1		37.6	34.1	
Actuated g/C Ratio	0.38	0.34	0.33	0.35	0.31		0.42	0.38		0.42	0.38	
Clearance Time (s)	3.0	5.0	5.0	3.0	5.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	340	527	435	182	536		277	1118		147	1095	
v/s Ratio Prot	c0.05	c0.31		0.02	0.14		0.02	c0.34		c0.03	0.19	
v/s Ratio Perm	0.22		0.02	0.10			0.12			0.25		
v/c Ratio	0.68	0.90	0.06	0.32	0.45		0.34	0.90		0.67	0.51	
Uniform Delay, d1	22.7	28.2	20.6	21.1	24.7		16.3	26.1		18.8	21.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	5.6	21.4	0.3	1.0	2.7		0.7	11.6		10.9	1.7	
Delay (s)	28.3	49.5	20.9	22.1	27.4		17.0	37.6		29.6	22.9	
Level of Service	C	D	C	C	C		B	D		C	C	
Approach Delay (s)		40.4			26.4			35.9			23.9	
Approach LOS		D			C			D			C	

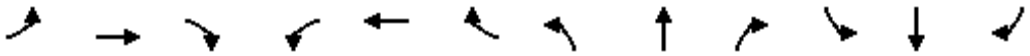
Intersection Summary			
HCM Average Control Delay	33.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	89.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	79.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	44	568	16	26	257	28	35	80	102	45	44	39
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	10	10	10	12	15	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Frpb, ped/bikes		1.00	0.97		1.00	0.97		0.99			0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.94			0.96	
Flt Protected		1.00	1.00		1.00	1.00		0.99			0.98	
Satd. Flow (prot)		1908	1482		1599	1198		1812			1823	
Flt Permitted		0.96	1.00		0.93	1.00		0.95			0.86	
Satd. Flow (perm)		1844	1482		1499	1198		1732			1604	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	46	598	17	27	271	29	37	84	107	47	46	41
RTOR Reduction (vph)	0	0	6	0	0	15	0	49	0	0	24	0
Lane Group Flow (vph)	0	644	11	0	298	14	0	179	0	0	110	0
Confl. Peds. (#/hr)	6		11	11		6	4		8	8		4
Confl. Bikes (#/hr)	1		1	1		1			1	1		
Heavy Vehicles (%)	0%	7%	0%	0%	5%	16%	0%	0%	0%	10%	0%	3%
Turn Type	Perm		Perm	Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Effective Green, g (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Actuated g/C Ratio		0.49	0.49		0.49	0.49		0.42			0.42	
Clearance Time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		908	730		738	590		719			666	
v/s Ratio Prot												
v/s Ratio Perm		c0.35	0.01		0.20	0.01		c0.10			0.07	
v/c Ratio		0.71	0.01		0.40	0.02		0.25			0.17	
Uniform Delay, d1		12.9	8.4		10.5	8.5		12.4			11.9	
Progression Factor		1.00	1.00		1.90	2.84		1.00			1.37	
Incremental Delay, d2		4.7	0.0		0.1	0.0		0.8			0.5	
Delay (s)		17.5	8.5		20.0	24.1		13.2			16.8	
Level of Service		B	A		C	C		B			B	
Approach Delay (s)		17.3			20.4			13.2			16.8	
Approach LOS		B			C			B			B	

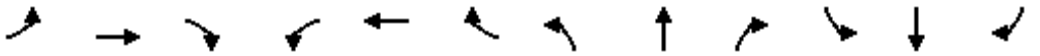
Intersection Summary			
HCM Average Control Delay	17.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	74.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	75	627	24	27	238	8	41	228	108	18	53	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.98		1.00	0.96		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.96	
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		0.99	
Satd. Flow (prot)		1656	1392		1581	1497		1755	1390		1656	
Flt Permitted		0.93	1.00		0.35	1.00		0.95	1.00		0.93	
Satd. Flow (perm)		1545	1392		562	1497		1677	1390		1559	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	79	660	25	28	251	8	43	240	114	19	56	32
RTOR Reduction (vph)	0	0	8	0	0	5	0	0	41	0	16	0
Lane Group Flow (vph)	0	739	17	0	279	3	0	283	73	0	91	0
Confl. Peds. (#/hr)	11		17	17		11	4		17	17		4
Confl. Bikes (#/hr)	1		1	1		1	1					1
Heavy Vehicles (%)	0%	9%	5%	33%	11%	0%	6%	1%	6%	0%	0%	8%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Effective Green, g (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Actuated g/C Ratio		0.35	0.35		0.35	0.35		0.49	0.49		0.49	
Clearance Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Grp Cap (vph)		547	493		199	530		826	684		768	
v/s Ratio Prot												
v/s Ratio Perm		0.48	0.01		c0.50	0.00		c0.17	0.05		0.06	
v/c Ratio		1.35	0.03		1.40	0.01		0.34	0.11		0.12	
Uniform Delay, d1		21.0	13.7		21.0	13.6		10.1	8.8		8.9	
Progression Factor		1.59	1.78		0.80	0.80		0.39	0.25		1.09	
Incremental Delay, d2		167.4	0.1		207.4	0.0		0.8	0.2		0.3	
Delay (s)		200.8	24.6		224.1	10.9		4.7	2.4		10.0	
Level of Service		F	C		F	B		A	A		A	
Approach Delay (s)		195.1			218.2			4.0			10.0	
Approach LOS		F			F			A			A	

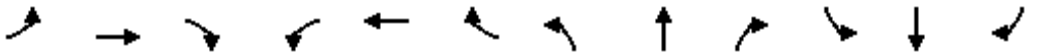
Intersection Summary			
HCM Average Control Delay	137.8	HCM Level of Service	F
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	88.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	676	21	31	9	18	15	26	363	19	9	220	226
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.97		0.98			1.00			1.00	0.95
Flpb, ped/bikes		0.98	1.00		1.00			1.00			1.00	1.00
Frt		1.00	0.85		0.95			0.99			1.00	0.85
Flt Protected		0.95	1.00		0.99			1.00			1.00	1.00
Satd. Flow (prot)		1750	1390		1761			1979			1873	1328
Flt Permitted		0.72	1.00		0.62			0.97			0.98	1.00
Satd. Flow (perm)		1330	1390		1111			1934			1848	1328
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	751	23	34	10	20	17	29	403	21	10	244	251
RTOR Reduction (vph)	0	0	10	0	13	0	0	3	0	0	0	127
Lane Group Flow (vph)	0	774	24	0	34	0	0	450	0	0	254	124
Confl. Peds. (#/hr)	49		22	22		49	34		17	17		34
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	9%	0%	7%	0%	0%	0%	0%	2%	0%	0%	9%	9%
Turn Type	pm+pt		Perm	Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		27.0	27.0		17.0			32.0			32.0	32.0
Effective Green, g (s)		27.0	27.0		17.0			32.0			32.0	32.0
Actuated g/C Ratio		0.42	0.42		0.26			0.49			0.49	0.49
Clearance Time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		604	577		291			952			910	654
v/s Ratio Prot		c0.16										
v/s Ratio Perm		0.37	0.02		0.03			c0.23			0.14	0.09
v/c Ratio		1.28	0.04		0.12			0.47			0.28	0.19
Uniform Delay, d1		19.0	11.3		18.3			10.9			9.7	9.2
Progression Factor		1.14	1.51		1.00			0.59			0.51	1.01
Incremental Delay, d2		127.9	0.0		0.8			1.6			0.1	0.1
Delay (s)		149.5	17.1		19.1			8.0			5.1	9.4
Level of Service		F	B		B			A			A	A
Approach Delay (s)		143.9			19.1			8.0			7.2	
Approach LOS		F			B			A			A	

Intersection Summary			
HCM Average Control Delay	68.7	HCM Level of Service	E
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	93.7%	ICU Level of Service	F
Analysis Period (min)	15		

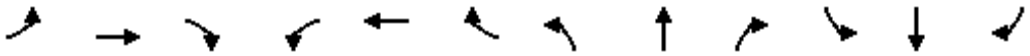
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	989	222	274	1130	0	0	0	0	275	201	376
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	11	8	8	8	11	12	14
Total Lost time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Lane Util. Factor		0.91		1.00	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00		1.00	1.00					1.00	0.99	0.99
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.97		1.00	1.00					1.00	0.94	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.99	1.00
Satd. Flow (prot)		4322		1589	3226					1419	2711	1355
Flt Permitted		1.00		0.13	1.00					0.95	0.99	1.00
Satd. Flow (perm)		4322		224	3226					1419	2711	1355
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1041	234	288	1189	0	0	0	0	289	212	396
RTOR Reduction (vph)	0	30	0	0	0	0	0	0	0	0	61	61
Lane Group Flow (vph)	0	1245	0	288	1189	0	0	0	0	234	392	149
Confl. Peds. (#/hr)	6		4	4		6	2					2
Heavy Vehicles (%)	0%	11%	7%	4%	6%	0%	0%	0%	0%	6%	4%	8%
Turn Type				pm+pt						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Actuated Green, G (s)		48.1		69.3	69.3					23.7	23.7	23.7
Effective Green, g (s)		48.1		69.3	69.3					23.7	23.7	23.7
Actuated g/C Ratio		0.46		0.66	0.66					0.23	0.23	0.23
Clearance Time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Vehicle Extension (s)		7.0		3.5	7.0					3.5	3.5	3.5
Lane Grp Cap (vph)		1980		365	2129					320	612	306
v/s Ratio Prot		0.29		c0.13	0.37							
v/s Ratio Perm				c0.40						c0.16	0.14	0.11
v/c Ratio		0.63		0.79	0.56					0.73	0.64	0.49
Uniform Delay, d1		21.7		19.0	9.6					37.7	36.8	35.4
Progression Factor		1.00		0.96	1.64					1.00	1.00	1.00
Incremental Delay, d2		1.5		6.1	0.6					8.6	2.4	1.4
Delay (s)		23.2		24.4	16.4					46.3	39.2	36.8
Level of Service		C		C	B					D	D	D
Approach Delay (s)		23.2			17.9			0.0			40.5	
Approach LOS		C			B			A			D	

Intersection Summary			
HCM Average Control Delay	25.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	105.5%	ICU Level of Service	G
Analysis Period (min)	15		

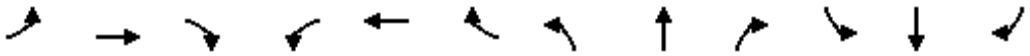
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	311	953	0	0	855	234	549	365	484	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	11	12	12	12	12	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0		6.0				
Lane Util. Factor	0.97	0.95			0.95	1.00		0.91				
Frpb, ped/bikes	1.00	1.00			1.00	0.99		1.00				
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00				
Frt	1.00	1.00			1.00	0.85		0.95				
Flt Protected	0.95	1.00			1.00	1.00		0.98				
Satd. Flow (prot)	2915	3138			3119	1449		4390				
Flt Permitted	0.18	1.00			1.00	1.00		0.98				
Satd. Flow (perm)	568	3138			3119	1449		4390				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	327	1003	0	0	900	246	578	384	509	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	105	0	88	0	0	0	0
Lane Group Flow (vph)	327	1003	0	0	900	141	0	1383	0	0	0	0
Confl. Peds. (#/hr)	4					4						
Heavy Vehicles (%)	10%	9%	0%	0%	6%	4%	4%	3%	5%	0%	0%	0%
Turn Type	pm+pt					Perm	Perm					
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8					
Actuated Green, G (s)	62.8	62.8			45.3	45.3		30.2				
Effective Green, g (s)	62.8	62.8			45.3	45.3		30.2				
Actuated g/C Ratio	0.60	0.60			0.43	0.43		0.29				
Clearance Time (s)	6.0	6.0			6.0	6.0		6.0				
Vehicle Extension (s)	3.5	7.0			7.0	7.0		5.0				
Lane Grp Cap (vph)	597	1877			1346	625		1263				
v/s Ratio Prot	0.06	c0.32			c0.29							
v/s Ratio Perm	0.27					0.10		0.31				
v/c Ratio	0.55	0.53			0.67	0.23		1.09				
Uniform Delay, d1	12.8	12.5			23.9	18.8		37.4				
Progression Factor	0.61	0.77			0.97	1.49		1.00				
Incremental Delay, d2	0.9	0.9			1.6	0.5		55.3				
Delay (s)	8.7	10.5			24.7	28.5		92.7				
Level of Service	A	B			C	C		F				
Approach Delay (s)		10.1			25.5			92.7			0.0	
Approach LOS		B			C			F			A	

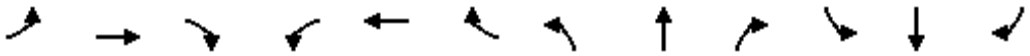
Intersection Summary			
HCM Average Control Delay	45.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	105.5%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	105	743	226	78	796	44	226	178	40	57	111	91
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	11	12	12	10	10	13	10	10	10
Total Lost time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.97		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1565	3061	1291	1603	3232		1446	3007		1544	2782	
Flt Permitted	0.13	1.00	1.00	0.36	1.00		0.54	1.00		0.61	1.00	
Satd. Flow (perm)	217	3061	1291	600	3232		819	3007		990	2782	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	111	782	238	82	838	46	238	187	42	60	117	96
RTOR Reduction (vph)	0	0	97	0	4	0	0	21	0	0	80	0
Lane Group Flow (vph)	111	782	141	82	880	0	238	208	0	60	133	0
Confl. Peds. (#/hr)	3		12	12		3	9		6	6		9
Heavy Vehicles (%)	2%	8%	5%	3%	5%	3%	10%	3%	2%	3%	7%	4%
Parking (#/hr)			0									
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	62.7	52.7	62.0	40.6	34.1		29.4	20.1		24.2	17.5	
Effective Green, g (s)	62.7	52.7	62.0	40.6	34.1		29.4	20.1		24.2	17.5	
Actuated g/C Ratio	0.60	0.50	0.59	0.39	0.32		0.28	0.19		0.23	0.17	
Clearance Time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0		3.0	7.0		3.0	7.0	
Lane Grp Cap (vph)	452	1536	762	294	1050		285	576		264	464	
v/s Ratio Prot	c0.06	c0.26	0.02	0.02	c0.27		c0.07	0.07		0.01	0.05	
v/s Ratio Perm	0.09		0.09	0.09			c0.16			0.04		
v/c Ratio	0.25	0.51	0.18	0.28	0.84		0.84	0.36		0.23	0.29	
Uniform Delay, d1	12.1	17.5	9.9	20.8	32.9		34.1	36.9		32.3	38.3	
Progression Factor	0.92	1.02	1.77	1.00	1.00		0.94	0.89		1.00	1.00	
Incremental Delay, d2	0.9	0.8	0.1	0.5	8.0		18.0	1.3		0.4	1.2	
Delay (s)	12.0	18.7	17.5	21.3	40.9		50.2	34.1		32.8	39.5	
Level of Service	B	B	B	C	D		D	C		C	D	
Approach Delay (s)		17.8			39.2			42.3			38.0	
Approach LOS		B			D			D			D	

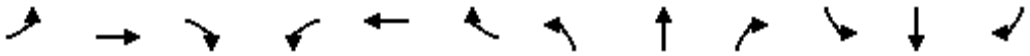
Intersection Summary			
HCM Average Control Delay	31.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	22.5
Intersection Capacity Utilization	73.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	62	329	286	59	196	102	329	382	83	91	258	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	12	11	12	12	11	13	12	10	11	12
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.93		1.00	0.95		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1635	2916		1463	3036		1589	3237		1549	3135	
Flt Permitted	0.53	1.00		0.24	1.00		0.46	1.00		0.47	1.00	
Satd. Flow (perm)	914	2916		367	3036		772	3237		772	3135	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	65	346	301	62	206	107	346	402	87	96	272	57
RTOR Reduction (vph)	0	144	0	0	61	0	0	17	0	0	17	0
Lane Group Flow (vph)	65	503	0	62	252	0	346	472	0	96	312	0
Confl. Peds. (#/hr)	20					20	1		2	2		1
Heavy Vehicles (%)	4%	5%	6%	13%	6%	5%	4%	6%	5%	3%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	35.7	28.7		35.9	28.8		53.2	41.9		38.6	31.3	
Effective Green, g (s)	35.7	28.7		35.9	28.8		53.2	41.9		38.6	31.3	
Actuated g/C Ratio	0.34	0.27		0.34	0.27		0.51	0.40		0.37	0.30	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.5	7.0		3.5	7.0		3.5	7.0		3.5	7.0	
Lane Grp Cap (vph)	359	797		200	833		530	1292		338	935	
v/s Ratio Prot	0.01	c0.17		c0.02	0.08		c0.11	0.15		0.02	0.10	
v/s Ratio Perm	0.05			0.09			c0.22			0.08		
v/c Ratio	0.18	0.63		0.31	0.30		0.65	0.36		0.28	0.33	
Uniform Delay, d1	23.8	33.5		24.5	30.2		16.6	22.2		22.4	28.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.06	0.93	
Incremental Delay, d2	0.3	3.8		1.0	0.9		3.0	0.8		0.5	0.9	
Delay (s)	24.1	37.3		25.5	31.1		19.6	23.0		24.2	27.8	
Level of Service	C	D		C	C		B	C		C	C	
Approach Delay (s)		36.1			30.2			21.6			27.0	
Approach LOS		D			C			C			C	

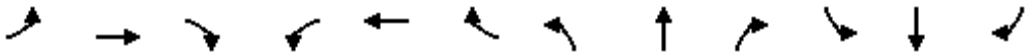
Intersection Summary			
HCM Average Control Delay	28.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	72.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	169	716	81	6	457	113	68	602	7	104	326	105
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	9	11	12	9	9	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.99			0.97		1.00	1.00		1.00	0.96	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		2929			2896		1436	3186		1451	2788	
Flt Permitted		0.58			0.94		0.41	1.00		0.28	1.00	
Satd. Flow (perm)		1724			2728		624	3186		421	2788	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	188	796	90	7	508	126	76	669	8	116	362	117
RTOR Reduction (vph)	0	11	0	0	33	0	0	1	0	0	48	0
Lane Group Flow (vph)	0	1063	0	0	608	0	76	676	0	116	431	0
Confl. Peds. (#/hr)	9		11	11		9	11		14	14		11
Heavy Vehicles (%)	3%	6%	18%	50%	6%	6%	7%	3%	50%	6%	7%	2%
Turn Type	pm+pt			Perm			pm+pt			pm+pt		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			19.0		26.0	22.0		26.0	22.0	
Effective Green, g (s)		27.0			19.0		26.0	22.0		26.0	22.0	
Actuated g/C Ratio		0.42			0.29		0.40	0.34		0.40	0.34	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		790			797		300	1078		232	944	
v/s Ratio Prot		c0.08					0.02	c0.21		c0.03	0.15	
v/s Ratio Perm		c0.48			0.22		0.09			0.17		
v/c Ratio		1.35			0.76		0.25	0.63		0.50	0.46	
Uniform Delay, d1		19.0			20.9		12.4	18.1		13.1	16.8	
Progression Factor		1.00			1.52		0.95	0.73		1.00	1.00	
Incremental Delay, d2		164.2			0.6		1.8	2.5		7.5	1.6	
Delay (s)		183.2			32.5		13.6	15.6		20.6	18.4	
Level of Service		F			C		B	B		C	B	
Approach Delay (s)		183.2			32.5			15.4			18.8	
Approach LOS		F			C			B			B	

Intersection Summary			
HCM Average Control Delay	78.5	HCM Level of Service	E
HCM Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	83.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	52	334	48	73	165	13	38	661	101	10	378	45
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1666	1916		1618	1943		1658	3196		1138	3197	
Flt Permitted	0.64	1.00		0.39	1.00		0.50	1.00		0.30	1.00	
Satd. Flow (perm)	1126	1916		660	1943		870	3196		354	3197	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	54	344	49	75	170	13	39	681	104	10	390	46
RTOR Reduction (vph)	0	8	0	0	4	0	0	19	0	0	14	0
Lane Group Flow (vph)	54	385	0	75	179	0	39	766	0	10	422	0
Confl. Peds. (#/hr)	10		16	16		10	4		6	6		4
Confl. Bikes (#/hr)			4	4								
Heavy Vehicles (%)	2%	4%	5%	5%	4%	0%	3%	4%	8%	50%	5%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.48	0.48		0.48	0.48	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	416	707		244	717		415	1524		169	1525	
v/s Ratio Prot		c0.20			0.09			c0.24			0.13	
v/s Ratio Perm	0.05			0.11			0.04			0.03		
v/c Ratio	0.13	0.54		0.31	0.25		0.09	0.50		0.06	0.28	
Uniform Delay, d1	13.6	16.2		14.6	14.2		9.3	11.7		9.2	10.2	
Progression Factor	1.00	1.00		1.74	1.78		1.00	1.00		0.48	0.47	
Incremental Delay, d2	0.6	3.0		1.1	0.3		0.4	1.2		0.5	0.3	
Delay (s)	14.2	19.2		26.4	25.6		9.8	12.9		4.9	5.2	
Level of Service	B	B		C	C		A	B		A	A	
Approach Delay (s)		18.6			25.8			12.7			5.2	
Approach LOS		B			C			B			A	

Intersection Summary			
HCM Average Control Delay	14.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	68.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR	SBR2
Lane Configurations												
Volume (vph)	761	200	621	17	3	14	3	47	30	0	2	4
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	12	12	16	12	12	16	12	12
Total Lost time (s)	5.0		5.0				4.0			4.0		
Lane Util. Factor	0.95		0.95				1.00			1.00		
Frpb, ped/bikes	1.00		1.00				1.00			1.00		
Flpb, ped/bikes	1.00		1.00				1.00			1.00		
Frt	1.00		1.00				0.91			0.98		
Flt Protected	1.00		0.99				0.99			0.96		
Satd. Flow (prot)	2956		2954				1732			1908		
Flt Permitted	1.00		0.55				0.94			0.79		
Satd. Flow (perm)	2956		1640				1643			1562		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	801	211	654	18	3	15	3	49	32	0	2	4
RTOR Reduction (vph)	0	0	2	0	0	0	38	0	0	3	0	0
Lane Group Flow (vph)	801	0	881	0	0	0	32	0	0	35	0	0
Confl. Peds. (#/hr)		7		6		3					3	
Confl. Bikes (#/hr)		1										
Heavy Vehicles (%)	8%	8%	6%	0%	0%	8%	0%	5%	0%	0%	0%	0%
Turn Type		custom				Perm			Perm			
Protected Phases	8	7	4				2			6		
Permitted Phases		4 7				2			6			
Actuated Green, G (s)	18.0		27.0				14.0			14.0		
Effective Green, g (s)	18.0		27.0				14.0			14.0		
Actuated g/C Ratio	0.28		0.42				0.22			0.22		
Clearance Time (s)	5.0		5.0				4.0			4.0		
Lane Grp Cap (vph)	819		803				354			336		
v/s Ratio Prot	0.27		c0.10									
v/s Ratio Perm			c0.35				0.02			c0.02		
v/c Ratio	0.98		1.10				0.09			0.10		
Uniform Delay, d1	23.3		19.0				20.4			20.5		
Progression Factor	1.34		0.74				1.00			1.00		
Incremental Delay, d2	5.6		60.5				0.5			0.6		
Delay (s)	36.9		74.6				20.9			21.1		
Level of Service	D		E				C			C		
Approach Delay (s)	36.9		74.6				20.9			21.1		
Approach LOS	D		E				C			C		

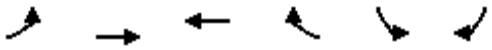
Intersection Summary			
HCM Average Control Delay	166.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	106.4%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



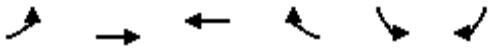
Movement	NEL	NER
Lane Configurations		
Volume (vph)	1	461
Ideal Flow (vphpl)	1800	1800
Lane Width	12	12
Total Lost time (s)	5.0	
Lane Util. Factor	1.00	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Frt	0.87	
Flt Protected	1.00	
Satd. Flow (prot)	1429	
Flt Permitted	1.00	
Satd. Flow (perm)	1429	
Peak-hour factor, PHF	0.95	0.95
Adj. Flow (vph)	1	485
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	486	0
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Heavy Vehicles (%)	0%	9%
Turn Type		
Protected Phases	3	
Permitted Phases		
Actuated Green, G (s)	10.0	
Effective Green, g (s)	10.0	
Actuated g/C Ratio	0.15	
Clearance Time (s)	5.0	
Lane Grp Cap (vph)	220	
v/s Ratio Prot	c0.34	
v/s Ratio Perm		
v/c Ratio	2.21	
Uniform Delay, d1	27.5	
Progression Factor	0.78	
Incremental Delay, d2	556.9	
Delay (s)	578.4	
Level of Service	F	
Approach Delay (s)	578.4	
Approach LOS	F	

Intersection Summary



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	194	1172	684	81	139	156
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frt		1.00	0.98		1.00	0.85
Flt Protected		0.99	1.00		0.95	1.00
Satd. Flow (prot)		3234	3205		1629	1457
Flt Permitted		0.65	1.00		0.95	1.00
Satd. Flow (perm)		2129	3205		1629	1457
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	216	1302	760	90	154	173
RTOR Reduction (vph)	0	0	14	0	0	128
Lane Group Flow (vph)	0	1518	836	0	154	45
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		40.0	40.0		17.0	17.0
Effective Green, g (s)		40.0	40.0		17.0	17.0
Actuated g/C Ratio		0.62	0.62		0.26	0.26
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1310	1972		426	381
v/s Ratio Prot			0.26		c0.09	
v/s Ratio Perm		c0.71				0.03
v/c Ratio		1.16	0.42		0.36	0.12
Uniform Delay, d1		12.5	6.5		19.6	18.3
Progression Factor		1.45	1.27		0.91	0.85
Incremental Delay, d2		72.3	0.6		2.4	0.6
Delay (s)		90.5	8.9		20.1	16.1
Level of Service		F	A		C	B
Approach Delay (s)		90.5	8.9		18.0	
Approach LOS		F	A		B	

Intersection Summary			
HCM Average Control Delay	56.0	HCM Level of Service	E
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	81.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



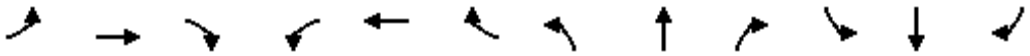
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	53	1231	703	202	174	56
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	12	10	11	12	10	10
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frpb, ped/bikes		1.00	1.00		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.97		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2928	2920		1464	1373
Flt Permitted		0.87	1.00		0.95	1.00
Satd. Flow (perm)		2566	2920		1464	1373
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	56	1296	740	213	183	59
RTOR Reduction (vph)	0	0	41	0	0	42
Lane Group Flow (vph)	0	1352	912	0	183	17
Confl. Peds. (#/hr)	1			1		
Confl. Bikes (#/hr)	1			1		
Heavy Vehicles (%)	4%	9%	8%	12%	9%	4%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		38.0	38.0		19.0	19.0
Effective Green, g (s)		38.0	38.0		19.0	19.0
Actuated g/C Ratio		0.58	0.58		0.29	0.29
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1500	1707		428	401
v/s Ratio Prot			0.31		c0.12	
v/s Ratio Perm		c0.53				0.01
v/c Ratio		0.90	0.53		0.43	0.04
Uniform Delay, d1		11.9	8.2		18.6	16.5
Progression Factor		0.89	0.58		0.95	1.39
Incremental Delay, d2		1.0	0.6		3.0	0.2
Delay (s)		11.5	5.3		20.8	23.1
Level of Service		B	A		C	C
Approach Delay (s)		11.5	5.3		21.4	
Approach LOS		B	A		C	

Intersection Summary			
HCM Average Control Delay	10.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	85.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

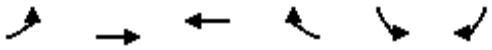
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1257	160	161	663	423	438
Ideal Flow (vphpl)	2300	1800	1800	2300	1800	1800
Lane Width	15	12	14	16	15	12
Total Lost time (s)	5.0		5.0	5.0	5.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	0.99	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.98		1.00	1.00	0.93	
Flt Protected	1.00		0.95	1.00	0.98	
Satd. Flow (prot)	2248		1770	2436	1748	
Flt Permitted	1.00		0.13	1.00	0.98	
Satd. Flow (perm)	2248		240	2436	1748	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	1283	163	164	677	432	447
RTOR Reduction (vph)	7	0	0	0	18	0
Lane Group Flow (vph)	1439	0	164	677	861	0
Confl. Peds. (#/hr)		4	4			8
Heavy Vehicles (%)	11%	7%	3%	7%	2%	2%
Turn Type			Perm			
Protected Phases	4			8	2	
Permitted Phases			8			
Actuated Green, G (s)	31.0		31.0	31.0	24.0	
Effective Green, g (s)	31.0		31.0	31.0	24.0	
Actuated g/C Ratio	0.48		0.48	0.48	0.37	
Clearance Time (s)	5.0		5.0	5.0	5.0	
Lane Grp Cap (vph)	1072		114	1162	645	
v/s Ratio Prot	0.64			0.28	c0.49	
v/s Ratio Perm			c0.68			
v/c Ratio	1.34		1.44	0.58	1.34	
Uniform Delay, d1	17.0		17.0	12.3	20.5	
Progression Factor	1.55		1.00	1.00	1.00	
Incremental Delay, d2	157.4		240.0	2.1	161.3	
Delay (s)	183.8		257.0	14.5	181.8	
Level of Service	F		F	B	F	
Approach Delay (s)	183.8			61.7	181.8	
Approach LOS	F			E	F	

Intersection Summary			
HCM Average Control Delay	150.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.39		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	138.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	725	89	258	1516	9	72	0	187	1	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	15	13	11	11	12	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0	4.0	3.0	3.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00		0.95	
Satd. Flow (prot)	1881	3213	1422	1589	3138	1366		1642	1443		969	
Flt Permitted	0.14	1.00	1.00	0.26	1.00	1.00		0.76	1.00		0.70	
Satd. Flow (perm)	285	3213	1422	435	3138	1366		1309	1443		719	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	806	99	287	1684	10	80	0	208	1	0	0
RTOR Reduction (vph)	0	0	48	0	0	2	0	0	182	0	0	0
Lane Group Flow (vph)	1	806	51	287	1684	8	0	80	26	0	1	0
Heavy Vehicles (%)	0%	10%	4%	4%	9%	12%	18%	0%	6%	100%	0%	0%
Turn Type	Perm		Perm	custom		custom	Perm		Perm	Perm		
Protected Phases		4		3	3 8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)	43.7	43.7	43.7	66.4	66.4	66.4		10.6	10.6		10.6	
Effective Green, g (s)	43.7	43.7	43.7	66.4	66.4	66.4		10.6	10.6		10.6	
Actuated g/C Ratio	0.51	0.51	0.51	0.78	0.78	0.78		0.12	0.12		0.12	
Clearance Time (s)	4.0	4.0	4.0	3.0		4.0		4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0		3.0	
Lane Grp Cap (vph)	147	1652	731	607	2451	1067		163	180		90	
v/s Ratio Prot		0.25		0.11	c0.54							
v/s Ratio Perm	0.00		0.04	0.26		0.01		c0.06	0.02		0.00	
v/c Ratio	0.01	0.49	0.07	0.47	0.69	0.01		0.49	0.14		0.01	
Uniform Delay, d1	10.1	13.4	10.4	4.1	4.4	2.0		34.7	33.2		32.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	0.1	1.0	0.2	0.6	0.8	0.0		2.3	0.4		0.0	
Delay (s)	10.2	14.4	10.6	4.7	5.2	2.1		37.0	33.5		32.7	
Level of Service	B	B	B	A	A	A		D	C		C	
Approach Delay (s)		14.0			5.1			34.5			32.7	
Approach LOS		B			A			C			C	

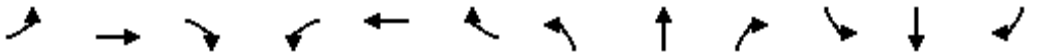
Intersection Summary			
HCM Average Control Delay	10.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	62.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	13	819	851	45	24	11
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	12	10	10
Total Lost time (s)		5.0	5.0		3.0	
Lane Util. Factor		0.95	0.95		1.00	
Frt		1.00	0.99		0.96	
Flt Protected		1.00	1.00		0.97	
Satd. Flow (prot)		3038	3017		1482	
Flt Permitted		0.93	1.00		0.97	
Satd. Flow (perm)		2834	3017		1482	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	14	910	946	50	27	12
RTOR Reduction (vph)	0	0	4	0	11	0
Lane Group Flow (vph)	0	924	992	0	28	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type	Perm					
Protected Phases		4	8 2 11		5	
Permitted Phases	4					
Actuated Green, G (s)		33.0	64.0		7.0	
Effective Green, g (s)		33.0	64.0		7.0	
Actuated g/C Ratio		0.37	0.71		0.08	
Clearance Time (s)		5.0			3.0	
Lane Grp Cap (vph)		1039	2145		115	
v/s Ratio Prot			c0.33		c0.02	
v/s Ratio Perm		c0.33				
v/c Ratio		0.89	0.46		0.24	
Uniform Delay, d1		26.8	5.6		39.0	
Progression Factor		1.00	0.00		1.00	
Incremental Delay, d2		11.3	0.2		4.9	
Delay (s)		38.1	0.3		44.0	
Level of Service		D	A		D	
Approach Delay (s)		38.1	0.3		44.0	
Approach LOS		D	A		D	

Intersection Summary			
HCM Average Control Delay	19.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	44.5%	ICU Level of Service	A
Analysis Period (min)	15		

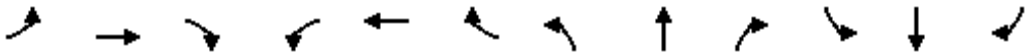
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	90	430	1	27	568	80	0	0	1	45	3	136
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12	12	11	12	11
Total Lost time (s)		4.0			4.0			3.0			3.0	3.0
Lane Util. Factor		1.00			0.95			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			0.92			1.00	0.96
Flpb, ped/bikes		1.00			1.00			1.00			0.98	1.00
Frt		1.00			0.98			0.86			1.00	0.85
Flt Protected		0.99			1.00			1.00			0.95	1.00
Satd. Flow (prot)		1726			3232			1432			1610	1282
Flt Permitted		0.76			0.89			1.00			0.93	1.00
Satd. Flow (perm)		1331			2895			1432			1569	1282
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	100	478	1	30	631	89	0	0	1	50	3	151
RTOR Reduction (vph)	0	0	0	0	12	0	0	1	0	0	0	101
Lane Group Flow (vph)	0	579	0	0	738	0	0	0	0	0	53	50
Confl. Peds. (#/hr)	33		13	13		33	29		13	13		29
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	4%	3%	0%	0%	4%	0%	0%	0%	0%	5%	0%	11%
Turn Type	Perm			custom			Perm			pm+pt		Perm
Protected Phases		4			3 4			1		2	1 2	
Permitted Phases	4			3	3		1	1		1 2		1 2
Actuated Green, G (s)		31.0			49.0			9.0			25.0	28.0
Effective Green, g (s)		31.0			49.0			9.0			25.0	28.0
Actuated g/C Ratio		0.36			0.58			0.11			0.29	0.33
Clearance Time (s)		4.0						3.0				
Lane Grp Cap (vph)		485			1669			152			469	422
v/s Ratio Prot								0.00			0.02	
v/s Ratio Perm		c0.43			c0.25						0.01	c0.04
v/c Ratio		1.19			0.44			0.00			0.11	0.12
Uniform Delay, d1		27.0			10.2			34.0			21.9	19.9
Progression Factor		1.00			0.22			1.00			1.00	1.00
Incremental Delay, d2		106.0			0.1			0.0			0.5	0.6
Delay (s)		133.0			2.3			34.0			22.4	20.5
Level of Service		F			A			C			C	C
Approach Delay (s)		133.0			2.3			34.0			21.0	
Approach LOS		F			A			C			C	

Intersection Summary			
HCM Average Control Delay	54.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	73.0%	ICU Level of Service	C
Analysis Period (min)	15		

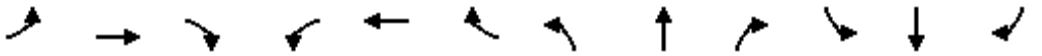
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	598	28	35	1014	58	36	35	48	23	26	87
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	16	10	10	16	8	15	8	8	14	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			0.98	
Flpb, ped/bikes	0.98	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.99			0.95			0.91	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1557	3022		1587	3021			1816			1706	
Flt Permitted	0.17	1.00		0.36	1.00			0.89			0.95	
Satd. Flow (perm)	277	3022		604	3021			1649			1630	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	41	629	29	37	1067	61	38	37	51	24	27	92
RTOR Reduction (vph)	0	5	0	0	6	0	0	33	0	0	21	0
Lane Group Flow (vph)	41	653	0	37	1122	0	0	93	0	0	122	0
Confl. Peds. (#/hr)	145		16	16		145	17		19	19		17
Confl. Bikes (#/hr)	5					5			2	2		
Heavy Vehicles (%)	0%	5%	0%	0%	4%	2%	0%	0%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			22.0			22.0	
Effective Green, g (s)	34.0	34.0		34.0	34.0			23.0			23.0	
Actuated g/C Ratio	0.52	0.52		0.52	0.52			0.35			0.35	
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0			5.0	
Lane Grp Cap (vph)	145	1581		316	1580			583			577	
v/s Ratio Prot		0.22			c0.37							
v/s Ratio Perm	0.15			0.06				0.06			c0.07	
v/c Ratio	0.28	0.41		0.12	0.71			0.16			0.21	
Uniform Delay, d1	8.7	9.4		7.9	11.8			14.4			14.7	
Progression Factor	1.00	1.00		0.70	1.41			1.00			1.00	
Incremental Delay, d2	4.8	0.8		0.7	2.4			0.6			0.8	
Delay (s)	13.5	10.2		6.2	19.1			15.0			15.5	
Level of Service	B	B		A	B			B			B	
Approach Delay (s)		10.4			18.6			15.0			15.5	
Approach LOS		B			B			B			B	

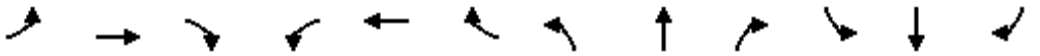
Intersection Summary			
HCM Average Control Delay	15.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	789	5	32	637	41	0	0	0	586	89	379
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00				0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.67				1.00	1.00	0.98
Flpb, ped/bikes	0.93	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	793	3379		1710	3226	514				3285	1731	1481
Flt Permitted	0.40	1.00		0.14	1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	331	3379		248	3226	514				3285	1731	1481
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	26	831	5	34	671	43	0	0	0	617	94	399
RTOR Reduction (vph)	0	0	0	0	0	19	0	0	0	0	0	166
Lane Group Flow (vph)	26	836	0	34	671	24	0	0	0	617	94	233
Confl. Peds. (#/hr)	350		4	4		350	8		6	6		8
Confl. Bikes (#/hr)	7		1	1		7						
Heavy Vehicles (%)	100%	1%	20%	0%	6%	100%	0%	0%	0%	1%	4%	1%
Turn Type	pm+pt			pm+pt		Perm				Split		Perm
Protected Phases	7	4		3	8					6	6	
Permitted Phases	4			8		8						6
Actuated Green, G (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Effective Green, g (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Actuated g/C Ratio	0.33	0.33		0.56	0.56	0.56				0.23	0.23	0.23
Clearance Time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Grp Cap (vph)	159	1118		634	1812	289				758	399	342
v/s Ratio Prot	0.02	c0.25		0.02	c0.21					c0.19	0.05	
v/s Ratio Perm	0.04			0.01		0.05						0.16
v/c Ratio	0.16	0.75		0.05	0.37	0.08				0.81	0.24	0.68
Uniform Delay, d1	31.6	38.7		15.2	15.8	13.1				47.4	40.7	45.6
Progression Factor	0.85	0.86		0.33	0.75	1.24				1.00	1.00	1.00
Incremental Delay, d2	2.1	4.4		0.1	0.4	0.4				9.3	1.4	10.5
Delay (s)	28.9	37.6		5.1	12.2	16.6				56.7	42.1	56.1
Level of Service	C	D		A	B	B				E	D	E
Approach Delay (s)		37.3			12.2			0.0			55.2	
Approach LOS		D			B			A			E	

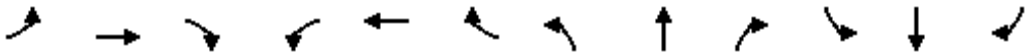
Intersection Summary			
HCM Average Control Delay	37.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	53.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	340	815	220	54	578	287	102	251	55	39	0	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.67		1.00	0.91	1.00		0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.97		1.00	1.00	0.85		1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (prot)	3285	3262		1710	3138	1018		3301	1359	855		734
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (perm)	3285	3262		1710	3138	1018		3301	1359	855		734
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	358	858	232	57	608	302	107	264	58	41	0	32
RTOR Reduction (vph)	0	18	0	0	0	228	0	0	42	0	0	30
Lane Group Flow (vph)	358	1072	0	57	608	74	0	371	16	41	0	2
Confl. Peds. (#/hr)	327		13	13		327	6		60	60		6
Confl. Bikes (#/hr)	6					6						
Heavy Vehicles (%)	1%	1%	0%	0%	9%	1%	0%	3%	2%	100%	0%	100%
Turn Type	Prot			Prot		Perm	Split		Perm	Prot		custom
Protected Phases	7	4		3	8		2	2		6		
Permitted Phases						8			2			6
Actuated Green, G (s)	44.0	68.0		8.0	32.0	32.0		28.0	28.0	8.0		8.0
Effective Green, g (s)	44.0	68.0		8.0	32.0	32.0		28.0	28.0	8.0		8.0
Actuated g/C Ratio	0.34	0.52		0.06	0.25	0.25		0.22	0.22	0.06		0.06
Clearance Time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	1112	1706		105	772	251		711	293	53		45
v/s Ratio Prot	0.11	c0.33		0.03	c0.19			c0.11		c0.05		
v/s Ratio Perm						0.07			0.01			0.00
v/c Ratio	0.32	0.63		0.54	0.79	0.30		0.52	0.06	0.77		0.04
Uniform Delay, d1	31.9	22.0		59.2	45.8	39.8		45.1	40.5	60.1		57.4
Progression Factor	0.95	0.16		1.00	1.00	1.00		0.94	0.99	1.00		1.00
Incremental Delay, d2	0.5	1.1		18.7	8.0	3.0		2.7	0.4	49.7		0.4
Delay (s)	30.7	4.7		77.9	53.8	42.8		45.3	40.6	109.9		57.8
Level of Service	C	A		E	D	D		D	D	F		E
Approach Delay (s)		11.1			51.8			44.7			87.0	
Approach LOS		B			D			D			F	

Intersection Summary			
HCM Average Control Delay	31.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	68.3%	ICU Level of Service	C
Analysis Period (min)	15		

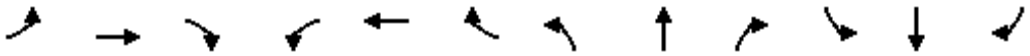
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	893	166	105	839	0	74	0	87	9	15	7
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	11	11	8	12	12	12	14	15	12
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes		0.99		1.00	1.00		1.00		0.98	1.00	0.98	
Flpb, ped/bikes		1.00		1.00	1.00		0.97		1.00	0.99	1.00	
Frt		0.98		1.00	1.00		1.00		0.85	1.00	0.95	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		2997		1649	3149		1388		1451	1803	1857	
Flt Permitted		1.00		0.17	1.00		0.74		1.00	0.95	1.00	
Satd. Flow (perm)		2997		299	3149		1082		1451	1803	1857	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	992	184	117	932	0	82	0	97	10	17	8
RTOR Reduction (vph)	0	15	0	0	0	0	0	0	66	0	5	0
Lane Group Flow (vph)	0	1161	0	117	932	0	82	0	31	10	20	0
Confl. Peds. (#/hr)	67		19	19		67	38		12	12		38
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	2%	11%	0%	5%	0%	19%	0%	3%	0%	0%	0%
Turn Type				Perm			custom		custom	Perm		
Protected Phases		4			8						6	
Permitted Phases				8			2		2	6		
Actuated Green, G (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Effective Green, g (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Actuated g/C Ratio		0.60		0.60	0.60		0.32		0.32	0.32	0.32	
Clearance Time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)		1798		179	1889		346		464	577	594	
v/s Ratio Prot		0.39			0.30						0.01	
v/s Ratio Perm				c0.39			c0.08		0.02	0.01		
v/c Ratio		0.65		0.65	0.49		0.24		0.07	0.02	0.03	
Uniform Delay, d1		13.1		13.2	11.4		25.0		23.6	23.2	23.4	
Progression Factor		1.00		1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		1.8		17.1	0.9		1.6		0.3	0.1	0.1	
Delay (s)		14.9		30.3	12.3		26.6		23.9	23.3	23.5	
Level of Service		B		C	B		C		C	C	C	
Approach Delay (s)		14.9			14.3			25.2			23.4	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	15.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.4%	ICU Level of Service	B
Analysis Period (min)	15		

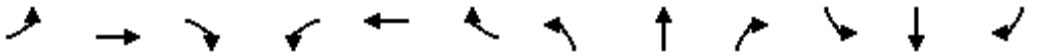
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	301	0	1230	215	686	0	0	792	490
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	12	10	10	12	12	11	12
Total Lost time (s)				4.0		5.0	3.0	4.0			4.0	
Lane Util. Factor				0.95		1.00	1.00	0.91			0.91	
Frpb, ped/bikes				1.00		1.00	1.00	1.00			0.98	
Flpb, ped/bikes				1.00		1.00	1.00	1.00			1.00	
Frt				1.00		0.85	1.00	1.00			0.94	
Flt Protected				0.95		1.00	0.95	1.00			1.00	
Satd. Flow (prot)				1540		1530	1535	4327			4271	
Flt Permitted				0.95		1.00	0.95	1.00			1.00	
Satd. Flow (perm)				1540		1530	1535	4327			4271	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	307	0	1255	219	700	0	0	808	500
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	307	0	1255	219	700	0	0	1308	0
Confl. Peds. (#/hr)	2					2	18		3	3		18
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%	4%	6%	0%	0%	4%	1%
Turn Type				Split		Prot	Prot					
Protected Phases				8	8	8	5	2			6	
Permitted Phases												
Actuated Green, G (s)				30.0		30.0	32.0	66.0			31.0	
Effective Green, g (s)				31.0		30.0	32.0	66.0			31.0	
Actuated g/C Ratio				0.30		0.29	0.30	0.63			0.30	
Clearance Time (s)				5.0		5.0	3.0	4.0			4.0	
Lane Grp Cap (vph)				455		437	468	2720			1261	
v/s Ratio Prot				0.20		c0.82	c0.14	0.16			c0.31	
v/s Ratio Perm												
v/c Ratio				0.67		2.87	0.47	0.26			1.16dr	
Uniform Delay, d1				32.6		37.5	29.6	8.6			37.0	
Progression Factor				1.00		1.00	0.64	2.11			1.00	
Incremental Delay, d2				7.8		848.6	2.8	0.2			35.5	
Delay (s)				40.4		886.1	21.8	18.4			72.5	
Level of Service				D		F	C	B			E	
Approach Delay (s)		0.0			719.9			19.2			72.5	
Approach LOS		A			F			B			E	

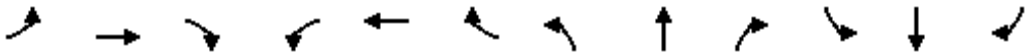
Intersection Summary			
HCM Average Control Delay	326.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.43		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	102.1%	ICU Level of Service	G
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	322	770	145	0	0	0	0	579	410	359	734	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	13	12	12	12	12	12	10	10	8	12	12	12
Total Lost time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Util. Factor	0.91	0.91						0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00						1.00	1.00	1.00	1.00	
Flpb, ped/bikes	0.99	1.00						1.00	1.00	1.00	1.00	
Frt	1.00	0.98						1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1509	3157						4368	2244	1598	4680	
Flt Permitted	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1509	3157						4368	2244	1598	4680	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	332	794	149	0	0	0	0	597	423	370	757	0
RTOR Reduction (vph)	0	14	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	299	962	0	0	0	0	0	597	423	370	757	0
Confl. Peds. (#/hr)	6		1	1		6	6					6
Heavy Vehicles (%)	6%	1%	0%	0%	0%	0%	0%	5%	4%	7%	5%	0%
Turn Type	Perm								Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Actuated Green, G (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Effective Green, g (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Actuated g/C Ratio	0.32	0.32						0.27	0.27	0.30	0.59	
Clearance Time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Grp Cap (vph)	489	1022						1165	598	472	2763	
v/s Ratio Prot								0.14		c0.23	0.16	
v/s Ratio Perm	0.20	0.30							c0.19			
v/c Ratio	0.61	0.94						0.51	0.71	0.78	0.27	
Uniform Delay, d1	29.9	34.5						32.7	34.8	33.9	10.5	
Progression Factor	1.00	1.00						1.14	1.14	0.86	0.22	
Incremental Delay, d2	5.6	17.2						1.4	6.1	4.8	0.1	
Delay (s)	35.5	51.7						38.5	45.6	34.1	2.4	
Level of Service	D	D						D	D	C	A	
Approach Delay (s)		47.9			0.0			41.5			12.8	
Approach LOS		D			A			D			B	

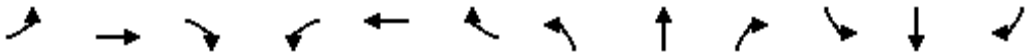
Intersection Summary			
HCM Average Control Delay	34.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	102.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	290	25	24	11	164	0	0	149	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	14	12	12	16	12
Total Lost time (s)				4.0	4.0		4.0	4.0			-3.0	
Lane Util. Factor				1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes				1.00	0.99		1.00	1.00			1.00	
Flpb, ped/bikes				1.00	1.00		1.00	1.00			1.00	
Frt				1.00	0.93		1.00	1.00			1.00	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1688	3132		1710	1846			1955	
Flt Permitted				0.95	1.00		0.54	1.00			1.00	
Satd. Flow (perm)				1688	3132		974	1846			1955	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	322	28	27	12	182	0	0	166	6
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	322	37	0	12	182	0	0	171	0
Confl. Peds. (#/hr)	2		2	2		2			6	6		
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	0%	4%	0%	0%	4%	0%
Turn Type				Perm			pm+pt					
Protected Phases					8		7	2			6	
Permitted Phases				8			2					
Actuated Green, G (s)				27.0	27.0		50.0	50.0			40.0	
Effective Green, g (s)				27.0	27.0		50.0	50.0			46.0	
Actuated g/C Ratio				0.32	0.32		0.59	0.59			0.54	
Clearance Time (s)				4.0	4.0		4.0	4.0			3.0	
Lane Grp Cap (vph)				536	995		634	1086			1058	
v/s Ratio Prot					0.01		0.00	c0.10			0.09	
v/s Ratio Perm				c0.19			0.01					
v/c Ratio				0.60	0.04		0.02	0.17			0.16	
Uniform Delay, d1				24.5	20.0		10.5	8.0			9.8	
Progression Factor				1.00	1.00		1.04	1.18			1.00	
Incremental Delay, d2				4.9	0.1		0.1	0.3			0.3	
Delay (s)				29.4	20.1		11.0	9.7			10.1	
Level of Service				C	C		B	A			B	
Approach Delay (s)		0.0			28.0			9.8			10.1	
Approach LOS		A			C			A			B	

Intersection Summary			
HCM Average Control Delay	19.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	37.0%	ICU Level of Service	A
Analysis Period (min)	15		

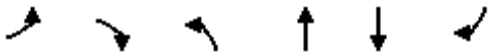
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	12	11	23	6	0	14	0	149	45	46	393	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	16	15	12	8	12	8	12	12	12	10	13	12
Total Lost time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.97			0.98			0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00			1.00		1.00	1.00	
Frt	1.00	0.90			0.90			0.97		1.00	1.00	
Flt Protected	0.95	1.00			0.99			1.00		0.95	1.00	
Satd. Flow (prot)	1935	1735			1571			1718		1590	1860	
Flt Permitted	0.74	1.00			0.96			1.00		0.59	1.00	
Satd. Flow (perm)	1515	1735			1529			1718		987	1860	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	13	12	24	6	0	15	0	157	47	48	414	0
RTOR Reduction (vph)	0	16	0	0	10	0	0	13	0	0	0	0
Lane Group Flow (vph)	13	20	0	0	11	0	0	191	0	48	414	0
Confl. Peds. (#/hr)	1		11	11		1	1		10	10		1
Confl. Bikes (#/hr)			2	2			1		2	2		1
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Turn Type	Perm			Perm						pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Effective Green, g (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Actuated g/C Ratio	0.32	0.32			0.32			0.47		0.59	0.59	
Clearance Time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Grp Cap (vph)	481	551			486			808		630	1094	
v/s Ratio Prot		c0.01						0.11		0.01	c0.22	
v/s Ratio Perm	0.01				0.01					0.04		
v/c Ratio	0.03	0.04			0.02			0.24		0.08	0.38	
Uniform Delay, d1	20.0	20.0			19.9			13.4		8.8	9.3	
Progression Factor	1.00	1.00			1.00			1.00		0.98	0.87	
Incremental Delay, d2	0.1	0.1			0.1			0.7		0.2	0.9	
Delay (s)	20.1	20.1			20.0			14.1		8.8	9.0	
Level of Service	C	C			C			B		A	A	
Approach Delay (s)		20.1			20.0			14.1			9.0	
Approach LOS		C			C			B			A	

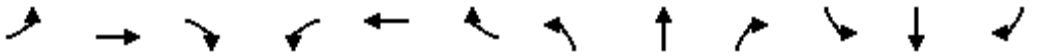
Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	41.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	48	42	12	193	288	28
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	14	12	13	12	10	12
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.94		1.00	1.00	0.99	
Flt Protected	0.97		0.95	1.00	1.00	
Satd. Flow (prot)	1752		1765	1782	1657	
Flt Permitted	0.97		0.50	1.00	1.00	
Satd. Flow (perm)	1752		937	1782	1657	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	53	47	13	214	320	31
RTOR Reduction (vph)	32	0	0	0	5	0
Lane Group Flow (vph)	68	0	13	214	346	0
Confl. Peds. (#/hr)			2			2
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.0		36.0	36.0	36.0	
Effective Green, g (s)	21.0		36.0	36.0	36.0	
Actuated g/C Ratio	0.32		0.55	0.55	0.55	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	566		519	987	918	
v/s Ratio Prot	c0.04			0.12	c0.21	
v/s Ratio Perm			0.01			
v/c Ratio	0.12		0.03	0.22	0.38	
Uniform Delay, d1	15.5		6.6	7.4	8.2	
Progression Factor	1.00		0.51	0.63	1.43	
Incremental Delay, d2	0.4		0.1	0.5	1.0	
Delay (s)	15.9		3.4	5.1	12.7	
Level of Service	B		A	A	B	
Approach Delay (s)	15.9			5.0	12.7	
Approach LOS	B			A	B	

Intersection Summary			
HCM Average Control Delay	10.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	30.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

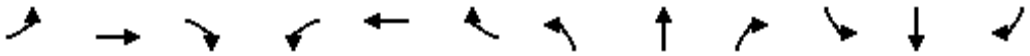


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	31	268	9	258	130	2	0	283	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	14	16	12	12	15	12	12	13	10
Total Lost time (s)					4.0		4.0	4.0			3.0	3.0
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Frt					1.00		1.00	1.00			1.00	0.85
Flt Protected					1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3772		1693	1677			1738	1428
Flt Permitted					1.00		0.47	1.00			1.00	1.00
Satd. Flow (perm)					3772		844	1677			1738	1428
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	34	298	10	287	144	2	0	314	19
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	0	0	0	11
Lane Group Flow (vph)	0	0	0	0	339	0	287	146	0	0	314	8
Confl. Peds. (#/hr)	1					1			5	5		
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	1%	18%	0%	0%	7%	0%
Turn Type				Split			pm+pt					Perm
Protected Phases				8	8		7	2			6	
Permitted Phases							2					6
Actuated Green, G (s)					26.0		51.0	51.0			38.0	38.0
Effective Green, g (s)					26.0		51.0	51.0			38.0	38.0
Actuated g/C Ratio					0.31		0.60	0.60			0.45	0.45
Clearance Time (s)					4.0		4.0	4.0			3.0	3.0
Lane Grp Cap (vph)					1154		606	1006			777	638
v/s Ratio Prot					c0.09		c0.06	0.09			0.18	
v/s Ratio Perm							c0.23					0.01
v/c Ratio					0.29		0.47	0.14			0.40	0.01
Uniform Delay, d1					22.5		13.7	7.4			15.9	13.1
Progression Factor					1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2					0.6		2.6	0.3			1.6	0.0
Delay (s)					23.1		16.4	7.7			17.4	13.1
Level of Service					C		B	A			B	B
Approach Delay (s)		0.0			23.1			13.5			17.2	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM Average Control Delay	17.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	96	94	38	133	207	32	59	703	44
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	15	12	12	12	12	12	13	12
Total Lost time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.98		1.00	0.98		1.00	0.99	
Flt Protected					0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1896		1710	3282		1707	3467	
Flt Permitted					0.98		0.25	1.00		0.59	1.00	
Satd. Flow (perm)					1896		446	3282		1056	3467	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	107	104	42	148	230	36	66	781	49
RTOR Reduction (vph)	0	0	0	0	10	0	0	16	0	0	6	0
Lane Group Flow (vph)	0	0	0	0	243	0	148	250	0	66	824	0
Confl. Peds. (#/hr)							5		5	5		5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	1%	0%
Turn Type				Split			pm+pt			pm+pt		
Protected Phases				8	8		5	2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)					23.0		41.0	34.0		41.0	34.0	
Effective Green, g (s)					23.0		41.0	34.0		41.0	34.0	
Actuated g/C Ratio					0.31		0.55	0.45		0.55	0.45	
Clearance Time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Grp Cap (vph)					581		362	1488		638	1572	
v/s Ratio Prot					c0.13		c0.04	0.08		0.01	c0.24	
v/s Ratio Perm							0.19			0.05		
v/c Ratio					0.42		0.41	0.17		0.10	0.52	
Uniform Delay, d1					20.7		16.4	12.1		8.2	14.7	
Progression Factor					1.00		0.83	0.82		1.00	1.00	
Incremental Delay, d2					2.2		3.4	0.2		0.3	1.3	
Delay (s)					22.9		17.0	10.2		8.5	16.0	
Level of Service					C		B	B		A	B	
Approach Delay (s)		0.0			22.9			12.7			15.4	
Approach LOS		A			C			B			B	

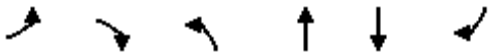
Intersection Summary			
HCM Average Control Delay	15.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	53.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	32	49	13	9	63	63	7	277	24	159	590	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	16	12	12	10	11	12	12	11	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.94		1.00	0.99		1.00	0.99	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1964			1655		1595	3173		1704	3231	
Flt Permitted		0.89			0.99		0.36	1.00		0.56	1.00	
Satd. Flow (perm)		1775			1637		599	3173		1004	3231	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	34	52	14	9	66	66	7	292	25	167	621	53
RTOR Reduction (vph)	0	8	0	0	42	0	0	8	0	0	8	0
Lane Group Flow (vph)	0	92	0	0	99	0	7	309	0	167	666	0
Confl. Peds. (#/hr)	2					2	1		6	6		1
Confl. Bikes (#/hr)			1	1			3					3
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	0%	3%	0%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Effective Green, g (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Actuated g/C Ratio		0.33			0.33		0.56	0.56		0.56	0.56	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		592			546		335	1777		562	1809	
v/s Ratio Prot								0.10			c0.21	
v/s Ratio Perm		0.05			c0.06		0.01			0.17		
v/c Ratio		0.16			0.18		0.02	0.17		0.30	0.37	
Uniform Delay, d1		17.6			17.7		7.3	8.0		8.7	9.1	
Progression Factor		1.00			1.00		1.00	1.00		0.27	0.25	
Incremental Delay, d2		0.6			0.7		0.1	0.2		1.2	0.5	
Delay (s)		18.1			18.5		7.5	8.3		3.5	2.8	
Level of Service		B			B		A	A		A	A	
Approach Delay (s)		18.1			18.5			8.2			3.0	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	6.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	48.4%	ICU Level of Service	A
Analysis Period (min)	15		

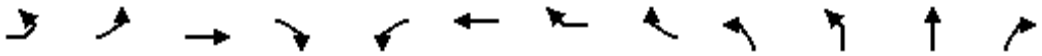
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	37	192	67	253	588	81
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	41	213	74	281	653	90

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	254	168	187	436	308
Volume Left (vph)	41	74	0	0	0
Volume Right (vph)	213	0	0	0	90
Hadj (s)	-0.42	0.27	0.05	0.05	-0.15
Departure Headway (s)	5.8	6.6	6.3	5.9	5.7
Degree Utilization, x	0.41	0.31	0.33	0.71	0.48
Capacity (veh/h)	591	528	546	602	622
Control Delay (s)	12.6	11.2	11.2	20.8	12.7
Approach Delay (s)	12.6	11.2		17.4	
Approach LOS	B	B		C	

Intersection Summary			
Delay	14.9		
HCM Level of Service	B		
Intersection Capacity Utilization	54.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	32	35	376	18	22	409	76	78	55	68	354	32
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	0.95	
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.93			1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Frt		1.00	1.00	0.85	1.00	1.00	0.85			1.00	0.99	
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	
Satd. Flow (prot)		1612	1731	1530	1710	1731	1421			1710	3251	
Flt Permitted		0.14	1.00	1.00	0.52	1.00	1.00			0.14	1.00	
Satd. Flow (perm)		238	1731	1530	932	1731	1421			257	3251	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	36	39	418	20	24	454	84	87	61	76	393	36
RTOR Reduction (vph)	0	0	0	12	0	0	36	0	0	0	7	0
Lane Group Flow (vph)	0	75	418	8	24	454	135	0	0	137	422	0
Confl. Peds. (#/hr)		25					25					3
Heavy Vehicles (%)	6%	6%	4%	0%	0%	4%	0%	0%	0%	0%	4%	0%
Turn Type	Perm	pm+pt		Perm	Perm		Perm		Perm	Perm		
Protected Phases		7	4			8					2	
Permitted Phases	4	4		4	8		8		2	2		
Actuated Green, G (s)		44.0	44.0	44.0	25.0	25.0	25.0			28.0	28.0	
Effective Green, g (s)		44.0	44.0	44.0	25.0	25.0	25.0			28.0	28.0	
Actuated g/C Ratio		0.42	0.42	0.42	0.24	0.24	0.24			0.27	0.27	
Clearance Time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Grp Cap (vph)		303	725	641	222	412	338			69	867	
v/s Ratio Prot		0.04	c0.24			c0.26					0.13	
v/s Ratio Perm		0.07		0.01	0.03		0.10			c0.53		
v/c Ratio		0.25	0.58	0.01	0.11	1.10	0.40			1.99	0.49	
Uniform Delay, d1		21.6	23.4	17.8	31.3	40.0	33.7			38.5	32.4	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Incremental Delay, d2		1.9	3.3	0.0	1.0	74.8	3.5			491.0	2.0	
Delay (s)		23.5	26.7	17.9	32.3	114.8	37.2			529.5	34.4	
Level of Service		C	C	B	C	F	D			F	C	
Approach Delay (s)			25.9			91.3					154.2	
Approach LOS			C			F					F	

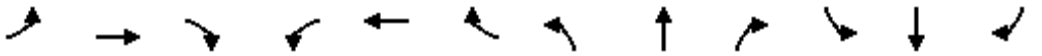
Intersection Summary			
HCM Average Control Delay	147.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.44		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	103.9%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations								
Volume (vph)	108	571	82	103	4	114	607	197
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5				4.5	4.5	
Lane Util. Factor	1.00	0.95				1.00	0.88	
Frpb, ped/bikes	1.00	1.00				1.00	1.00	
Flpb, ped/bikes	1.00	1.00				1.00	1.00	
Frt	1.00	0.96				1.00	0.85	
Flt Protected	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1705	3246				1710	2633	
Flt Permitted	0.37	1.00				0.95	1.00	
Satd. Flow (perm)	670	3246				1710	2633	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	120	634	91	114	4	127	674	219
RTOR Reduction (vph)	0	12	0	0	0	0	26	0
Lane Group Flow (vph)	120	827	0	0	0	131	867	0
Confl. Peds. (#/hr)	3							
Heavy Vehicles (%)	0%	2%	0%	0%	0%	0%	3%	0%
Turn Type	Perm				Split		Perm	
Protected Phases		6			9	9		
Permitted Phases	6						9	
Actuated Green, G (s)	27.5	27.5				20.5	20.5	
Effective Green, g (s)	27.5	27.5				20.5	20.5	
Actuated g/C Ratio	0.26	0.26				0.20	0.20	
Clearance Time (s)	4.5	4.5				4.5	4.5	
Lane Grp Cap (vph)	175	850				334	514	
v/s Ratio Prot		0.25				0.08		
v/s Ratio Perm	0.18						c0.33	
v/c Ratio	0.69	0.97				0.39	1.69	
Uniform Delay, d1	34.9	38.4				36.8	42.2	
Progression Factor	1.00	1.00				1.00	1.00	
Incremental Delay, d2	19.7	25.0				3.4	317.6	
Delay (s)	54.6	63.4				40.3	359.9	
Level of Service	D	E				D	F	
Approach Delay (s)		62.3				319.0		
Approach LOS		E				F		

Intersection Summary



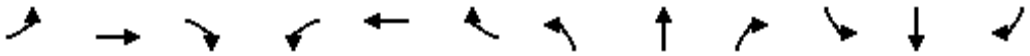
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	65	601	0	0	493	60	85	52	20	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	11	11	16	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.99			0.98				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		1681			1951			1840				
Flt Permitted		0.90			1.00			0.97				
Satd. Flow (perm)		1524			1951			1840				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	72	668	0	0	548	67	94	58	22	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	740	0	0	615	0	0	174	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		40.0			40.0			17.0				
Effective Green, g (s)		40.0			40.0			17.0				
Actuated g/C Ratio		0.62			0.62			0.26				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		938			1201			481				
v/s Ratio Prot					0.32							
v/s Ratio Perm		c0.49						0.09				
v/c Ratio		0.79			0.51			0.36				
Uniform Delay, d1		9.3			7.0			19.6				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		6.7			1.6			2.1				
Delay (s)		16.0			8.6			21.7				
Level of Service		B			A			C				
Approach Delay (s)		16.0			8.6			21.7			0.0	
Approach LOS		B			A			C			A	

Intersection Summary			
HCM Average Control Delay	13.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	87.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	71	340	152	129	358	157	105	639	85	144	759	94
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	9	9	10	9
Total Lost time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.96	1.00	1.00	0.95	1.00	1.00	0.94
Flpb, ped/bikes		1.00	1.00		0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1982	1434		1947	1444	1546	3040	1296	1506	3069	1252
Flt Permitted		0.30	1.00		0.70	1.00	0.23	1.00	1.00	0.29	1.00	1.00
Satd. Flow (perm)		598	1434		1378	1444	373	3040	1296	455	3069	1252
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	75	358	160	136	377	165	111	673	89	152	799	99
RTOR Reduction (vph)	0	0	94	0	0	118	0	0	53	0	0	49
Lane Group Flow (vph)	0	433	66	0	513	47	111	673	36	152	799	50
Confl. Peds. (#/hr)	24		45	45		24	36		24	24		36
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	2%	2%	2%	2%	3%	2%	3%	5%	1%	2%	4%	3%
Turn Type	pm+pt		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		43.0	43.0		30.0	30.0	50.6	42.3	42.3	51.4	42.7	42.7
Effective Green, g (s)		43.0	43.0		30.0	30.0	50.6	42.3	42.3	51.4	42.7	42.7
Actuated g/C Ratio		0.41	0.41		0.29	0.29	0.48	0.40	0.40	0.49	0.41	0.41
Clearance Time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		377	587		394	413	272	1225	522	310	1248	509
v/s Ratio Prot		c0.11					0.03	0.22		c0.04	c0.26	
v/s Ratio Perm		0.36	0.05		c0.37	0.03	0.16		0.03	0.20		0.04
v/c Ratio		1.15	0.11		1.30	0.11	0.41	0.55	0.07	0.49	0.64	0.10
Uniform Delay, d1		31.0	19.2		37.5	27.7	16.4	24.0	19.3	16.1	25.0	19.2
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.75	1.55	2.62
Incremental Delay, d2		93.3	0.4		153.4	0.6	1.0	1.8	0.3	1.2	2.4	0.4
Delay (s)		124.3	19.6		190.9	28.2	17.4	25.8	19.5	29.4	41.1	50.9
Level of Service		F	B		F	C	B	C	B	C	D	D
Approach Delay (s)		96.0			151.3			24.1			40.3	
Approach LOS		F			F			C			D	

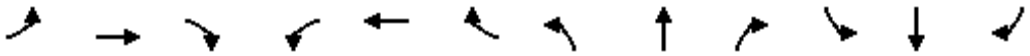
Intersection Summary			
HCM Average Control Delay	69.8	HCM Level of Service	E
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	92.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	85	421	85	98	539	94	51	61	71	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		0.98			0.98			0.95				
Flt Protected		0.99			0.99			0.99				
Satd. Flow (prot)		1645			1649			1797				
Flt Permitted		0.83			0.85			0.99				
Satd. Flow (perm)		1367			1417			1797				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	94	468	94	109	599	104	57	68	79	0	0	0
RTOR Reduction (vph)	0	9	0	0	8	0	0	35	0	0	0	0
Lane Group Flow (vph)	0	647	0	0	804	0	0	169	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		40.0			40.0			17.0				
Effective Green, g (s)		40.0			40.0			17.0				
Actuated g/C Ratio		0.62			0.62			0.26				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		841			872			470				
v/s Ratio Prot												
v/s Ratio Perm		0.47			c0.57			0.09				
v/c Ratio		0.77			0.92			0.36				
Uniform Delay, d1		9.1			11.1			19.6				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		6.7			16.6			2.1				
Delay (s)		15.8			27.7			21.7				
Level of Service		B			C			C				
Approach Delay (s)		15.8			27.7			21.7			0.0	
Approach LOS		B			C			C			A	

Intersection Summary			
HCM Average Control Delay	22.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	72.2%	ICU Level of Service	C
Analysis Period (min)	15		

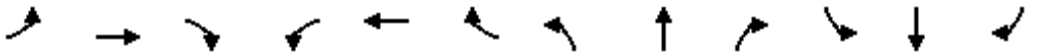
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	53	496	83	76	527	37	38	76	72	54	238	56
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	11	12	12	15	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.96		1.00	0.96		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		0.99	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.98	
Flt Protected		1.00	1.00		0.99	1.00		0.98	1.00		0.99	
Satd. Flow (prot)		1685	1382		1713	1417		1686	1455		1878	
Flt Permitted		0.89	1.00		0.84	1.00		0.82	1.00		0.94	
Satd. Flow (perm)		1504	1382		1442	1417		1412	1455		1774	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	56	522	87	80	555	39	40	80	76	57	251	59
RTOR Reduction (vph)	0	0	37	0	0	12	0	0	52	0	10	0
Lane Group Flow (vph)	0	578	50	0	635	27	0	120	24	0	357	0
Confl. Peds. (#/hr)	25		19	19		25	36		30	30		36
Confl. Bikes (#/hr)	1		2	2		1	3					3
Heavy Vehicles (%)	0%	3%	3%	0%	1%	0%	0%	1%	1%	0%	1%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Effective Green, g (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.32	0.32		0.32	
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Grp Cap (vph)		862	792		827	812		452	466		568	
v/s Ratio Prot												
v/s Ratio Perm		0.38	0.04		c0.44	0.02		0.08	0.02		c0.20	
v/c Ratio		0.67	0.06		0.77	0.03		0.27	0.05		0.63	
Uniform Delay, d1		11.1	7.1		12.2	7.0		18.9	17.6		21.7	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		4.1	0.2		6.8	0.1		1.4	0.2		5.2	
Delay (s)		15.2	7.2		19.0	7.0		20.4	17.8		26.9	
Level of Service		B	A		B	A		C	B		C	
Approach Delay (s)		14.2			18.3			19.4			26.9	
Approach LOS		B			B			B			C	

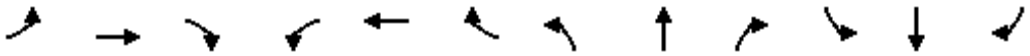
Intersection Summary			
HCM Average Control Delay	18.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	101.5%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	494	34	45	539	54	45	165	55	123	210	33
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	11	16	8	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	0.98	1.00		1.00	1.00		0.99	1.00	1.00	0.99	1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1533	3066		1652	3730		1585	1663	1370	1568	1680	1397
Flt Permitted	0.35	1.00		0.39	1.00		0.57	1.00	1.00	0.63	1.00	1.00
Satd. Flow (perm)	562	3066		675	3730		953	1663	1370	1043	1680	1397
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	66	549	38	50	599	60	50	183	61	137	233	37
RTOR Reduction (vph)	0	8	0	0	12	0	0	0	37	0	0	22
Lane Group Flow (vph)	66	579	0	50	647	0	50	183	24	137	233	15
Confl. Peds. (#/hr)	51		3	3		51	13		13	13		13
Heavy Vehicles (%)	2%	3%	3%	0%	2%	0%	0%	1%	2%	1%	0%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Effective Green, g (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	268	1462		322	1779		381	665	548	417	672	559
v/s Ratio Prot		c0.19			0.17			0.11			c0.14	
v/s Ratio Perm	0.12			0.07			0.05		0.02	0.13		0.01
v/c Ratio	0.25	0.40		0.16	0.36		0.13	0.28	0.04	0.33	0.35	0.03
Uniform Delay, d1	10.1	11.0		9.6	10.8		12.3	13.1	11.9	13.5	13.6	11.8
Progression Factor	1.00	1.00		1.00	1.00		0.85	0.90	0.76	0.59	0.59	0.26
Incremental Delay, d2	2.2	0.8		1.0	0.6		0.7	1.0	0.2	2.0	1.4	0.1
Delay (s)	12.3	11.8		10.6	11.3		11.2	12.9	9.2	9.9	9.4	3.1
Level of Service	B	B		B	B		B	B	A	A	A	A
Approach Delay (s)		11.8			11.3			11.8			9.0	
Approach LOS		B			B			B			A	

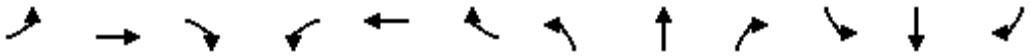
Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	421	81	73	396	67	57	180	64	89	245	80
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	11	10	11	11	10	11	11	10	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	0.97	1.00		0.95	1.00		0.99	1.00		0.96	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.96		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1329	3137		1520	3128		1580	2919		1452	2997	
Flt Permitted	0.44	1.00		0.42	1.00		0.53	1.00		0.59	1.00	
Satd. Flow (perm)	617	3137		667	3128		882	2919		907	2997	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	63	443	85	77	417	71	60	189	67	94	258	84
RTOR Reduction (vph)	0	0	0	0	0	0	0	39	0	0	42	0
Lane Group Flow (vph)	63	528	0	77	488	0	60	217	0	94	300	0
Confl. Peds. (#/hr)	112		99	99		112	23		53	53		23
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	16%	1%	0%	0%	1%	9%	0%	8%	2%	5%	5%	7%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.41	0.41		0.41	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	296	1506		320	1501		365	1207		375	1239	
v/s Ratio Prot		c0.17			0.16			0.07			0.10	
v/s Ratio Perm	0.10			0.12			0.07			c0.10		
v/c Ratio	0.21	0.35		0.24	0.33		0.16	0.18		0.25	0.24	
Uniform Delay, d1	11.3	12.2		11.5	12.0		13.8	13.9		14.4	14.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.6	0.6		1.8	0.6		1.0	0.3		1.6	0.5	
Delay (s)	12.9	12.8		13.2	12.6		14.8	14.3		16.0	14.8	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		12.8			12.7			14.4			15.1	
Approach LOS		B			B			B			B	

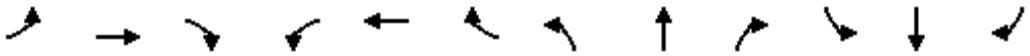
Intersection Summary			
HCM Average Control Delay	13.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	100	447	62	32	523	48	86	203	60	76	473	110
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	8	16	12	9	10	10	9	10	10
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1595	1653		1371	1973		1534	2998		1535	3012	
Flt Permitted	0.24	1.00		0.30	1.00		0.28	1.00		0.58	1.00	
Satd. Flow (perm)	402	1653		435	1973		451	2998		939	3012	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	105	471	65	34	551	51	91	214	63	80	498	116
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	105	536	0	34	602	0	91	277	0	80	614	0
Confl. Peds. (#/hr)	21		95	95		21	36		8	8		36
Confl. Bikes (#/hr)	2		3	3		2	2					2
Heavy Vehicles (%)	0%	2%	0%	7%	2%	0%	0%	3%	0%	0%	2%	1%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	43.9	39.3		40.7	37.7		26.7	21.8		26.7	21.8	
Effective Green, g (s)	43.9	37.3		40.7	35.7		26.7	19.8		26.7	19.8	
Actuated g/C Ratio	0.52	0.44		0.48	0.42		0.31	0.23		0.31	0.23	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	272	725		241	829		204	698		329	702	
v/s Ratio Prot	c0.02	c0.32		0.00	0.31		c0.03	0.09		0.01	c0.20	
v/s Ratio Perm	0.18			0.06			0.11			0.06		
v/c Ratio	0.39	0.74		0.14	0.73		0.45	0.40		0.24	0.87	
Uniform Delay, d1	23.8	19.8		20.5	20.6		29.2	27.6		21.9	31.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.9	6.7		0.3	5.5		1.6	1.7		0.4	14.3	
Delay (s)	24.7	26.5		20.8	26.1		30.8	29.2		22.2	45.7	
Level of Service	C	C		C	C		C	C		C	D	
Approach Delay (s)		26.2			25.8			29.6			43.0	
Approach LOS		C			C			C			D	

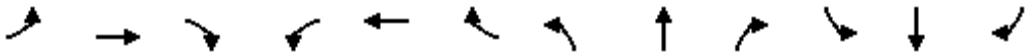
Intersection Summary			
HCM Average Control Delay	31.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	79.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	77	399	65	117	510	118	67	158	58	127	367	82
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	11	11	11	11	12	12	10	10	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		0.99	1.00	
Frt		0.98			0.98		1.00	0.96		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3681			3131		1652	3237		1549	3027	
Flt Permitted		0.71			0.72		0.42	1.00		0.60	1.00	
Satd. Flow (perm)		2616			2271		737	3237		983	3027	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	86	443	72	130	567	131	74	176	64	141	408	91
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	601	0	0	828	0	74	240	0	141	499	0
Confl. Peds. (#/hr)	23		30	30		23	1		20	20		1
Confl. Bikes (#/hr)	3					3						
Heavy Vehicles (%)	0%	3%	0%	2%	2%	0%	0%	1%	0%	2%	2%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.0			33.0		32.0	32.0		32.0	32.0	
Effective Green, g (s)		34.0			34.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio		0.45			0.45		0.44	0.44		0.44	0.44	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		1186			1030		324	1424		433	1332	
v/s Ratio Prot								0.07			c0.16	
v/s Ratio Perm		0.23			c0.36		0.10			0.14		
v/c Ratio		0.51			0.80		0.23	0.17		0.33	0.37	
Uniform Delay, d1		14.5			17.6		13.1	12.7		13.7	14.1	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.5			6.7		1.6	0.3		2.0	0.8	
Delay (s)		16.1			24.3		14.7	13.0		15.7	14.9	
Level of Service		B			C		B	B		B	B	
Approach Delay (s)		16.1			24.3			13.4			15.1	
Approach LOS		B			C			B			B	

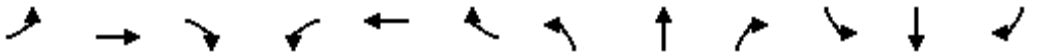
Intersection Summary			
HCM Average Control Delay	18.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	98	877	6	20	585	249	1	1	9	213	1	80
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	12	12	12	12	12	13	13	13
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	1.00		1.00	1.00	0.85		0.89			0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00		1.00			0.97	
Satd. Flow (prot)	1605	3206		1660	3320	1485		1545			3176	
Flt Permitted	0.38	1.00		0.25	1.00	1.00		0.98			0.77	
Satd. Flow (perm)	647	3206		432	3320	1485		1519			2533	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	109	974	7	22	650	277	1	1	10	237	1	89
RTOR Reduction (vph)	0	0	0	0	0	103	0	7	0	0	52	0
Lane Group Flow (vph)	109	981	0	22	650	174	0	5	0	0	275	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	46.1	46.1		46.1	46.1	46.1		19.5			19.5	
Effective Green, g (s)	46.1	46.1		46.1	46.1	46.1		19.5			19.5	
Actuated g/C Ratio	0.63	0.63		0.63	0.63	0.63		0.26			0.26	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		8.0			8.0	
Lane Grp Cap (vph)	405	2008		271	2080	930		402			671	
v/s Ratio Prot		c0.31			0.20							
v/s Ratio Perm	0.17			0.05		0.12		0.00			c0.11	
v/c Ratio	0.27	0.49		0.08	0.31	0.19		0.01			0.41	
Uniform Delay, d1	6.2	7.4		5.4	6.4	5.8		19.9			22.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	1.6	0.9		0.6	0.4	0.4		0.0			1.7	
Delay (s)	7.8	8.3		6.0	6.8	6.3		20.0			24.0	
Level of Service	A	A		A	A	A		B			C	
Approach Delay (s)		8.2			6.6			20.0			24.0	
Approach LOS		A			A			B			C	

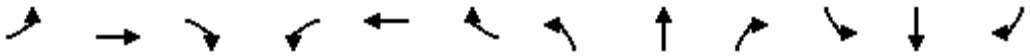
Intersection Summary			
HCM Average Control Delay	9.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	73.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	131	228	124	94	163	56	144	907	90	125	825	104
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	9	12	10	10	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.95		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1560	1505		1563	1585		1493	3069	1337	1523	3099	1318
Flt Permitted	0.45	1.00		0.21	1.00		0.20	1.00	1.00	0.16	1.00	1.00
Satd. Flow (perm)	743	1505		340	1585		317	3069	1337	263	3099	1318
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	138	240	131	99	172	59	152	955	95	132	868	109
RTOR Reduction (vph)	0	23	0	0	15	0	0	0	40	0	0	51
Lane Group Flow (vph)	138	348	0	99	216	0	152	955	55	132	868	58
Confl. Peds. (#/hr)	10		13	13		10	18		7	7		18
Confl. Bikes (#/hr)	2					2	2		1	1		2
Heavy Vehicles (%)	2%	1%	1%	2%	1%	2%	3%	4%	0%	1%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	28.0	21.0		28.0	21.0		42.0	35.0	35.0	42.0	35.0	35.0
Effective Green, g (s)	26.0	22.0		26.0	22.0		40.0	35.0	35.0	40.0	35.0	35.0
Actuated g/C Ratio	0.31	0.26		0.31	0.26		0.47	0.41	0.41	0.47	0.41	0.41
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	285	390		190	410		232	1264	551	213	1276	543
v/s Ratio Prot	0.03	c0.23		c0.04	0.14		c0.05	c0.31		0.04	0.28	
v/s Ratio Perm	0.11			0.12			0.26		0.04	0.25		0.04
v/c Ratio	0.48	0.89		0.52	0.53		0.66	0.76	0.10	0.62	0.68	0.11
Uniform Delay, d1	22.7	30.4		22.9	27.0		14.7	21.3	15.3	15.0	20.4	15.4
Progression Factor	1.00	1.00		1.00	1.00		0.67	0.82	0.53	1.00	1.00	1.00
Incremental Delay, d2	5.8	25.2		9.9	4.8		12.2	3.8	0.3	12.8	2.9	0.4
Delay (s)	28.4	55.5		32.7	31.8		22.0	21.3	8.5	27.8	23.4	15.8
Level of Service	C	E		C	C		C	C	A	C	C	B
Approach Delay (s)		48.2			32.1			20.4			23.1	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM Average Control Delay	27.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	73.7%	ICU Level of Service	D
Analysis Period (min)	15		

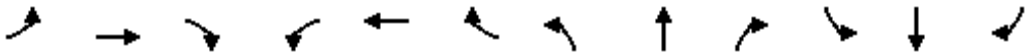
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	22	181	35	20	173	21	25	149	40	47	255	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	14	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.99			1.00			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.99			0.97			0.98	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1839			1849			1939			1974	
Flt Permitted		0.97			0.96			0.94			0.94	
Satd. Flow (perm)		1783			1791			1837			1868	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	23	187	36	21	178	22	26	154	41	48	263	52
RTOR Reduction (vph)	0	9	0	0	6	0	0	12	0	0	9	0
Lane Group Flow (vph)	0	237	0	0	215	0	0	209	0	0	354	0
Confl. Peds. (#/hr)	18		34	34		18	16		19	19		16
Confl. Bikes (#/hr)			6	6			1		4	4		1
Heavy Vehicles (%)	0%	1%	0%	5%	1%	0%	0%	2%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.42			0.42			0.46			0.46	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		741			744			848			862	
v/s Ratio Prot												
v/s Ratio Perm		c0.13			0.12			0.11			c0.19	
v/c Ratio		0.32			0.29			0.25			0.41	
Uniform Delay, d1		12.8			12.6			10.6			11.6	
Progression Factor		1.00			0.70			1.18			1.00	
Incremental Delay, d2		1.1			1.0			0.7			1.4	
Delay (s)		13.9			9.8			13.2			13.1	
Level of Service		B			A			B			B	
Approach Delay (s)		13.9			9.8			13.2			13.1	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	12.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.1%	ICU Level of Service	A
Analysis Period (min)	15		

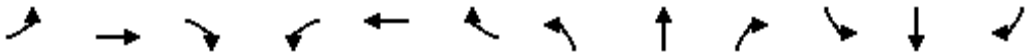
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	193	38	25	180	19	49	200	31	43	214	39
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.97	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1496	3059		1576	3119		1518	3119		1550	3076	
Flt Permitted	0.61	1.00		0.59	1.00		0.58	1.00		0.59	1.00	
Satd. Flow (perm)	966	3059		985	3119		926	3119		968	3076	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	214	42	28	200	21	54	222	34	48	238	43
RTOR Reduction (vph)	0	25	0	0	12	0	0	14	0	0	18	0
Lane Group Flow (vph)	27	231	0	28	209	0	54	242	0	48	263	0
Confl. Peds. (#/hr)	20		17	17		20	2					2
Confl. Bikes (#/hr)	32		36	36		32	22		25	25		22
Heavy Vehicles (%)	4%	1%	0%	0%	0%	0%	5%	0%	0%	3%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0		39.0	39.0		39.0	39.0	
Effective Green, g (s)	19.0	19.0		19.0	19.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.58	0.58		0.58	0.58	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	282	894		288	912		541	1823		566	1798	
v/s Ratio Prot		c0.08			0.07			0.08			c0.09	
v/s Ratio Perm	0.03			0.03			0.06			0.05		
v/c Ratio	0.10	0.26		0.10	0.23		0.10	0.13		0.08	0.15	
Uniform Delay, d1	16.7	17.6		16.8	17.4		6.0	6.1		5.9	6.1	
Progression Factor	0.95	0.97		0.75	0.74		1.36	1.36		0.38	0.34	
Incremental Delay, d2	0.6	0.7		0.7	0.6		0.4	0.1		0.3	0.2	
Delay (s)	16.5	17.7		13.2	13.5		8.4	8.4		2.5	2.3	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		17.6			13.5			8.4			2.3	
Approach LOS		B			B			A			A	

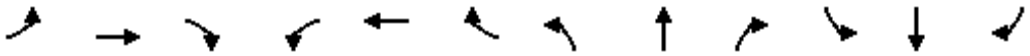
Intersection Summary			
HCM Average Control Delay	10.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.18		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



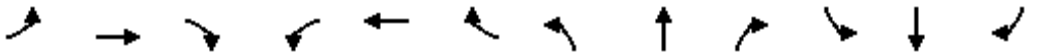
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	67	168	41	25	159	38	27	247	16	40	322	33
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	9	9	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.97		1.00	0.97			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1555	3058		1525	2937			1922			1938	
Flt Permitted	0.61	1.00		0.61	1.00			0.94			0.94	
Satd. Flow (perm)	1007	3058		974	2937			1823			1840	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	74	187	46	28	177	42	30	274	18	44	358	37
RTOR Reduction (vph)	0	28	0	0	25	0	0	3	0	0	5	0
Lane Group Flow (vph)	74	205	0	28	194	0	0	319	0	0	434	0
Confl. Peds. (#/hr)	11		17	17		11	26		7	7		26
Heavy Vehicles (%)	2%	1%	0%	0%	1%	3%	4%	5%	0%	0%	4%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Effective Green, g (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40			0.48			0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	403	1223		390	1175			869			878	
v/s Ratio Prot		0.07			0.07							
v/s Ratio Perm	c0.07			0.03				0.17			c0.24	
v/c Ratio	0.18	0.17		0.07	0.16			0.37			0.49	
Uniform Delay, d1	12.6	12.5		12.0	12.5			10.8			11.6	
Progression Factor	1.05	1.00		0.77	0.76			1.00			1.00	
Incremental Delay, d2	1.0	0.3		0.3	0.3			1.2			2.0	
Delay (s)	14.3	12.8		9.6	9.8			11.9			13.6	
Level of Service	B	B		A	A			B			B	
Approach Delay (s)		13.2			9.8			11.9			13.6	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	12.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



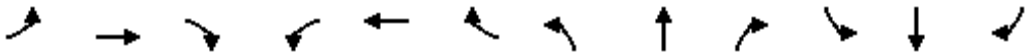
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	47	111	28	20	161	27	41	235	11	33	364	57
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	16	12	10	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.97		1.00	0.98			0.99			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			1.00	
Satd. Flow (prot)	1652	1970		1584	1975			1981			1979	
Flt Permitted	0.57	1.00		0.65	1.00			0.90			0.96	
Satd. Flow (perm)	986	1970		1087	1975			1792			1912	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	52	123	31	22	179	30	46	261	12	37	404	63
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	52	154	0	22	209	0	0	319	0	0	504	0
Confl. Peds. (#/hr)	1		10	10		1	2		5	5		2
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	2%	0%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Effective Green, g (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Actuated g/C Ratio	0.31	0.31		0.31	0.31			0.57			0.57	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	303	606		334	608			1020			1088	
v/s Ratio Prot		0.08			c0.11							
v/s Ratio Perm	0.05			0.02				0.18			c0.26	
v/c Ratio	0.17	0.25		0.07	0.34			0.31			0.46	
Uniform Delay, d1	16.4	16.9		15.9	17.4			7.3			8.2	
Progression Factor	0.83	0.81		0.92	0.93			0.97			1.00	
Incremental Delay, d2	1.2	1.0		0.4	1.5			0.8			1.4	
Delay (s)	14.8	14.6		15.1	17.7			7.9			9.6	
Level of Service	B	B		B	B			A			A	
Approach Delay (s)		14.7			17.5			7.9			9.6	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



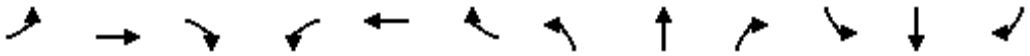
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	54	13	97	2	5	10	62	235	5	5	466	76
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	10	11	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98		1.00	0.98		1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.87		1.00	0.90		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1695	1727		1702	1808		1594	1647	1428	1653	2000	1496
Flt Permitted	0.75	1.00		0.68	1.00		0.39	1.00	1.00	0.59	1.00	1.00
Satd. Flow (perm)	1332	1727		1216	1808		660	1647	1428	1030	2000	1496
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	60	14	108	2	6	11	69	261	6	6	518	84
RTOR Reduction (vph)	0	78	0	0	8	0	0	0	2	0	0	28
Lane Group Flow (vph)	60	44	0	2	9	0	69	261	4	6	518	56
Confl. Peds. (#/hr)	5		5	5		5	3					3
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	0%	2%	0%	0%	2%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	17.0	17.0		17.0	17.0		39.0	39.0	39.0	39.0	39.0	39.0
Effective Green, g (s)	18.0	18.0		18.0	18.0		39.0	39.0	39.0	39.0	39.0	39.0
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.60	0.60	0.60	0.60	0.60	0.60
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	369	478		337	501		396	988	857	618	1200	898
v/s Ratio Prot		0.03			0.01			0.16			c0.26	
v/s Ratio Perm	c0.05			0.00			0.10		0.00	0.01		0.04
v/c Ratio	0.16	0.09		0.01	0.02		0.17	0.26	0.00	0.01	0.43	0.06
Uniform Delay, d1	17.8	17.4		17.0	17.1		5.8	6.2	5.2	5.2	7.0	5.4
Progression Factor	1.39	2.73		1.00	1.00		0.82	0.77	0.97	1.00	1.00	1.00
Incremental Delay, d2	0.9	0.4		0.0	0.1		0.7	0.5	0.0	0.0	1.1	0.1
Delay (s)	25.6	48.1		17.1	17.1		5.5	5.3	5.1	5.3	8.2	5.5
Level of Service	C	D		B	B		A	A	A	A	A	A
Approach Delay (s)		40.7			17.1			5.3			7.8	
Approach LOS		D			B			A			A	

Intersection Summary			
HCM Average Control Delay	12.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	253	163	178	204	0	0	0	0	110	470	377
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)		4.0		3.0	3.0					5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	
Frpb, ped/bikes		0.99		1.00	1.00					1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Frt		0.94		1.00	1.00					1.00	0.93	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		2905		1693	3288					1503	3021	
Flt Permitted		1.00		0.41	1.00					0.95	1.00	
Satd. Flow (perm)		2905		722	3288					1503	3021	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	266	172	187	215	0	0	0	0	116	495	397
RTOR Reduction (vph)	0	103	0	0	0	0	0	0	0	0	141	0
Lane Group Flow (vph)	0	335	0	187	215	0	0	0	0	116	751	0
Confl. Peds. (#/hr)	18		3	3		18	1					1
Heavy Vehicles (%)	0%	4%	1%	1%	4%	0%	0%	0%	0%	10%	2%	1%
Turn Type				D.P+P						Split		
Protected Phases		8		7	7 8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		33.0		53.0	56.0					37.0	37.0	
Effective Green, g (s)		33.0		53.0	56.0					37.0	37.0	
Actuated g/C Ratio		0.32		0.52	0.55					0.36	0.36	
Clearance Time (s)		4.0		3.0						5.0	5.0	
Lane Grp Cap (vph)		940		566	1805					545	1096	
v/s Ratio Prot		c0.12		c0.06	0.07					0.08	c0.25	
v/s Ratio Perm				0.11								
v/c Ratio		0.36		0.33	0.12					0.21	0.68	
Uniform Delay, d1		26.4		13.5	11.1					22.4	27.6	
Progression Factor		1.00		2.20	2.13					1.00	1.00	
Incremental Delay, d2		1.1		1.4	0.1					0.9	3.5	
Delay (s)		27.4		31.0	23.8					23.3	31.0	
Level of Service		C		C	C					C	C	
Approach Delay (s)		27.4			27.1			0.0			30.2	
Approach LOS		C			C			A			C	

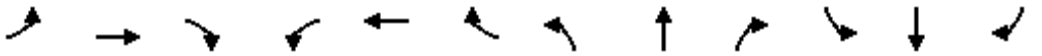
Intersection Summary			
HCM Average Control Delay	28.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	102.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	141	222	0	0	305	113	77	539	233	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	9	12	13	12	13	12	12	12
Total Lost time (s)	4.0	4.0			4.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.96		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1674	3196			2850		1767	1782	1560			
Flt Permitted	0.36	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	632	3196			2850		1767	1782	1560			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	148	234	0	0	321	119	81	567	245	0	0	0
RTOR Reduction (vph)	0	0	0	0	37	0	0	0	168	0	0	0
Lane Group Flow (vph)	148	234	0	0	403	0	81	567	77	0	0	0
Confl. Peds. (#/hr)	9		13	13		9			1	1		
Confl. Bikes (#/hr)	3					3						
Heavy Vehicles (%)	2%	7%	0%	0%	3%	1%	0%	1%	0%	0%	0%	0%
Turn Type	pm+pt						custom		Perm			
Protected Phases	4	1 4			1		2	2				
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	59.0	63.0			26.0		30.0	30.0	30.0			
Effective Green, g (s)	59.0	63.0			26.0		30.0	30.0	30.0			
Actuated g/C Ratio	0.58	0.62			0.25		0.29	0.29	0.29			
Clearance Time (s)	4.0				4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	703	1974			726		520	524	459			
v/s Ratio Prot	c0.07	0.07			c0.14		0.05	c0.32				
v/s Ratio Perm	0.05								0.05			
v/c Ratio	0.21	0.12			0.55		0.16	1.08	0.17			
Uniform Delay, d1	10.3	8.0			33.0		26.6	36.0	26.7			
Progression Factor	0.42	0.43			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.6	0.1			3.0		0.6	63.3	0.8			
Delay (s)	4.9	3.6			36.0		27.3	99.3	27.5			
Level of Service	A	A			D		C	F	C			
Approach Delay (s)		4.1			36.0			73.1			0.0	
Approach LOS		A			D			E			A	

Intersection Summary			
HCM Average Control Delay	48.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	102.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	62.4%	ICU Level of Service	B
Analysis Period (min)	15		

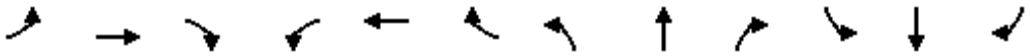
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	514	479	81	534	0	0	0	0	11	434	285
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	11	12	12	12	12	10	10	12
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	1.00
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.93		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3098		1710	3306					1596	3192	1530
Flt Permitted		1.00		0.11	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3098		200	3306					1596	3192	1530
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	535	499	84	556	0	0	0	0	11	452	297
RTOR Reduction (vph)	0	168	0	0	0	0	0	0	0	0	0	196
Lane Group Flow (vph)	0	866	0	84	556	0	0	0	0	11	452	101
Confl. Peds. (#/hr)	8		8	8		8	3					3
Confl. Bikes (#/hr)	9					9			61	61		
Heavy Vehicles (%)	0%	1%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type				pm+pt						Split		Prot
Protected Phases		8		7	7 8					6	6	6
Permitted Phases				7 8								
Actuated Green, G (s)		36.0		54.0	58.0					34.0	34.0	34.0
Effective Green, g (s)		36.0		54.0	58.0					34.0	34.0	34.0
Actuated g/C Ratio		0.36		0.54	0.58					0.34	0.34	0.34
Clearance Time (s)		4.0		4.0						4.0	4.0	4.0
Lane Grp Cap (vph)		1115		380	1917					543	1085	520
v/s Ratio Prot		c0.28		0.04	c0.17					0.01	c0.14	0.07
v/s Ratio Perm				0.08								
v/c Ratio		0.78		0.22	0.29					0.02	0.42	0.19
Uniform Delay, d1		28.4		14.4	10.6					21.9	25.4	23.3
Progression Factor		1.00		1.01	1.19					1.00	1.00	1.00
Incremental Delay, d2		5.3		0.9	0.3					0.1	1.2	0.8
Delay (s)		33.8		15.5	12.9					22.0	26.6	24.2
Level of Service		C		B	B					C	C	C
Approach Delay (s)		33.8			13.2			0.0			25.5	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM Average Control Delay	25.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.5%	ICU Level of Service	F
Analysis Period (min)	15		

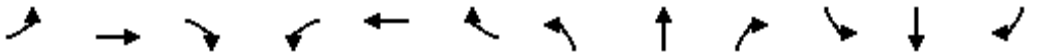
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	419	106	0	0	150	6	465	480	58	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	10	12	11	11	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	0.91	0.91			0.95		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.99		1.00	1.00	0.85			
Flt Protected	0.95	0.97			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1469	3110			3170		1555	1653	1530			
Flt Permitted	0.64	0.71			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	992	2290			3170		1555	1653	1530			
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	432	109	0	0	155	6	479	495	60	0	0	0
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	38	0	0	0
Lane Group Flow (vph)	216	325	0	0	158	0	479	495	22	0	0	0
Confl. Peds. (#/hr)	13		6	6		13			8	8		
Confl. Bikes (#/hr)	1					1			2	2		
Heavy Vehicles (%)	2%	1%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%
Turn Type	pm+pt						custom		custom			
Protected Phases	4	1 4			1		2	2	2			
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Effective Green, g (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Actuated g/C Ratio	0.51	0.51			0.15		0.37	0.37	0.37			
Clearance Time (s)	4.0				4.0		4.0	4.0	4.0			
Lane Grp Cap (vph)	678	1463			476		575	612	566			
v/s Ratio Prot	c0.11	0.08			c0.05		c0.31	0.30	0.01			
v/s Ratio Perm	0.05	0.03										
v/c Ratio	0.32	0.22			0.33		0.83	0.81	0.04			
Uniform Delay, d1	14.1	13.5			38.0		28.7	28.3	20.1			
Progression Factor	0.24	0.25			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.7	0.2			1.9		13.3	11.0	0.1			
Delay (s)	4.1	3.6			39.9		42.0	39.3	20.3			
Level of Service	A	A			D		D	D	C			
Approach Delay (s)		3.8			39.9			39.5			0.0	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM Average Control Delay	28.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.5%	ICU Level of Service	F
Analysis Period (min)	15		

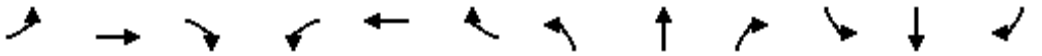
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	78	220	103	153	273	121	84	699	87	102	884	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	9	10	9	9	10	9
Total Lost time (s)		4.0			4.0		4.0	3.5	4.0	4.0	3.5	4.0
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		0.99			0.99		1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.96			0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		2940			2929		1508	3069	1309	1508	3099	1298
Flt Permitted		0.72			0.72		0.16	1.00	1.00	0.25	1.00	1.00
Satd. Flow (perm)		2137			2152		254	3069	1309	401	3099	1298
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	81	229	107	159	284	126	88	728	91	106	921	68
RTOR Reduction (vph)	0	40	0	0	31	0	0	0	56	0	0	33
Lane Group Flow (vph)	0	377	0	0	538	0	88	728	35	106	921	35
Confl. Peds. (#/hr)	35		30	30		35	34		8	8		34
Confl. Bikes (#/hr)	1					1	1					1
Heavy Vehicles (%)	1%	4%	0%	1%	3%	3%	2%	4%	2%	2%	3%	2%
Turn Type	pm+pt			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		35.0			27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)		36.0			28.0		36.0	33.5	33.0	36.0	33.5	33.0
Actuated g/C Ratio		0.42			0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)		5.0			5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)		962			709		167	1210	508	222	1221	504
v/s Ratio Prot		c0.03					c0.02	0.24		0.02	c0.30	
v/s Ratio Perm		0.14			c0.25		0.20		0.03	0.18		0.03
v/c Ratio		0.39			0.76		0.53	0.60	0.07	0.48	0.75	0.07
Uniform Delay, d1		16.9			25.5		16.7	20.5	16.3	16.0	22.2	16.3
Progression Factor		1.00			1.00		1.36	0.69	0.62	1.11	1.16	1.74
Incremental Delay, d2		1.2			7.5		10.7	2.1	0.2	5.2	3.1	0.2
Delay (s)		18.1			33.0		33.5	16.2	10.4	22.9	29.0	28.6
Level of Service		B			C		C	B	B	C	C	C
Approach Delay (s)		18.1			33.0			17.3			28.4	
Approach LOS		B			C			B			C	

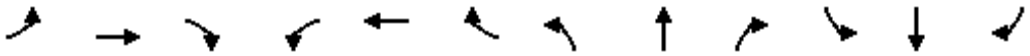
Intersection Summary			
HCM Average Control Delay	24.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	74.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	76	327	0	0	424	88	53	44	34	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.98			0.96				
Flt Protected		0.99			1.00			0.98				
Satd. Flow (prot)		1731			1707			1653				
Flt Permitted		0.83			1.00			0.98				
Satd. Flow (perm)		1453			1707			1653				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	84	363	0	0	471	98	59	49	38	0	0	0
RTOR Reduction (vph)	0	0	0	0	12	0	0	20	0	0	0	0
Lane Group Flow (vph)	0	447	0	0	557	0	0	126	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		38.0			38.0			19.0				
Effective Green, g (s)		38.0			38.0			19.0				
Actuated g/C Ratio		0.58			0.58			0.29				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		849			998			483				
v/s Ratio Prot					c0.33							
v/s Ratio Perm		0.31						0.08				
v/c Ratio		0.53			0.56			0.26				
Uniform Delay, d1		8.1			8.3			17.6				
Progression Factor		1.00			0.76			1.00				
Incremental Delay, d2		2.3			2.0			1.3				
Delay (s)		10.4			8.3			18.9				
Level of Service		B			A			B				
Approach Delay (s)		10.4			8.3			18.9			0.0	
Approach LOS		B			A			B			A	

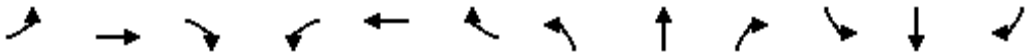
Intersection Summary			
HCM Average Control Delay	10.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	21	384	39	39	370	50	31	118	39	53	150	43
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	10	12	12	10	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			0.98	
Flpb, ped/bikes		1.00			1.00			0.99			1.00	
Frt		0.99			0.99			0.97			0.97	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1955			1941			2969			2985	
Flt Permitted		0.97			0.94			0.88			0.86	
Satd. Flow (perm)		1900			1825			2647			2591	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	23	427	43	43	411	56	34	131	43	59	167	48
RTOR Reduction (vph)	0	5	0	0	7	0	0	25	0	0	27	0
Lane Group Flow (vph)	0	488	0	0	503	0	0	183	0	0	247	0
Confl. Peds. (#/hr)	32		25	25		32	59		24	24		59
Confl. Bikes (#/hr)	3		2	2		3	4		2	2		4
Heavy Vehicles (%)	0%	3%	0%	3%	3%	0%	0%	0%	7%	4%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0			27.0			27.0	
Effective Green, g (s)		30.0			30.0			27.0			27.0	
Actuated g/C Ratio		0.46			0.46			0.42			0.42	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		877			842			1100			1076	
v/s Ratio Prot												
v/s Ratio Perm		0.26			c0.28			0.07			c0.10	
v/c Ratio		0.56			0.60			0.17			0.23	
Uniform Delay, d1		12.7			13.0			11.9			12.3	
Progression Factor		0.61			0.40			1.08			0.43	
Incremental Delay, d2		2.4			2.8			0.3			0.5	
Delay (s)		10.1			8.0			13.2			5.8	
Level of Service		B			A			B			A	
Approach Delay (s)		10.1			8.0			13.2			5.8	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM Average Control Delay	9.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	75.8%	ICU Level of Service	D
Analysis Period (min)	15		

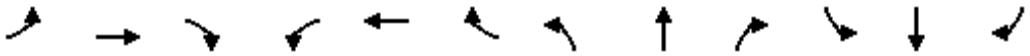
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	51	330	49	81	467	86	45	219	98	83	227	64
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	9	10	10	9	10	10	12	10	10	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		0.99	1.00		0.99	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.95		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1510	3036		1573	3077		1587	2962		1585	3072	
Flt Permitted	0.32	1.00		0.46	1.00		0.56	1.00		0.54	1.00	
Satd. Flow (perm)	502	3036		760	3077		929	2962		903	3072	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	57	367	54	90	519	96	50	243	109	92	252	71
RTOR Reduction (vph)	0	18	0	0	23	0	0	50	0	0	33	0
Lane Group Flow (vph)	57	403	0	90	592	0	50	302	0	92	290	0
Confl. Peds. (#/hr)	20		31	31		20	16		20	20		16
Confl. Bikes (#/hr)							1		3	3		1
Heavy Vehicles (%)	5%	3%	0%	0%	1%	0%	0%	2%	2%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	170	1028		257	1041		500	1595		486	1654	
v/s Ratio Prot		0.13			c0.19			0.10			0.09	
v/s Ratio Perm	0.11			0.12			0.05			c0.10		
v/c Ratio	0.34	0.39		0.35	0.57		0.10	0.19		0.19	0.18	
Uniform Delay, d1	16.0	16.4		16.1	17.6		7.3	7.7		7.7	7.6	
Progression Factor	0.70	0.67		0.93	0.93		0.95	0.97		1.08	1.08	
Incremental Delay, d2	4.6	1.0		3.7	2.2		0.4	0.3		0.9	0.2	
Delay (s)	15.9	12.0		18.7	18.5		7.3	7.7		9.2	8.5	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		12.5			18.5			7.7			8.6	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	12.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.7%	ICU Level of Service	A
Analysis Period (min)	15		

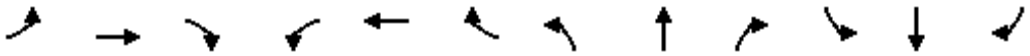
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	348	78	87	418	50	46	231	58	46	279	64
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	9	10	9	9	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			0.98	
Flpb, ped/bikes	0.98	1.00		0.99	1.00			0.99			1.00	
Frt	1.00	0.97		1.00	0.98			0.97			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1509	3018		1430	3723			3485			3521	
Flt Permitted	0.45	1.00		0.48	1.00			0.86			0.88	
Satd. Flow (perm)	708	3018		715	3723			3028			3119	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	62	366	82	92	440	53	48	243	61	48	294	67
RTOR Reduction (vph)	0	29	0	0	14	0	0	27	0	0	25	0
Lane Group Flow (vph)	62	419	0	92	479	0	0	325	0	0	384	0
Confl. Peds. (#/hr)	38		17	17		38	125		53	53		125
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	3%	0%	7%	2%	0%	0%	6%	10%	2%	5%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Effective Green, g (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48			0.40			0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	338	1439		341	1776			1211			1248	
v/s Ratio Prot		c0.14			0.13							
v/s Ratio Perm	0.09			0.13				0.11			c0.12	
v/c Ratio	0.18	0.29		0.27	0.27			0.27			0.31	
Uniform Delay, d1	9.7	10.3		10.2	10.2			13.1			13.3	
Progression Factor	1.61	1.75		1.09	1.09			0.69			0.73	
Incremental Delay, d2	1.1	0.5		1.7	0.3			0.5			0.6	
Delay (s)	16.8	18.6		12.9	11.4			9.5			10.4	
Level of Service	B	B		B	B			A			B	
Approach Delay (s)		18.4			11.6			9.5			10.4	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM Average Control Delay	12.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.4%	ICU Level of Service	B
Analysis Period (min)	15		

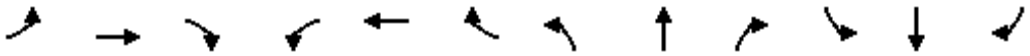
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	86	294	92	92	293	92	120	82	47	47	82	119
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	16	12	12	16	12
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		0.95			1.00			1.00	
Frt		1.00	0.85		0.97			0.97			0.94	
Flt Protected		0.99	1.00		0.99			0.98			0.99	
Satd. Flow (prot)		1670	1436		3087			1885			1835	
Flt Permitted		0.79	1.00		0.79			0.68			0.90	
Satd. Flow (perm)		1336	1436		2454			1303			1674	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	96	327	102	102	326	102	133	91	52	52	91	132
RTOR Reduction (vph)	0	0	49	0	32	0	0	13	0	0	51	0
Lane Group Flow (vph)	0	423	53	0	498	0	0	263	0	0	224	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		34.0	34.0		34.0			21.0			21.0	
Effective Green, g (s)		34.0	34.0		34.0			21.0			21.0	
Actuated g/C Ratio		0.52	0.52		0.52			0.32			0.32	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Grp Cap (vph)		699	751		1284			421			541	
v/s Ratio Prot												
v/s Ratio Perm		c0.32	0.04		0.20			c0.20			0.13	
v/c Ratio		0.61	0.07		0.39			0.63			0.41	
Uniform Delay, d1		10.8	7.7		9.3			18.7			17.2	
Progression Factor		1.86	4.76		0.51			1.00			1.00	
Incremental Delay, d2		3.8	0.2		0.9			6.8			2.3	
Delay (s)		23.9	36.7		5.6			25.5			19.5	
Level of Service		C	D		A			C			B	
Approach Delay (s)		26.4			5.6			25.5			19.5	
Approach LOS		C			A			C			B	

Intersection Summary			
HCM Average Control Delay	18.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	79.9%	ICU Level of Service	D
Analysis Period (min)	15		

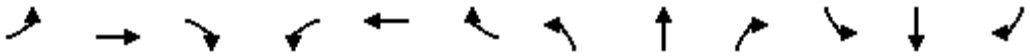
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	55	281	28	26	327	60	26	133	47	62	146	63
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	15	8	16	8	8	16	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.98			0.97			0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1444	3026		1566	3019			3582			3599	
Flt Permitted	0.48	1.00		0.55	1.00			0.90			0.84	
Satd. Flow (perm)	736	3026		899	3019			3238			3069	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	61	312	31	29	363	67	29	148	52	69	162	70
RTOR Reduction (vph)	0	11	0	0	23	0	0	30	0	0	41	0
Lane Group Flow (vph)	61	332	0	29	407	0	0	199	0	0	260	0
Confl. Peds. (#/hr)	24		47	47		24	9		36	36		9
Confl. Bikes (#/hr)			4	4			1					1
Heavy Vehicles (%)	9%	4%	0%	0%	3%	0%	0%	1%	10%	0%	0%	8%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	30.0	30.0		30.0	30.0			27.0			27.0	
Effective Green, g (s)	30.0	30.0		30.0	30.0			27.0			27.0	
Actuated g/C Ratio	0.46	0.46		0.46	0.46			0.42			0.42	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	340	1397		415	1393			1345			1275	
v/s Ratio Prot		0.11			c0.13							
v/s Ratio Perm	0.08			0.03				0.06			c0.08	
v/c Ratio	0.18	0.24		0.07	0.29			0.15			0.20	
Uniform Delay, d1	10.3	10.6		9.7	10.9			11.8			12.1	
Progression Factor	0.67	0.68		0.86	0.69			0.95			0.41	
Incremental Delay, d2	0.9	0.3		0.1	0.2			0.2			0.3	
Delay (s)	7.8	7.5		8.5	7.8			11.4			5.3	
Level of Service	A	A		A	A			B			A	
Approach Delay (s)		7.5			7.8			11.4			5.3	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM Average Control Delay	7.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.7%	ICU Level of Service	B
Analysis Period (min)	15		

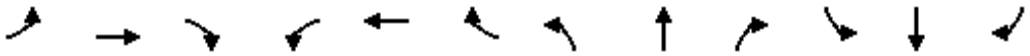
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	47	450	26	86	507	222	24	124	115	340	261	82
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.99			0.96			0.93			0.98	
Flt Protected		1.00			0.99			1.00			0.98	
Satd. Flow (prot)		3281			3168			3089			3181	
Flt Permitted		0.76			0.79			0.90			0.70	
Satd. Flow (perm)		2509			2518			2805			2289	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	52	500	29	96	563	247	27	138	128	378	290	91
RTOR Reduction (vph)	0	6	0	0	60	0	0	69	0	0	16	0
Lane Group Flow (vph)	0	575	0	0	846	0	0	224	0	0	743	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0			30.0			17.0	
Effective Green, g (s)		25.0			25.0			30.0			17.0	
Actuated g/C Ratio		0.38			0.38			0.46			0.26	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		965			968			1338			599	
v/s Ratio Prot								c0.03				
v/s Ratio Perm		0.23			c0.34			0.05			c0.32	
v/c Ratio		0.60			0.87			0.17			1.36dl	
Uniform Delay, d1		16.0			18.5			10.2			24.0	
Progression Factor		1.48			1.00			1.00			0.80	
Incremental Delay, d2		2.7			10.9			0.3			121.3	
Delay (s)		26.4			29.4			10.5			140.5	
Level of Service		C			C			B			F	
Approach Delay (s)		26.4			29.4			10.5			140.5	
Approach LOS		C			C			B			F	

Intersection Summary			
HCM Average Control Delay	59.7	HCM Level of Service	E
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	86.1%	ICU Level of Service	E
Analysis Period (min)	15		

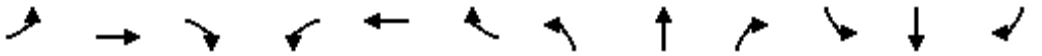
dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	899	132	48	794	0	82	0	36	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	10	10	12	12	12	12	12	12	12
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			1.00				
Frt		0.98			1.00			0.96				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		3039			3090			1619				
Flt Permitted		1.00			0.80			0.79				
Satd. Flow (perm)		3039			2485			1328				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	999	147	53	882	0	91	0	40	0	0	0
RTOR Reduction (vph)	0	16	0	0	0	0	0	17	0	0	0	0
Lane Group Flow (vph)	0	1130	0	0	935	0	0	114	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	custom			Perm			Perm			Perm		
Protected Phases		4 5 6 11			8			2			2	
Permitted Phases	4 6 11			8			2			2		
Actuated Green, G (s)		65.0			33.0			16.0				
Effective Green, g (s)		58.0			33.0			16.0				
Actuated g/C Ratio		0.64			0.37			0.18				
Clearance Time (s)					5.0			5.0				
Lane Grp Cap (vph)		1958			911			236				
v/s Ratio Prot		c0.37										
v/s Ratio Perm					c0.38			c0.09				
v/c Ratio		0.58			1.03			0.48				
Uniform Delay, d1		9.1			28.5			33.3				
Progression Factor		0.16			1.43			1.00				
Incremental Delay, d2		0.3			35.5			6.9				
Delay (s)		1.7			76.4			40.2				
Level of Service		A			E			D				
Approach Delay (s)		1.7			76.4			40.2			0.0	
Approach LOS		A			E			D			A	

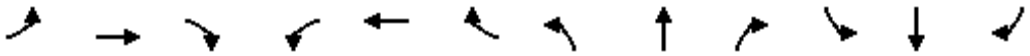
Intersection Summary			
HCM Average Control Delay	35.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	74.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	224	642	24	112	614	185	61	4	107	212	10	213
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	10	12	12	12	12	16	12	12	12	12
Total Lost time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85		0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (prot)	1550	3192		1660	3320	1485		1782		1660	1748	1485
Flt Permitted	0.29	1.00		0.33	1.00	1.00		0.88		0.44	1.00	1.00
Satd. Flow (perm)	471	3192		583	3320	1485		1592		763	1748	1485
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	249	713	27	124	682	206	68	4	119	236	11	237
RTOR Reduction (vph)	0	2	0	0	0	96	0	90	0	0	0	135
Lane Group Flow (vph)	249	738	0	124	682	110	0	101	0	236	11	102
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	54.9	42.5		47.6	38.2	48.2		12.1		25.1	25.1	38.8
Effective Green, g (s)	54.9	42.5		47.6	38.2	48.2		12.1		25.1	25.1	38.8
Actuated g/C Ratio	0.61	0.47		0.53	0.42	0.54		0.13		0.28	0.28	0.43
Clearance Time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Vehicle Extension (s)	4.0	3.0		4.0	3.0	3.0		4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	452	1507		421	1409	795		214		312	487	640
v/s Ratio Prot	c0.08	0.23		0.03	0.21	0.02				c0.08	0.01	0.02
v/s Ratio Perm	c0.25			0.13		0.06		0.06		c0.13		0.04
v/c Ratio	0.55	0.49		0.29	0.48	0.14		0.47		0.76	0.02	0.16
Uniform Delay, d1	9.2	16.3		10.9	18.8	10.5		36.0		28.6	23.5	15.6
Progression Factor	2.63	1.86		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	1.5	1.0		0.5	1.2	0.1		2.2		10.0	0.0	0.2
Delay (s)	25.9	31.3		11.4	20.0	10.6		38.2		38.6	23.6	15.8
Level of Service	C	C		B	B	B		D		D	C	B
Approach Delay (s)		30.0			17.0			38.2			27.1	
Approach LOS		C			B			D			C	

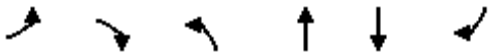
Intersection Summary					
HCM Average Control Delay	25.1	HCM Level of Service		C	
HCM Volume to Capacity ratio	0.58				
Actuated Cycle Length (s)	90.0	Sum of lost time (s)		6.0	
Intersection Capacity Utilization	61.7%	ICU Level of Service		B	
Analysis Period (min)	15				
c Critical Lane Group					



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	518	443	2	333	0	0	0	0	19	0	578
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	576	492	2	370	0	0	0	0	21	0	642
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		498										
pX, platoon unblocked												
vC, conflicting volume	370			576			765	950	288	662	950	185
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	370			576			765	950	288	662	950	185
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	94	100	22
cM capacity (veh/h)	1178			987			64	256	706	345	256	823

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	288	288	492	126	247	21	642
Volume Left	0	0	0	2	0	21	0
Volume Right	0	0	492	0	0	0	642
cSH	1700	1700	1700	987	1700	345	823
Volume to Capacity	0.17	0.17	0.29	0.00	0.15	0.06	0.78
Queue Length 95th (ft)	0	0	0	0	0	5	198
Control Delay (s)	0.0	0.0	0.0	0.2	0.0	16.1	23.1
Lane LOS				A		C	C
Approach Delay (s)	0.0			0.1		22.8	
Approach LOS						C	

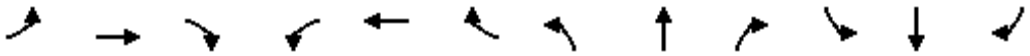
Intersection Summary				
Average Delay	7.2			
Intersection Capacity Utilization	54.2%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	537	0	335	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	597	0	372	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	298	298	372
Volume Left (vph)	298	298	372
Volume Right (vph)	0	0	0
Hadj (s)	0.55	0.55	0.25
Departure Headway (s)	6.2	6.2	5.6
Degree Utilization, x	0.51	0.51	0.58
Capacity (veh/h)	568	570	619
Control Delay (s)	14.3	14.3	16.0
Approach Delay (s)	14.3		16.0
Approach LOS	B		C

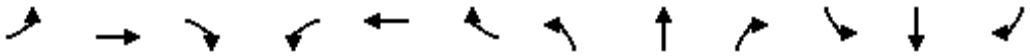
Intersection Summary			
Delay	14.9		
HCM Level of Service	B		
Intersection Capacity Utilization	42.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	475	64	196	511	0	0	0	0	101	21	58
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)		3.0		4.0	4.0						5.0	
Lane Util. Factor		0.95		1.00	0.95						0.95	
Frt		0.98		1.00	1.00						0.95	
Flt Protected		1.00		0.95	1.00						0.97	
Satd. Flow (prot)		3153		1605	3210						3074	
Flt Permitted		1.00		0.34	1.00						0.97	
Satd. Flow (perm)		3153		582	3210						3074	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	528	71	218	568	0	0	0	0	112	23	64
RTOR Reduction (vph)	0	12	0	0	0	0	0	0	0	0	44	0
Lane Group Flow (vph)	0	587	0	218	568	0	0	0	0	0	155	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type				pm+pt						Split		
Protected Phases		4		3	8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		36.0		49.0	49.0						27.0	
Effective Green, g (s)		36.0		49.0	49.0						27.0	
Actuated g/C Ratio		0.42		0.58	0.58						0.32	
Clearance Time (s)		3.0		4.0	4.0						5.0	
Lane Grp Cap (vph)		1335		456	1850						976	
v/s Ratio Prot		0.19		c0.06	0.18						c0.05	
v/s Ratio Perm				c0.22								
v/c Ratio		0.44		0.48	0.31						0.16	
Uniform Delay, d1		17.4		15.9	9.3						20.8	
Progression Factor		1.00		0.35	0.18						1.00	
Incremental Delay, d2		1.1		2.8	0.3						0.3	
Delay (s)		18.4		8.4	2.0						21.2	
Level of Service		B		A	A						C	
Approach Delay (s)		18.4			3.8			0.0			21.2	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	44.9%	ICU Level of Service	A
Analysis Period (min)	15		

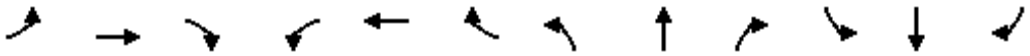
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	95	481	0	0	644	129	63	90	59	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	11	11	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0			3.0			5.0				
Lane Util. Factor	1.00	0.95			0.95			0.91				
Frt	1.00	1.00			0.98			0.96				
Flt Protected	0.95	1.00			1.00			0.99				
Satd. Flow (prot)	1660	3320			3130			4504				
Flt Permitted	0.21	1.00			1.00			0.99				
Satd. Flow (perm)	367	3320			3130			4504				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	106	534	0	0	716	143	70	100	66	0	0	0
RTOR Reduction (vph)	0	0	0	0	19	0	0	45	0	0	0	0
Lane Group Flow (vph)	106	534	0	0	840	0	0	191	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt						Split					
Protected Phases	7	4			8		2	2				
Permitted Phases	4											
Actuated Green, G (s)	48.0	48.0			35.0			27.0				
Effective Green, g (s)	48.0	48.0			35.0			27.0				
Actuated g/C Ratio	0.56	0.56			0.41			0.32				
Clearance Time (s)	5.0	5.0			3.0			5.0				
Lane Grp Cap (vph)	359	1875			1289			1431				
v/s Ratio Prot	0.03	c0.16			c0.27			c0.04				
v/s Ratio Perm	0.13											
v/c Ratio	0.30	0.28			0.65			0.13				
Uniform Delay, d1	18.6	9.6			20.1			20.7				
Progression Factor	0.43	0.31			1.00			1.00				
Incremental Delay, d2	1.9	0.4			2.6			0.2				
Delay (s)	9.9	3.4			22.7			20.9				
Level of Service	A	A			C			C				
Approach Delay (s)		4.4			22.7			20.9			0.0	
Approach LOS		A			C			C			A	

Intersection Summary			
HCM Average Control Delay	15.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	44.9%	ICU Level of Service	A
Analysis Period (min)	15		

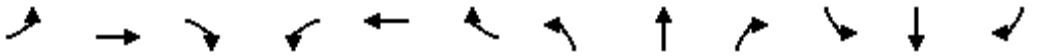
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	114	346	114	91	386	81	129	78	30	31	87	144
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	12	15	12	12	15	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		0.97			0.98			0.98			0.93	
Flt Protected		0.99			0.99			0.97			0.99	
Satd. Flow (prot)		2977			3007			1840			1769	
Flt Permitted		0.66			0.69			0.72			0.95	
Satd. Flow (perm)		1975			2105			1358			1683	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	127	384	127	101	429	90	143	87	33	34	97	160
RTOR Reduction (vph)	0	34	0	0	21	0	0	8	0	0	68	0
Lane Group Flow (vph)	0	604	0	0	599	0	0	255	0	0	223	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		23.0			23.0			32.0			32.0	
Effective Green, g (s)		23.0			23.0			32.0			32.0	
Actuated g/C Ratio		0.35			0.35			0.49			0.49	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		699			745			669			829	
v/s Ratio Prot												
v/s Ratio Perm		c0.31			0.28			c0.19			0.13	
v/c Ratio		0.86			0.80			0.38			0.27	
Uniform Delay, d1		19.6			19.0			10.3			9.7	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		13.5			9.0			1.6			0.8	
Delay (s)		33.0			27.9			12.0			10.5	
Level of Service		C			C			B			B	
Approach Delay (s)		33.0			27.9			12.0			10.5	
Approach LOS		C			C			B			B	

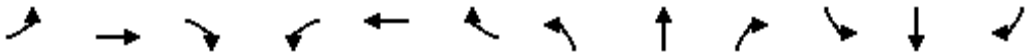
Intersection Summary			
HCM Average Control Delay	24.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	80.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	114	201	88	159	311	65	124	542	67	95	950	180
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	12	10	16	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.95		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1559	2980		1573	3683		1508	3069	1333	1520	3099	1336
Flt Permitted	0.45	1.00		0.53	1.00		0.13	1.00	1.00	0.34	1.00	1.00
Satd. Flow (perm)	739	2980		880	3683		212	3069	1333	541	3099	1336
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	120	212	93	167	327	68	131	571	71	100	1000	189
RTOR Reduction (vph)	0	58	0	0	21	0	0	0	45	0	0	120
Lane Group Flow (vph)	120	247	0	167	374	0	131	571	26	100	1000	69
Confl. Peds. (#/hr)	19		16	16		19	22		25	25		22
Heavy Vehicles (%)	2%	2%	0%	1%	2%	2%	2%	4%	0%	1%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	32.0	27.0		32.0	27.0		38.0	31.0	31.0	38.0	31.0	31.0
Effective Green, g (s)	30.0	28.0		30.0	28.0		36.0	31.0	31.0	36.0	31.0	31.0
Actuated g/C Ratio	0.35	0.33		0.35	0.33		0.42	0.36	0.36	0.42	0.36	0.36
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	299	982		343	1213		181	1119	486	298	1130	487
v/s Ratio Prot	0.02	0.08		c0.02	0.10		c0.05	0.19		0.02	c0.32	
v/s Ratio Perm	0.12			c0.15			0.26		0.02	0.12		0.05
v/c Ratio	0.40	0.25		0.49	0.31		0.72	0.51	0.05	0.34	0.88	0.14
Uniform Delay, d1	19.7	20.8		20.7	21.3		18.1	21.1	17.5	15.4	25.3	18.1
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.39	1.04	2.36
Incremental Delay, d2	4.0	0.6		4.9	0.7		22.1	1.7	0.2	2.2	7.8	0.4
Delay (s)	23.7	21.5		25.5	21.9		40.2	22.7	17.7	23.7	34.2	43.2
Level of Service	C	C		C	C		D	C	B	C	C	D
Approach Delay (s)		22.1			23.0			25.2			34.7	
Approach LOS		C			C			C			C	

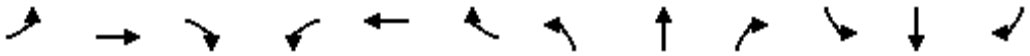
Intersection Summary			
HCM Average Control Delay	28.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	70.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	49	295	30	33	393	24	33	102	41	36	134	66
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	16	12	12	16	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00	0.98		1.00	0.99
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		0.99	1.00
Satd. Flow (prot)		1962	1466		1993	1480		2015	1506		2002	1511
Flt Permitted		0.90	1.00		0.96	1.00		0.91	1.00		0.93	1.00
Satd. Flow (perm)		1777	1466		1913	1480		1861	1506		1877	1511
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	52	311	32	35	414	25	35	107	43	38	141	69
RTOR Reduction (vph)	0	0	17	0	0	13	0	0	25	0	0	40
Lane Group Flow (vph)	0	363	15	0	449	12	0	142	18	0	179	29
Confl. Peds. (#/hr)	11		20	20		11	1		4	4		1
Confl. Bikes (#/hr)	1		1	1		1			1	1		
Heavy Vehicles (%)	4%	3%	0%	0%	2%	0%	0%	0%	0%	0%	1%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Effective Green, g (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Actuated g/C Ratio		0.46	0.46		0.46	0.46		0.42	0.42		0.42	0.42
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		820	677		883	683		773	626		780	628
v/s Ratio Prot												
v/s Ratio Perm		0.20	0.01		c0.23	0.01		0.08	0.01		c0.10	0.02
v/c Ratio		0.44	0.02		0.51	0.02		0.18	0.03		0.23	0.05
Uniform Delay, d1		11.8	9.5		12.3	9.5		12.0	11.2		12.3	11.3
Progression Factor		1.00	1.00		0.55	0.41		1.04	1.19		1.04	0.94
Incremental Delay, d2		1.7	0.1		2.0	0.0		0.5	0.1		0.7	0.1
Delay (s)		13.6	9.6		8.8	3.9		13.1	13.4		13.4	10.8
Level of Service		B	A		A	A		B	B		B	B
Approach Delay (s)		13.3			8.5			13.2			12.7	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	11.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	83.0%	ICU Level of Service	E
Analysis Period (min)	15		

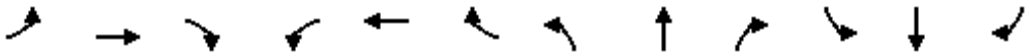
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	75	317	20	51	299	51	10	109	23	115	214	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.98		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1550	3072		1550	3031		1550	3017		1550	2991	
Flt Permitted	0.95	1.00		0.53	1.00		0.55	1.00		0.66	1.00	
Satd. Flow (perm)	1550	3072		864	3031		892	3017		1074	2991	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	83	352	22	57	332	57	11	121	26	128	238	72
RTOR Reduction (vph)	0	7	0	0	21	0	0	15	0	0	42	0
Lane Group Flow (vph)	83	367	0	57	368	0	11	132	0	128	268	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Prot			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Effective Green, g (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.11	0.49		0.34	0.34		0.42	0.42		0.42	0.42	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	167	1512		292	1026		371	1253		446	1242	
v/s Ratio Prot	c0.05	0.12			c0.12			0.04			0.09	
v/s Ratio Perm				0.07			0.01			c0.12		
v/c Ratio	0.50	0.24		0.20	0.36		0.03	0.11		0.29	0.22	
Uniform Delay, d1	27.3	9.5		15.2	16.2		11.2	11.6		12.6	12.2	
Progression Factor	0.93	0.56		0.82	0.82		0.86	0.85		1.12	1.12	
Incremental Delay, d2	9.8	0.4		1.4	0.9		0.0	0.0		1.6	0.4	
Delay (s)	35.3	5.6		13.9	14.2		9.7	9.8		15.7	14.0	
Level of Service	D	A		B	B		A	A		B	B	
Approach Delay (s)		11.0			14.2			9.8			14.5	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM Average Control Delay	12.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	39.9%	ICU Level of Service	A
Analysis Period (min)	15		

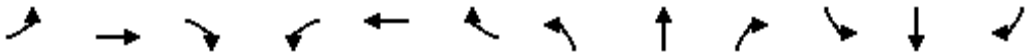
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	64	267	88	245	330	63	104	295	189	55	282	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.96		1.00	0.98			0.95			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1550	2984		1550	3025			3133			3233	
Flt Permitted	0.50	1.00		0.95	1.00			0.79			0.81	
Satd. Flow (perm)	813	2984		1550	3025			2496			2628	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	71	297	98	272	367	70	116	328	210	61	313	56
RTOR Reduction (vph)	0	49	0	0	24	0	0	87	0	0	18	0
Lane Group Flow (vph)	71	346	0	272	413	0	0	567	0	0	412	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Prot			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4						2			6		
Actuated Green, G (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Effective Green, g (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Actuated g/C Ratio	0.31	0.31		0.09	0.45			0.38			0.38	
Clearance Time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	250	918		143	1350			960			1011	
v/s Ratio Prot		c0.12		c0.18	0.14							
v/s Ratio Perm	0.09							c0.23			0.16	
v/c Ratio	0.28	0.38		1.90	0.31			0.59			0.41	
Uniform Delay, d1	17.1	17.6		29.5	11.5			15.9			14.6	
Progression Factor	0.65	0.60		1.27	1.18			1.22			0.70	
Incremental Delay, d2	2.8	1.2		417.0	0.3			2.4			1.2	
Delay (s)	13.9	11.7		454.6	13.8			21.8			11.4	
Level of Service	B	B		F	B			C			B	
Approach Delay (s)		12.1			182.9			21.8			11.4	
Approach LOS		B			F			C			B	

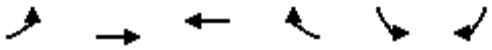
Intersection Summary			
HCM Average Control Delay	68.4	HCM Level of Service	E
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	26	454	16	75	645	75	55	110	165	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	14	12	10	15	10
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			0.95				
Frt		1.00			0.99			0.93				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		1620			1603			3249				
Flt Permitted		0.94			0.91			0.99				
Satd. Flow (perm)		1529			1465			3249				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	29	504	18	83	717	83	61	122	183	0	0	0
RTOR Reduction (vph)	0	1	0	0	5	0	0	139	0	0	0	0
Lane Group Flow (vph)	0	550	0	0	878	0	0	227	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		41.5			41.5			15.5				
Effective Green, g (s)		41.5			41.5			15.5				
Actuated g/C Ratio		0.64			0.64			0.24				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		3.0			3.0			8.0				
Lane Grp Cap (vph)		976			935			775				
v/s Ratio Prot												
v/s Ratio Perm		0.36			c0.60			0.07				
v/c Ratio		0.56			0.94			0.29				
Uniform Delay, d1		6.6			10.6			20.3				
Progression Factor		1.30			1.00			1.00				
Incremental Delay, d2		2.1			18.0			0.9				
Delay (s)		10.7			28.6			21.2				
Level of Service		B			C			C				
Approach Delay (s)		10.7			28.6			21.2			0.0	
Approach LOS		B			C			C			A	

Intersection Summary			
HCM Average Control Delay	21.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	85.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	142	464	611	39	119	176
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	149	488	643	41	125	185
Pedestrians		5	6		17	
Lane Width (ft)		16.0	16.0		10.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		1	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1319	491			
pX, platoon unblocked	0.83				0.83	0.83
vC, conflicting volume	701				1474	686
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	538				1469	519
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	82				0	60
cM capacity (veh/h)	833				95	458

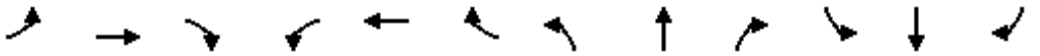
Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	638	684	125	185
Volume Left	149	0	125	0
Volume Right	0	41	0	185
cSH	833	1700	95	458
Volume to Capacity	0.18	0.40	1.32	0.40
Queue Length 95th (ft)	16	0	225	48
Control Delay (s)	4.4	0.0	281.6	18.1
Lane LOS	A		F	C
Approach Delay (s)	4.4	0.0	124.4	
Approach LOS			F	

Intersection Summary			
Average Delay	25.4		
Intersection Capacity Utilization	88.5%	ICU Level of Service	E
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	690	0	1	620	3	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frt	1.00			1.00	0.88	
Flt Protected	1.00			1.00	1.00	
Satd. Flow (prot)	1748			1747	1525	
Flt Permitted	1.00			1.00	1.00	
Satd. Flow (perm)	1748			1747	1525	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	767	0	1	689	3	32
RTOR Reduction (vph)	0	0	0	0	27	0
Lane Group Flow (vph)	767	0	0	690	8	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type			Perm			
Protected Phases	1 2 4			4	3	
Permitted Phases			4			
Actuated Green, G (s)	63.0			31.0	14.0	
Effective Green, g (s)	59.0			31.0	14.0	
Actuated g/C Ratio	0.69			0.36	0.16	
Clearance Time (s)				4.0	4.0	
Lane Grp Cap (vph)	1213			637	251	
v/s Ratio Prot	c0.44				c0.01	
v/s Ratio Perm				0.40		
v/c Ratio	0.63			1.08	0.03	
Uniform Delay, d1	7.1			27.0	29.8	
Progression Factor	0.10			1.00	1.00	
Incremental Delay, d2	0.2			60.3	0.2	
Delay (s)	0.9			87.3	30.1	
Level of Service	A			F	C	
Approach Delay (s)	0.9			87.3	30.1	
Approach LOS	A			F	C	

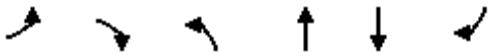
Intersection Summary			
HCM Average Control Delay	41.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	48.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	243	606	32	407	0	0	0	0	17	6	249
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	270	673	36	452	0	0	0	0	19	7	277
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	452			270			1133	1130	472	658	793	452
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	452			270			1133	1130	472	658	793	452
tC, single (s)	4.1			4.2			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			100	100	100	95	98	50
cM capacity (veh/h)	1119			1276			77	200	544	346	314	555

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	180	763	488	26	277
Volume Left	0	0	36	19	0
Volume Right	0	673	0	0	277
cSH	1700	1700	1276	337	555
Volume to Capacity	0.11	0.45	0.03	0.08	0.50
Queue Length 95th (ft)	0	0	2	6	69
Control Delay (s)	0.0	0.0	0.9	16.6	17.8
Lane LOS			A	C	C
Approach Delay (s)	0.0		0.9	17.7	
Approach LOS				C	

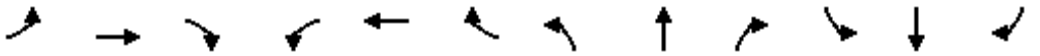
Intersection Summary				
Average Delay	3.3			
Intersection Capacity Utilization	60.5%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	260	0	439	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	289	0	488	0	0	0

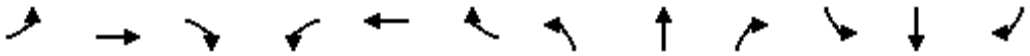
Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	144	144	488
Volume Left (vph)	144	144	488
Volume Right (vph)	0	0	0
Hadj (s)	0.55	0.55	0.25
Departure Headway (s)	6.4	6.4	5.0
Degree Utilization, x	0.26	0.26	0.68
Capacity (veh/h)	536	537	701
Control Delay (s)	10.3	10.3	17.7
Approach Delay (s)	10.3		17.7
Approach LOS	B		C

Intersection Summary			
Delay	15.0		
HCM Level of Service	B		
Intersection Capacity Utilization	40.2%	ICU Level of Service	A
Analysis Period (min)	15		



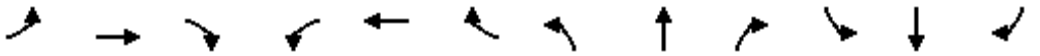
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	530	345	313	770	0	0	0	0	279	269	372
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	13	12	12	12	12	10	10	11
Total Lost time (s)		6.0	6.0		6.0					6.0	6.0	6.0
Lane Util. Factor		0.95	1.00		0.95					0.86	0.81	0.86
Frpb, ped/bikes		1.00	0.98		1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	0.95	0.85
Flt Protected		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (prot)		3179	1232		3425					1359	3806	1133
Flt Permitted		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (perm)		3179	1232		3425					1359	3806	1133
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	558	363	329	811	0	0	0	0	294	283	392
RTOR Reduction (vph)	0	0	217	0	0	0	0	0	0	0	53	113
Lane Group Flow (vph)	0	558	146	0	1140	0	0	0	0	162	558	83
Confl. Peds. (#/hr)	4		6	6		4						
Heavy Vehicles (%)	0%	4%	6%	1%	2%	0%	0%	0%	0%	1%	1%	1%
Parking (#/hr)			0									0
Turn Type			Perm	Split						Split		custom
Protected Phases		2		10 12 14	10 12 14					4	4	
Permitted Phases			2									4 2
Actuated Green, G (s)		39.0	39.0		67.4					23.0	23.0	68.0
Effective Green, g (s)		39.0	39.0		67.4					23.0	23.0	68.0
Actuated g/C Ratio		0.24	0.24		0.42					0.14	0.14	0.42
Clearance Time (s)		6.0	6.0							6.0	6.0	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		775	300		1443					195	547	482
v/s Ratio Prot		c0.18			c0.33					0.12	c0.15	
v/s Ratio Perm			0.12									0.07
v/c Ratio		0.72	0.49		0.79					0.83	1.02	0.17
Uniform Delay, d1		55.5	51.9		40.2					66.6	68.5	28.5
Progression Factor		1.00	1.00		0.10					1.00	1.00	1.00
Incremental Delay, d2		5.7	5.6		0.3					24.9	43.6	0.2
Delay (s)		61.2	57.5		4.3					91.5	112.1	28.7
Level of Service		E	E		A					F	F	C
Approach Delay (s)		59.7			4.3			0.0			91.8	
Approach LOS		E			A			A			F	

Intersection Summary			
HCM Average Control Delay	49.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	32.6
Intersection Capacity Utilization	81.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



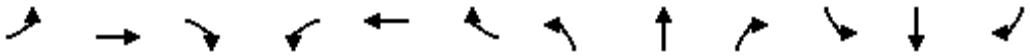
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	292	517	0	0	750	144	332	214	206	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	13	12	12	11	12	13	13	14	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0				
Lane Util. Factor	1.00	0.95			0.95	1.00	0.91	0.91				
Frt	1.00	1.00			1.00	0.85	1.00	0.94				
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (prot)	1605	3431			3210	1485	1561	3059				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (perm)	1605	3431			3210	1485	1561	3059				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	324	574	0	0	833	160	369	238	229	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	66	0	69	0	0	0	0
Lane Group Flow (vph)	324	574	0	0	833	94	284	483	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Split					Perm	Split					
Protected Phases	2 4 8	2 4 8			10		12	12				
Permitted Phases						10						
Actuated Green, G (s)	84.6	84.6			36.4	36.4	12.0	12.0				
Effective Green, g (s)	84.6	84.6			36.4	36.4	12.0	12.0				
Actuated g/C Ratio	0.53	0.53			0.23	0.23	0.08	0.08				
Clearance Time (s)					6.0	6.0	6.0	6.0				
Vehicle Extension (s)					3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	849	1814			730	338	117	229				
v/s Ratio Prot	c0.20	0.17			c0.26		c0.18	0.16				
v/s Ratio Perm						0.06						
v/c Ratio	0.38	0.32			1.14	0.28	2.43	2.11				
Uniform Delay, d1	22.3	21.3			61.8	50.9	74.0	74.0				
Progression Factor	0.05	0.06			1.00	1.00	1.00	1.00				
Incremental Delay, d2	0.2	0.1			79.4	0.4	667.5	512.9				
Delay (s)	1.4	1.3			141.2	51.4	741.5	586.9				
Level of Service	A	A			F	D	F	F				
Approach Delay (s)		1.3			126.8			639.4			0.0	
Approach LOS		A			F			F			A	

Intersection Summary			
HCM Average Control Delay	242.6	HCM Level of Service	F
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	29.0
Intersection Capacity Utilization	69.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	140	312	136	188	418	107	108	522	95	106	803	120
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	14	12	10	10	12	9	10	12
Total Lost time (s)	4.0	4.0	5.0	4.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1579	1600	1372	1594	1788		1578	3000		1537	3001	
Flt Permitted	0.15	1.00	1.00	0.35	1.00		0.13	1.00		0.32	1.00	
Satd. Flow (perm)	256	1600	1372	583	1788		216	3000		511	3001	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	147	328	143	198	440	113	114	549	100	112	845	126
RTOR Reduction (vph)	0	0	100	0	11	0	0	16	0	0	13	0
Lane Group Flow (vph)	147	328	43	198	542	0	114	633	0	112	958	0
Confl. Peds. (#/hr)	28		8	8		28	59		11	11		59
Confl. Bikes (#/hr)	3					3	1		2	2		1
Heavy Vehicles (%)	1%	5%	2%	0%	4%	0%	1%	4%	0%	0%	3%	3%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	34.0	27.0	27.0	34.0	27.0		43.0	36.0		40.2	34.6	
Effective Green, g (s)	32.0	28.0	27.0	32.0	27.0		41.0	36.0		38.2	34.6	
Actuated g/C Ratio	0.35	0.31	0.30	0.35	0.30		0.45	0.40		0.42	0.38	
Clearance Time (s)	3.0	5.0	5.0	3.0	5.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	178	494	409	273	533		188	1192		268	1146	
v/s Ratio Prot	c0.05	0.20		0.05	c0.30		c0.04	0.21		0.02	c0.32	
v/s Ratio Perm	0.24		0.03	0.21			0.23			0.16		
v/c Ratio	0.83	0.66	0.10	0.73	1.02		0.61	0.53		0.42	0.84	
Uniform Delay, d1	23.9	27.2	23.0	24.8	31.8		17.4	20.8		16.7	25.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	25.7	6.9	0.5	9.2	43.5		5.4	1.7		1.1	7.3	
Delay (s)	49.6	34.1	23.5	34.0	75.3		22.8	22.5		17.8	32.7	
Level of Service	D	C	C	C	E		C	C		B	C	
Approach Delay (s)		35.3			64.4			22.6			31.2	
Approach LOS		D			E			C			C	

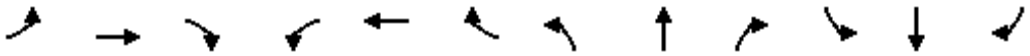
Intersection Summary					
HCM Average Control Delay	37.7	HCM Level of Service		D	
HCM Volume to Capacity ratio	0.88				
Actuated Cycle Length (s)	90.6	Sum of lost time (s)		17.0	
Intersection Capacity Utilization	87.3%	ICU Level of Service		E	
Analysis Period (min)	15				
c Critical Lane Group					



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	402	61	112	645	62	37	59	44	31	91	70
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	10	10	10	12	15	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.97		0.99			0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.96			0.95	
Flt Protected		1.00	1.00		0.99	1.00		0.99			0.99	
Satd. Flow (prot)		1971	1467		1624	1381		1855			1873	
Flt Permitted		0.63	1.00		0.78	1.00		0.90			0.95	
Satd. Flow (perm)		1245	1467		1276	1381		1699			1791	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	41	423	64	118	679	65	39	62	46	33	96	74
RTOR Reduction (vph)	0	0	30	0	0	18	0	25	0	0	32	0
Lane Group Flow (vph)	0	464	34	0	797	47	0	122	0	0	171	0
Confl. Peds. (#/hr)	12		20	20		12	8		2	2		8
Confl. Bikes (#/hr)	1		2	2		1			1	1		
Heavy Vehicles (%)	3%	3%	0%	0%	3%	0%	0%	0%	0%	0%	1%	3%
Turn Type	Perm		Perm	Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Effective Green, g (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Actuated g/C Ratio		0.49	0.49		0.49	0.49		0.42			0.42	
Clearance Time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		613	722		628	680		706			744	
v/s Ratio Prot												
v/s Ratio Perm		0.37	0.02		c0.62	0.03		0.07			c0.10	
v/c Ratio		0.76	0.05		1.27	0.07		0.17			0.23	
Uniform Delay, d1		13.4	8.6		16.5	8.7		12.0			12.3	
Progression Factor		1.00	1.00		1.88	2.75		1.00			1.95	
Incremental Delay, d2		8.5	0.1		122.3	0.0		0.5			0.7	
Delay (s)		21.8	8.7		153.4	23.8		12.5			24.6	
Level of Service		C	A		F	C		B			C	
Approach Delay (s)		20.2			143.6			12.5			24.6	
Approach LOS		C			F			B			C	

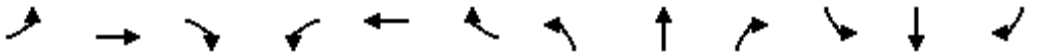
Intersection Summary			
HCM Average Control Delay	81.2	HCM Level of Service	F
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	90.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	318	41	110	700	20	36	114	44	17	184	70
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.94		1.00	0.97		1.00	0.97		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.97	
Flt Protected		0.99	1.00		0.99	1.00		0.99	1.00		1.00	
Satd. Flow (prot)		1756	1443		1724	1487		1713	1489		1712	
Flt Permitted		0.18	1.00		0.65	1.00		0.89	1.00		0.98	
Satd. Flow (perm)		318	1443		1125	1487		1541	1489		1685	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	62	335	43	116	737	21	38	120	46	18	194	74
RTOR Reduction (vph)	0	0	24	0	0	5	0	0	23	0	19	0
Lane Group Flow (vph)	0	397	19	0	853	16	0	158	23	0	267	0
Confl. Peds. (#/hr)	19		25	25		19	3		6	6		3
Confl. Bikes (#/hr)	1		2	2		1			1	1		
Heavy Vehicles (%)	0%	2%	0%	0%	4%	0%	0%	5%	0%	0%	0%	2%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Effective Green, g (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Actuated g/C Ratio		0.35	0.35		0.35	0.35		0.49	0.49		0.49	
Clearance Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Grp Cap (vph)		113	511		398	526		759	733		830	
v/s Ratio Prot												
v/s Ratio Perm		c1.25	0.01		0.76	0.01		0.10	0.02		c0.16	
v/c Ratio		3.51	0.04		2.14	0.03		0.21	0.03		0.32	
Uniform Delay, d1		21.0	13.8		21.0	13.7		9.3	8.5		10.0	
Progression Factor		1.63	2.35		0.98	0.86		0.16	0.22		1.07	
Incremental Delay, d2		1147.0	0.1		518.3	0.0		0.1	0.0		1.0	
Delay (s)		1181.3	32.5		538.8	11.8		1.5	1.9		11.6	
Level of Service		F	C		F	B		A	A		B	
Approach Delay (s)		1069.0			526.2			1.6			11.6	
Approach LOS		F			F			A			B	

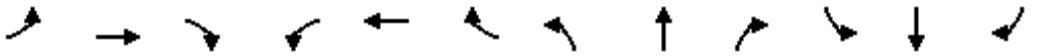
Intersection Summary			
HCM Average Control Delay	517.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.66		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	101.4%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	298	35	76	8	14	11	38	247	8	31	570	799
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.95		0.98			1.00			1.00	0.94
Flpb, ped/bikes		0.98	1.00		0.99			1.00			1.00	1.00
Frt		1.00	0.85		0.96			1.00			1.00	0.85
Flt Protected		0.96	1.00		0.99			0.99			1.00	1.00
Satd. Flow (prot)		1855	1440		1767			1995			1975	1382
Flt Permitted		0.75	1.00		0.92			0.79			0.97	1.00
Satd. Flow (perm)		1455	1440		1640			1587			1930	1382
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	331	39	84	9	16	12	42	274	9	34	633	888
RTOR Reduction (vph)	0	0	49	0	9	0	0	2	0	0	0	295
Lane Group Flow (vph)	0	370	35	0	28	0	0	323	0	0	667	593
Confl. Peds. (#/hr)	37		53	53		37	39		54	54		39
Confl. Bikes (#/hr)							2					2
Heavy Vehicles (%)	4%	0%	1%	0%	0%	0%	0%	1%	0%	0%	3%	4%
Turn Type	pm+pt		Perm	Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		27.0	27.0		17.0			32.0			32.0	32.0
Effective Green, g (s)		27.0	27.0		17.0			32.0			32.0	32.0
Actuated g/C Ratio		0.42	0.42		0.26			0.49			0.49	0.49
Clearance Time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		654	598		429			781			950	680
v/s Ratio Prot		c0.07										
v/s Ratio Perm		0.17	0.02		0.02			0.20			0.35	c0.43
v/c Ratio		0.57	0.06		0.07			0.41			0.70	0.87
Uniform Delay, d1		14.5	11.4		18.0			10.5			12.8	14.7
Progression Factor		1.18	1.99		1.00			0.41			0.76	1.11
Incremental Delay, d2		0.3	0.0		0.3			0.6			4.0	13.4
Delay (s)		17.5	22.7		18.3			4.9			13.7	29.7
Level of Service		B	C		B			A			B	C
Approach Delay (s)		18.5			18.3			4.9			22.9	
Approach LOS		B			B			A			C	

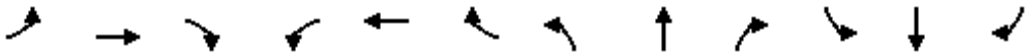
Intersection Summary			
HCM Average Control Delay	19.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	95.4%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



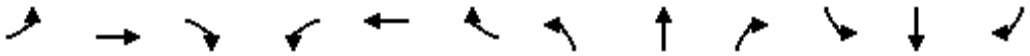
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	923	289	447	1189	0	0	0	0	513	284	334
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	11	8	8	8	11	12	14
Total Lost time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Lane Util. Factor		0.91		1.00	0.95					0.91	0.86	0.91
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.96		1.00	1.00					1.00	0.98	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.98	1.00
Satd. Flow (prot)		4577		1621	3320					1489	2913	1442
Flt Permitted		1.00		0.09	1.00					0.95	0.98	1.00
Satd. Flow (perm)		4577		157	3320					1489	2913	1442
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	972	304	471	1252	0	0	0	0	540	299	352
RTOR Reduction (vph)	0	47	0	0	0	0	0	0	0	0	9	58
Lane Group Flow (vph)	0	1229	0	471	1252	0	0	0	0	308	603	213
Confl. Peds. (#/hr)	15		11	11		15						
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	0%	3%	3%	2%	3%	0%	0%	0%	0%	1%	3%	3%
Turn Type				pm+pt						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Actuated Green, G (s)		39.0		74.9	74.9					28.1	28.1	28.1
Effective Green, g (s)		39.0		74.9	74.9					28.1	28.1	28.1
Actuated g/C Ratio		0.34		0.65	0.65					0.24	0.24	0.24
Clearance Time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Vehicle Extension (s)		7.0		3.5	7.0					3.5	3.5	3.5
Lane Grp Cap (vph)		1552		502	2162					364	712	352
v/s Ratio Prot		0.27		c0.26	0.38							
v/s Ratio Perm				c0.36						0.21	0.21	0.15
v/c Ratio		0.79		0.94	0.58					0.85	0.85	0.60
Uniform Delay, d1		34.3		32.7	11.2					41.4	41.4	38.5
Progression Factor		1.00		0.77	2.00					1.00	1.00	1.00
Incremental Delay, d2		4.2		14.8	0.5					16.7	9.4	3.1
Delay (s)		38.6		40.1	22.9					58.1	50.8	41.6
Level of Service		D		D	C					E	D	D
Approach Delay (s)		38.6			27.6			0.0			50.6	
Approach LOS		D			C			A			D	

Intersection Summary			
HCM Average Control Delay	37.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	111.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	341	1095	0	0	1206	271	430	351	337	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	11	12	12	12	12	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0		6.0				
Lane Util. Factor	0.97	0.95			0.95	1.00		0.91				
Frpb, ped/bikes	1.00	1.00			1.00	0.98		1.00				
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00				
Frt	1.00	1.00			1.00	0.85		0.95				
Flt Protected	0.95	1.00			1.00	1.00		0.98				
Satd. Flow (prot)	3144	3353			3241	1489		4513				
Flt Permitted	0.08	1.00			1.00	1.00		0.98				
Satd. Flow (perm)	280	3353			3241	1489		4513				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	359	1153	0	0	1269	285	453	369	355	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	77	0	67	0	0	0	0
Lane Group Flow (vph)	359	1153	0	0	1269	208	0	1110	0	0	0	0
Confl. Peds. (#/hr)	7		5	5		7						
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	2%	2%	0%	0%	2%	1%	2%	1%	3%	0%	0%	0%
Turn Type	pm+pt					Perm	Perm					
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8					
Actuated Green, G (s)	73.3	73.3			53.3	53.3		29.7				
Effective Green, g (s)	73.3	73.3			53.3	53.3		29.7				
Actuated g/C Ratio	0.64	0.64			0.46	0.46		0.26				
Clearance Time (s)	6.0	6.0			6.0	6.0		6.0				
Vehicle Extension (s)	3.5	7.0			7.0	7.0		5.0				
Lane Grp Cap (vph)	527	2137			1502	690		1166				
v/s Ratio Prot	c0.08	0.34			c0.39							
v/s Ratio Perm	0.35					0.14		0.25				
v/c Ratio	0.68	0.54			0.84	0.30		0.95				
Uniform Delay, d1	24.7	11.5			27.2	19.2		41.9				
Progression Factor	1.52	0.13			0.87	1.12		1.00				
Incremental Delay, d2	2.1	0.6			3.2	0.6		16.4				
Delay (s)	39.5	2.0			26.8	22.2		58.4				
Level of Service	D	A			C	C		E				
Approach Delay (s)		10.9			26.0			58.4			0.0	
Approach LOS		B			C			E			A	

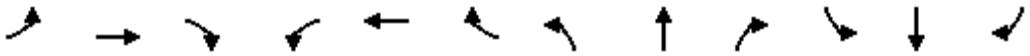
Intersection Summary			
HCM Average Control Delay	29.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	111.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	135	719	408	104	968	76	227	179	66	80	162	121
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	11	12	12	10	10	13	10	10	10
Total Lost time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		0.99	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.96		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1565	3273	1313	1601	3286		1578	3002		1540	2941	
Flt Permitted	0.11	1.00	1.00	0.36	1.00		0.39	1.00		0.59	1.00	
Satd. Flow (perm)	174	3273	1313	614	3286		652	3002		961	2941	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	142	757	429	109	1019	80	239	188	69	84	171	127
RTOR Reduction (vph)	0	0	173	0	5	0	0	38	0	0	107	0
Lane Group Flow (vph)	142	757	256	109	1094	0	239	219	0	84	191	0
Confl. Peds. (#/hr)	11		23	23		11	8		12	12		8
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	2%	1%	3%	3%	3%	0%	1%	1%	2%	3%	0%	1%
Parking (#/hr)			0									
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	64.9	52.3	68.7	43.5	34.4		38.1	26.5		26.3	18.2	
Effective Green, g (s)	64.9	52.3	68.7	43.5	34.4		38.1	26.5		26.3	18.2	
Actuated g/C Ratio	0.56	0.45	0.60	0.38	0.30		0.33	0.23		0.23	0.16	
Clearance Time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0		3.0	7.0		3.0	7.0	
Lane Grp Cap (vph)	425	1489	784	310	983		348	692		261	465	
v/s Ratio Prot	c0.08	c0.23	0.05	0.03	c0.33		c0.10	0.07		0.02	0.06	
v/s Ratio Perm	0.11		0.15	0.10			c0.13			0.05		
v/c Ratio	0.33	0.51	0.33	0.35	1.11		0.69	0.32		0.32	0.41	
Uniform Delay, d1	17.5	22.2	11.6	23.9	40.3		30.6	36.7		36.2	43.6	
Progression Factor	0.77	0.75	1.59	1.00	1.00		1.03	1.05		1.00	1.00	
Incremental Delay, d2	1.6	1.0	0.2	0.7	65.0		5.3	0.9		0.7	2.1	
Delay (s)	15.1	17.7	18.7	24.5	105.3		36.8	39.6		36.9	45.7	
Level of Service	B	B	B	C	F		D	D		D	D	
Approach Delay (s)		17.7			98.0			38.2			43.7	
Approach LOS		B			F			D			D	

Intersection Summary			
HCM Average Control Delay	52.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	81.4%	ICU Level of Service	D
Analysis Period (min)	15		

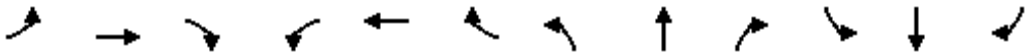
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	46	250	367	95	441	113	362	340	84	206	408	56
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	12	11	12	12	11	13	12	10	11	12
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.91		1.00	0.97		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1708	2925		1653	3267		1620	3402		1580	3183	
Flt Permitted	0.34	1.00		0.22	1.00		0.32	1.00		0.49	1.00	
Satd. Flow (perm)	619	2925		375	3267		544	3402		822	3183	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	48	263	386	100	464	119	381	358	88	217	429	59
RTOR Reduction (vph)	0	215	0	0	19	0	0	19	0	0	9	0
Lane Group Flow (vph)	48	434	0	100	564	0	381	427	0	217	479	0
Confl. Peds. (#/hr)	12		3	3		12	5					5
Heavy Vehicles (%)	0%	2%	2%	0%	1%	1%	2%	1%	0%	1%	2%	0%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	39.2	32.5		46.4	36.1		56.2	44.2		40.1	32.1	
Effective Green, g (s)	39.2	32.5		46.4	36.1		56.2	44.2		40.1	32.1	
Actuated g/C Ratio	0.34	0.28		0.40	0.31		0.49	0.38		0.35	0.28	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.5	7.0		3.5	7.0		3.5	7.0		3.5	7.0	
Lane Grp Cap (vph)	274	827		266	1026		454	1308		339	888	
v/s Ratio Prot	0.01	0.15		c0.03	c0.17		c0.15	0.13		0.04	0.15	
v/s Ratio Perm	0.05			0.12			c0.26			0.18		
v/c Ratio	0.18	0.52		0.38	0.55		0.84	0.33		0.64	0.54	
Uniform Delay, d1	25.9	34.7		23.2	32.7		20.8	24.9		28.8	35.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.97	
Incremental Delay, d2	0.4	2.4		1.1	2.1		13.1	0.7		4.0	2.2	
Delay (s)	26.3	37.1		24.3	34.8		33.9	25.6		32.8	36.1	
Level of Service	C	D		C	C		C	C		C	D	
Approach Delay (s)		36.4			33.3			29.4			35.1	
Approach LOS		D			C			C			D	

Intersection Summary			
HCM Average Control Delay	33.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.2%	ICU Level of Service	D
Analysis Period (min)	15		

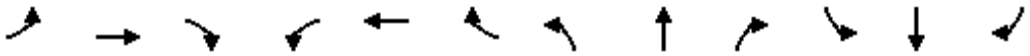
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	105	695	141	10	741	89	104	287	9	204	609	183
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	9	11	12	9	9	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.98		1.00	1.00		1.00	0.97	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3039			3060		1452	3227		1522	2872	
Flt Permitted		0.52			0.94		0.19	1.00		0.54	1.00	
Satd. Flow (perm)		1604			2872		284	3227		873	2872	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	117	772	157	11	823	99	116	319	10	227	677	203
RTOR Reduction (vph)	0	22	0	0	14	0	0	3	0	0	44	0
Lane Group Flow (vph)	0	1024	0	0	919	0	116	326	0	227	836	0
Confl. Peds. (#/hr)	4		2	2		4	8		4	4		8
Confl. Bikes (#/hr)							2					2
Heavy Vehicles (%)	1%	2%	2%	0%	2%	6%	6%	2%	0%	1%	3%	3%
Turn Type	pm+pt			Perm			pm+pt			pm+pt		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			17.0		28.0	24.0		28.0	24.0	
Effective Green, g (s)		25.0			17.0		28.0	24.0		28.0	24.0	
Actuated g/C Ratio		0.38			0.26		0.43	0.37		0.43	0.37	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		705			751		194	1192		416	1060	
v/s Ratio Prot		c0.09					c0.04	0.10		0.03	c0.29	
v/s Ratio Perm		c0.47			0.32		0.22			0.20		
v/c Ratio		1.45			1.22		0.60	0.27		0.55	0.79	
Uniform Delay, d1		20.0			24.0		12.5	14.4		12.7	18.2	
Progression Factor		1.00			1.42		1.18	0.57		1.00	1.00	
Incremental Delay, d2		211.4			101.8		12.2	0.5		5.1	6.0	
Delay (s)		231.4			136.0		27.0	8.7		17.8	24.2	
Level of Service		F			F		C	A		B	C	
Approach Delay (s)		231.4			136.0			13.5			22.9	
Approach LOS		F			F			B			C	

Intersection Summary			
HCM Average Control Delay	113.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	96.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	67	261	136	132	418	28	72	462	86	35	698	70
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.99		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1708	1910		1601	2019		1676	3215		1435	3274	
Flt Permitted	0.31	1.00		0.37	1.00		0.29	1.00		0.42	1.00	
Satd. Flow (perm)	557	1910		621	2019		516	3215		627	3274	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	69	269	140	136	431	29	74	476	89	36	720	72
RTOR Reduction (vph)	0	29	0	0	4	0	0	24	0	0	12	0
Lane Group Flow (vph)	69	380	0	136	456	0	74	541	0	36	780	0
Confl. Peds. (#/hr)	3		20	20		3	2		3	3		2
Confl. Bikes (#/hr)			1	1			2		2	2		2
Heavy Vehicles (%)	0%	0%	1%	6%	0%	0%	2%	3%	6%	19%	3%	2%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.48	0.48		0.48	0.48	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	206	705		229	745		246	1533		299	1561	
v/s Ratio Prot		0.20			c0.23			0.17			c0.24	
v/s Ratio Perm	0.12			0.22			0.14			0.06		
v/c Ratio	0.33	0.54		0.59	0.61		0.30	0.35		0.12	0.50	
Uniform Delay, d1	14.8	16.1		16.6	16.7		10.4	10.7		9.4	11.7	
Progression Factor	1.00	1.00		1.34	1.35		1.00	1.00		1.18	0.96	
Incremental Delay, d2	4.3	2.9		1.0	0.3		3.1	0.6		0.3	0.4	
Delay (s)	19.1	19.1		23.2	22.9		13.5	11.3		11.5	11.6	
Level of Service	B	B		C	C		B	B		B	B	
Approach Delay (s)		19.1			23.0			11.6			11.6	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM Average Control Delay	15.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	75.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	883	501	938	41	3	10	9	47	15	0	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	10	10	10	12	12	16	12	12	16	12
Total Lost time (s)		5.0		5.0				4.0			4.0	
Lane Util. Factor		0.95		0.95				1.00			1.00	
Frpb, ped/bikes		1.00		1.00				0.99			0.99	
Flpb, ped/bikes		1.00		1.00				1.00			1.00	
Frt		1.00		1.00				0.91			0.95	
Flt Protected		1.00		0.98				0.99			0.97	
Satd. Flow (prot)		3160		3077				1810			1858	
Flt Permitted		0.78		0.58				0.96			0.85	
Satd. Flow (perm)		2476		1809				1748			1633	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	2	929	527	987	43	3	11	9	49	16	0	3
RTOR Reduction (vph)	0	0	0	3	0	0	0	38	0	0	4	0
Lane Group Flow (vph)	0	931	0	1554	0	0	0	34	0	0	20	0
Confl. Peds. (#/hr)	7		4		7		7		2	2		7
Confl. Bikes (#/hr)							2		2	2		2
Heavy Vehicles (%)	0%	1%	2%	1%	6%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Perm		custom				Perm			Perm		
Protected Phases		8	7	4				2			6	
Permitted Phases	8		4 7				2			6		
Actuated Green, G (s)		18.0		27.0				14.0			14.0	
Effective Green, g (s)		18.0		27.0				14.0			14.0	
Actuated g/C Ratio		0.28		0.42				0.22			0.22	
Clearance Time (s)		5.0		5.0				4.0			4.0	
Lane Grp Cap (vph)		686		868				376			352	
v/s Ratio Prot				c0.17								
v/s Ratio Perm		0.38		c0.58				c0.02			0.01	
v/c Ratio		1.36		2.51dl				0.09			0.06	
Uniform Delay, d1		23.5		19.0				20.4			20.3	
Progression Factor		1.42		0.62				1.00			1.00	
Incremental Delay, d2		161.6		358.6				0.5			0.3	
Delay (s)		194.9		370.4				20.9			20.6	
Level of Service		F		F				C			C	
Approach Delay (s)		194.9		370.4				20.9			20.6	
Approach LOS		F		F				C			C	

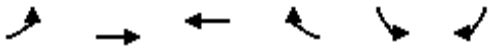
Intersection Summary			
HCM Average Control Delay	285.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.23		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	119.6%	ICU Level of Service	H
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group



Movement	SBR2	NEL	NER
Lane Configurations			
Volume (vph)	5	3	311
Ideal Flow (vphpl)	1800	1800	1800
Lane Width	12	12	12
Total Lost time (s)		5.0	
Lane Util. Factor		1.00	
Frpb, ped/bikes		1.00	
Flpb, ped/bikes		1.00	
Frt		0.87	
Flt Protected		1.00	
Satd. Flow (prot)		1559	
Flt Permitted		1.00	
Satd. Flow (perm)		1559	
Peak-hour factor, PHF	0.95	0.95	0.95
Adj. Flow (vph)	5	3	327
RTOR Reduction (vph)	0	0	0
Lane Group Flow (vph)	0	330	0
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Heavy Vehicles (%)	0%	0%	0%
Turn Type			
Protected Phases		3	
Permitted Phases			
Actuated Green, G (s)		10.0	
Effective Green, g (s)		10.0	
Actuated g/C Ratio		0.15	
Clearance Time (s)		5.0	
Lane Grp Cap (vph)		240	
v/s Ratio Prot		c0.21	
v/s Ratio Perm			
v/c Ratio		1.38	
Uniform Delay, d1		27.5	
Progression Factor		0.84	
Incremental Delay, d2		190.6	
Delay (s)		213.6	
Level of Service		F	
Approach Delay (s)		213.6	
Approach LOS		F	

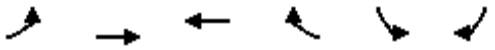
Intersection Summary



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	264	965	1254	177	125	234
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frt		1.00	0.98		1.00	0.85
Flt Protected		0.99	1.00		0.95	1.00
Satd. Flow (prot)		3285	3259		1660	1485
Flt Permitted		0.51	1.00		0.95	1.00
Satd. Flow (perm)		1708	3259		1660	1485
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	293	1072	1393	197	139	260
RTOR Reduction (vph)	0	0	17	0	0	38
Lane Group Flow (vph)	0	1365	1573	0	139	222
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		40.0	40.0		17.0	17.0
Effective Green, g (s)		40.0	40.0		17.0	17.0
Actuated g/C Ratio		0.62	0.62		0.26	0.26
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1051	2006		434	388
v/s Ratio Prot			0.48		0.08	
v/s Ratio Perm		c0.80				c0.15
v/c Ratio		2.71dl	0.78		0.32	0.57
Uniform Delay, d1		12.5	9.3		19.3	20.8
Progression Factor		1.24	0.60		1.06	1.03
Incremental Delay, d2		135.1	1.4		1.1	3.5
Delay (s)		150.7	7.0		21.5	25.0
Level of Service		F	A		C	C
Approach Delay (s)		150.7	7.0		23.8	
Approach LOS		F	A		C	

Intersection Summary			
HCM Average Control Delay	67.5	HCM Level of Service	E
HCM Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	96.1%	ICU Level of Service	F
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group



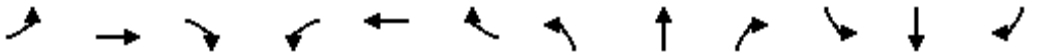
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	81	1012	1347	198	276	88
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	12	10	11	12	10	10
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frpb, ped/bikes		1.00	1.00		1.00	0.99
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.98		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3120	3139		1506	1343
Flt Permitted		0.60	1.00		0.95	1.00
Satd. Flow (perm)		1875	3139		1506	1343
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	85	1065	1418	208	291	93
RTOR Reduction (vph)	0	0	18	0	0	17
Lane Group Flow (vph)	0	1150	1608	0	291	76
Confl. Peds. (#/hr)	2			2		1
Heavy Vehicles (%)	1%	2%	2%	10%	6%	5%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		34.0	34.0		23.0	23.0
Effective Green, g (s)		34.0	34.0		23.0	23.0
Actuated g/C Ratio		0.52	0.52		0.35	0.35
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		981	1642		533	475
v/s Ratio Prot			0.51		c0.19	
v/s Ratio Perm		c0.61				0.06
v/c Ratio		1.17	0.98		0.55	0.16
Uniform Delay, d1		15.5	15.2		16.8	14.4
Progression Factor		1.10	1.47		1.75	2.04
Incremental Delay, d2		78.6	3.4		3.1	0.6
Delay (s)		95.7	25.7		32.5	29.9
Level of Service		F	C		C	C
Approach Delay (s)		95.7	25.7		31.9	
Approach LOS		F	C		C	

Intersection Summary			
HCM Average Control Delay	51.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	104.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



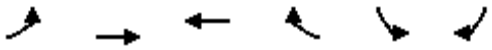
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	887	261	532	1433	205	161
Ideal Flow (vphpl)	2300	1800	1800	2300	1800	1800
Lane Width	15	12	14	16	15	12
Total Lost time (s)	5.0		5.0	5.0	5.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	0.99	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.97		1.00	1.00	0.94	
Flt Protected	1.00		0.95	1.00	0.97	
Satd. Flow (prot)	2404		1788	2506	1734	
Flt Permitted	1.00		0.13	1.00	0.97	
Satd. Flow (perm)	2404		243	2506	1734	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	905	266	543	1462	209	164
RTOR Reduction (vph)	16	0	0	0	44	0
Lane Group Flow (vph)	1155	0	543	1462	329	0
Confl. Peds. (#/hr)						1
Heavy Vehicles (%)	2%	2%	2%	4%	7%	0%
Turn Type			Perm			
Protected Phases	4			8	2	
Permitted Phases			8			
Actuated Green, G (s)	31.0		31.0	31.0	24.0	
Effective Green, g (s)	31.0		31.0	31.0	24.0	
Actuated g/C Ratio	0.48		0.48	0.48	0.37	
Clearance Time (s)	5.0		5.0	5.0	5.0	
Lane Grp Cap (vph)	1147		116	1195	640	
v/s Ratio Prot	0.48			0.58	c0.19	
v/s Ratio Perm			c2.24			
v/c Ratio	1.01		4.68	1.22	0.51	
Uniform Delay, d1	17.0		17.0	17.0	16.0	
Progression Factor	1.46		1.00	1.00	1.00	
Incremental Delay, d2	9.7		1676.0	108.2	2.9	
Delay (s)	34.5		1693.0	125.2	18.9	
Level of Service	C		F	F	B	
Approach Delay (s)	34.5			549.8	18.9	
Approach LOS	C			F	B	

Intersection Summary			
HCM Average Control Delay	324.0	HCM Level of Service	F
HCM Volume to Capacity ratio	2.87		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	117.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	2022	38	112	961	1	62	0	157	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	15	13	11	11	12	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0	4.0	3.0	3.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00			
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1881	3431	1479	1589	3320	1530		1938	1500			
Flt Permitted	0.27	1.00	1.00	0.08	1.00	1.00		0.76	1.00			
Satd. Flow (perm)	530	3431	1479	130	3320	1530		1545	1500			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	2247	42	124	1068	1	69	0	174	0	0	0
RTOR Reduction (vph)	0	0	10	0	0	0	0	0	138	0	0	0
Lane Group Flow (vph)	1	2247	32	124	1068	1	0	69	36	0	0	0
Heavy Vehicles (%)	0%	3%	0%	4%	3%	0%	0%	0%	2%	0%	0%	0%
Turn Type	Perm		Perm	custom		custom	Perm		Perm	Perm		
Protected Phases		4		3	3 8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)	48.6	48.6	48.6	67.6	67.6	67.6		9.4	9.4			
Effective Green, g (s)	48.6	48.6	48.6	67.6	67.6	67.6		9.4	9.4			
Actuated g/C Ratio	0.57	0.57	0.57	0.80	0.80	0.80		0.11	0.11			
Clearance Time (s)	4.0	4.0	4.0	3.0		4.0		4.0	4.0			
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0			
Lane Grp Cap (vph)	303	1962	846	378	2640	1217		171	166			
v/s Ratio Prot		c0.65		0.06	c0.32							
v/s Ratio Perm	0.00		0.02	0.20		0.00		c0.04	0.02			
v/c Ratio	0.00	1.15	0.04	0.33	0.40	0.00		0.40	0.22			
Uniform Delay, d1	7.8	18.2	8.0	16.3	2.6	1.8		35.2	34.4			
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00			
Incremental Delay, d2	0.0	71.9	0.1	0.5	0.1	0.0		1.6	0.7			
Delay (s)	7.8	90.1	8.0	16.8	2.7	1.8		36.7	35.1			
Level of Service	A	F	A	B	A	A		D	D			
Approach Delay (s)		88.6			4.2			35.6			0.0	
Approach LOS		F			A			D			A	

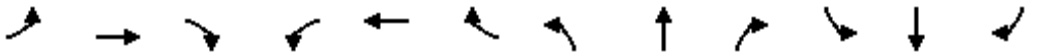
Intersection Summary			
HCM Average Control Delay	58.1	HCM Level of Service	E
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	80.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	11	960	846	30	71	14
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10
Total Lost time (s)		5.0	5.0		3.0	
Lane Util. Factor		0.95	0.95		1.00	
Frt		1.00	0.99		0.98	
Flt Protected		1.00	1.00		0.96	
Satd. Flow (prot)		3097	3083		1530	
Flt Permitted		0.94	1.00		0.96	
Satd. Flow (perm)		2912	3083		1530	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	12	1067	940	33	79	16
RTOR Reduction (vph)	0	0	3	0	8	0
Lane Group Flow (vph)	0	1079	970	0	87	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Perm					
Protected Phases		4	8 2 11		5	
Permitted Phases	4					
Actuated Green, G (s)		33.0	64.0		7.0	
Effective Green, g (s)		33.0	64.0		7.0	
Actuated g/C Ratio		0.37	0.71		0.08	
Clearance Time (s)		5.0			3.0	
Lane Grp Cap (vph)		1068	2192		119	
v/s Ratio Prot			c0.31		c0.06	
v/s Ratio Perm		c0.37				
v/c Ratio		1.01	0.44		0.73	
Uniform Delay, d1		28.5	5.5		40.6	
Progression Factor		1.00	0.01		1.00	
Incremental Delay, d2		30.1	0.2		32.1	
Delay (s)		58.6	0.2		72.7	
Level of Service		E	A		E	
Approach Delay (s)		58.6	0.2		72.7	
Approach LOS		E	A		E	

Intersection Summary			
HCM Average Control Delay	32.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	48.7%	ICU Level of Service	A
Analysis Period (min)	15		

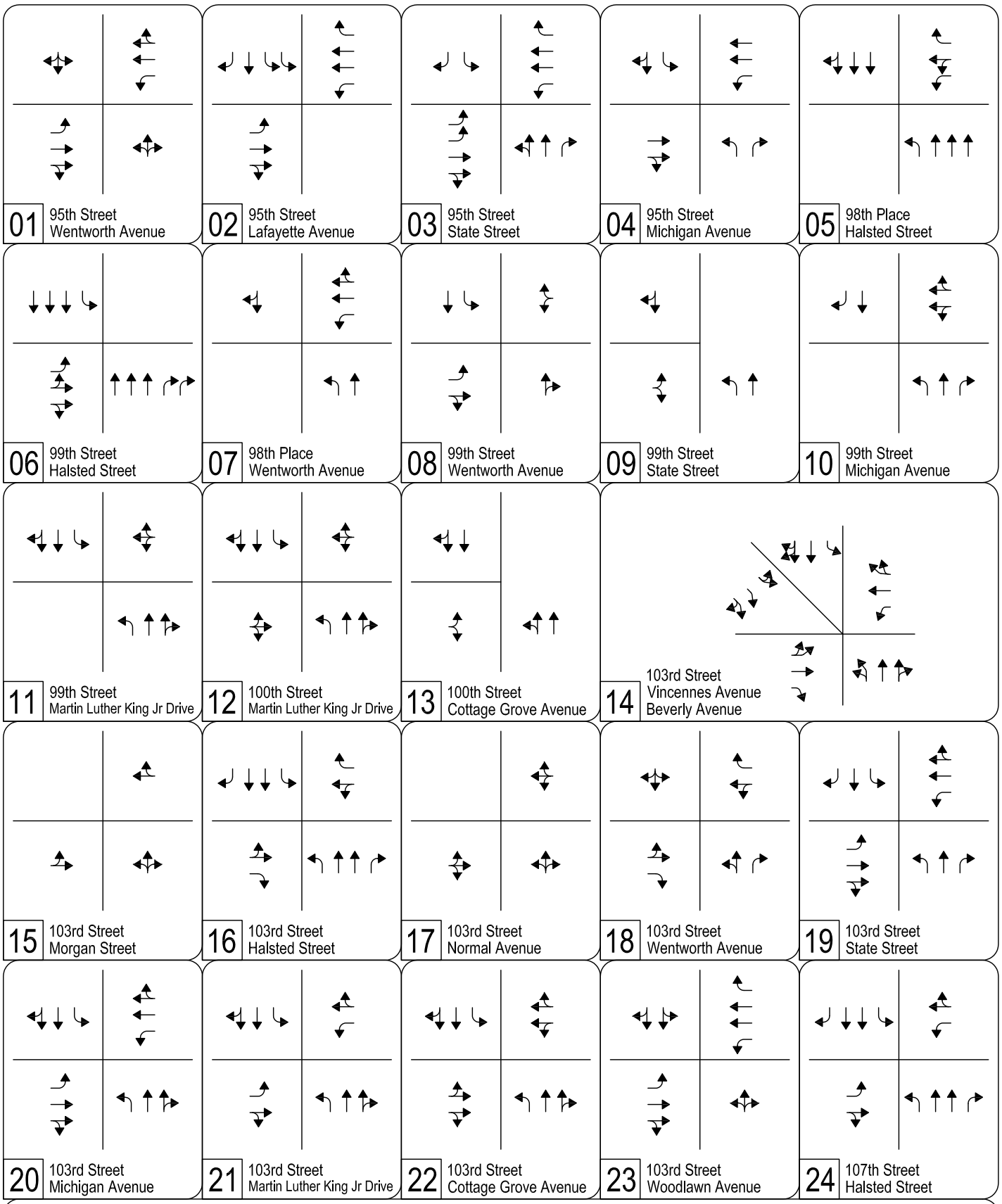
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	107	500	0	1	583	39	3	2	28	202	0	150
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12	12	11	12	11
Total Lost time (s)		4.0			4.0			3.0			3.0	3.0
Lane Util. Factor		1.00			0.95			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			0.94			1.00	0.98
Flpb, ped/bikes		1.00			1.00			1.00			0.99	1.00
Frt		1.00			0.99			0.88			1.00	0.85
Flt Protected		0.99			1.00			1.00			0.95	1.00
Satd. Flow (prot)		1764			3341			1467			1670	1348
Flt Permitted		0.77			0.95			0.88			0.88	1.00
Satd. Flow (perm)		1365			3191			1296			1545	1348
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	119	556	0	1	648	43	3	2	31	224	0	167
RTOR Reduction (vph)	0	0	0	0	6	0	0	28	0	0	0	112
Lane Group Flow (vph)	0	675	0	0	686	0	0	8	0	0	224	55
Confl. Peds. (#/hr)	60		44	44		60	14		10	10		14
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	0%	1%	0%	0%	1%	3%	20%	0%	0%	1%	0%	7%
Turn Type	Perm			Prot			Perm			pm+pt		Perm
Protected Phases		4		3	3 4			1		2	1 2	
Permitted Phases	4				3		1	1		1 2		1 2
Actuated Green, G (s)		31.0			45.0			9.0			25.0	28.0
Effective Green, g (s)		31.0			45.0			9.0			25.0	28.0
Actuated g/C Ratio		0.36			0.53			0.11			0.29	0.33
Clearance Time (s)		4.0						3.0				
Lane Grp Cap (vph)		498			1714			137			478	444
v/s Ratio Prot					c0.07						c0.09	
v/s Ratio Perm		c0.49			0.15			0.01			c0.05	0.04
v/c Ratio		1.36			0.40			0.06			0.47	0.12
Uniform Delay, d1		27.0			11.9			34.2			24.6	19.9
Progression Factor		1.00			1.37			1.00			1.00	1.00
Incremental Delay, d2		172.7			0.1			0.8			3.3	0.6
Delay (s)		199.7			16.5			35.0			27.8	20.5
Level of Service		F			B			D			C	C
Approach Delay (s)		199.7			16.5			35.0			24.7	
Approach LOS		F			B			D			C	

Intersection Summary			
HCM Average Control Delay	87.6	HCM Level of Service	F
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	81.1%	ICU Level of Service	D
Analysis Period (min)	15		

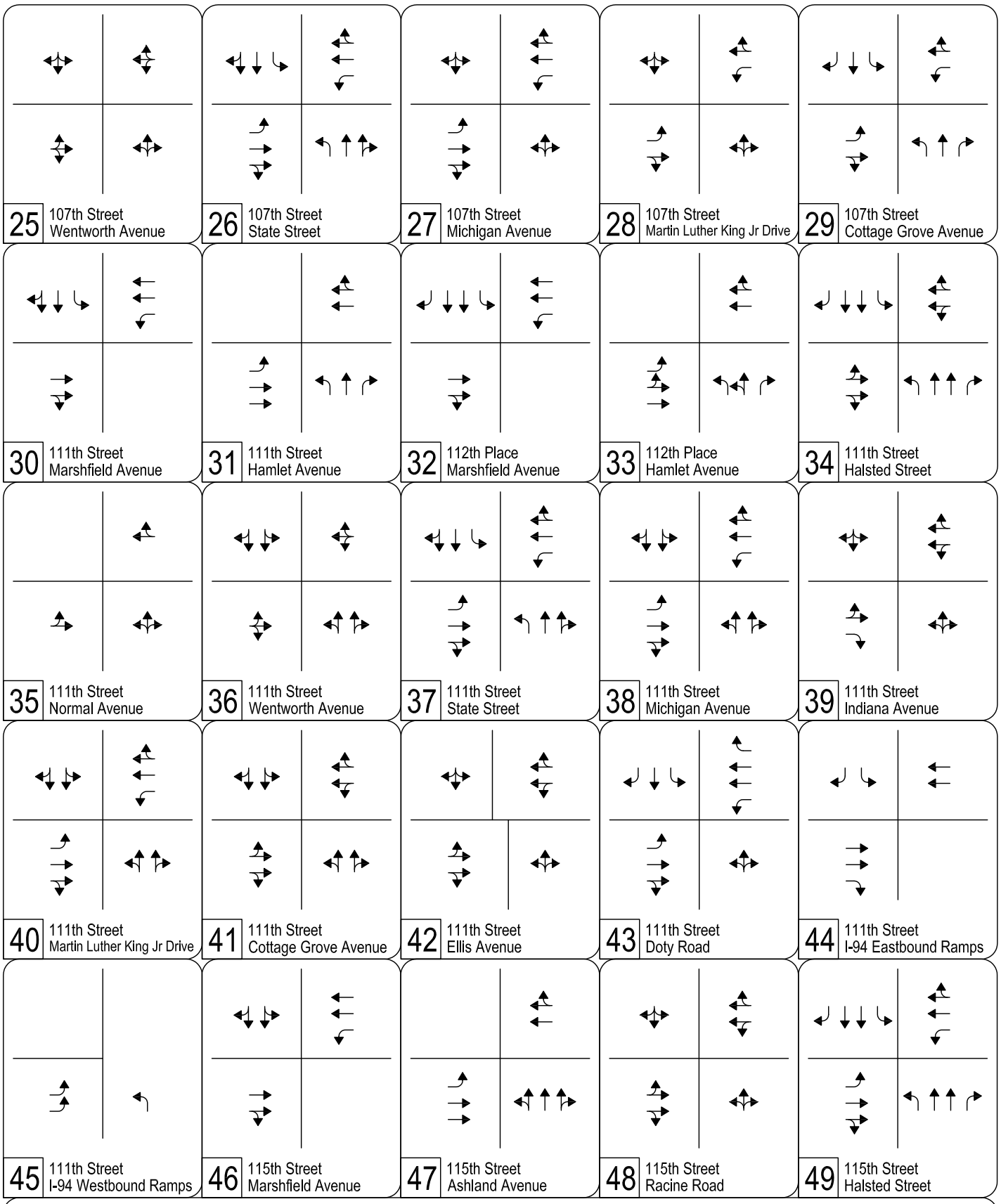
c Critical Lane Group



UPRR ROW Option Alternative Mitigated (2030) Intersection Lane Geometry

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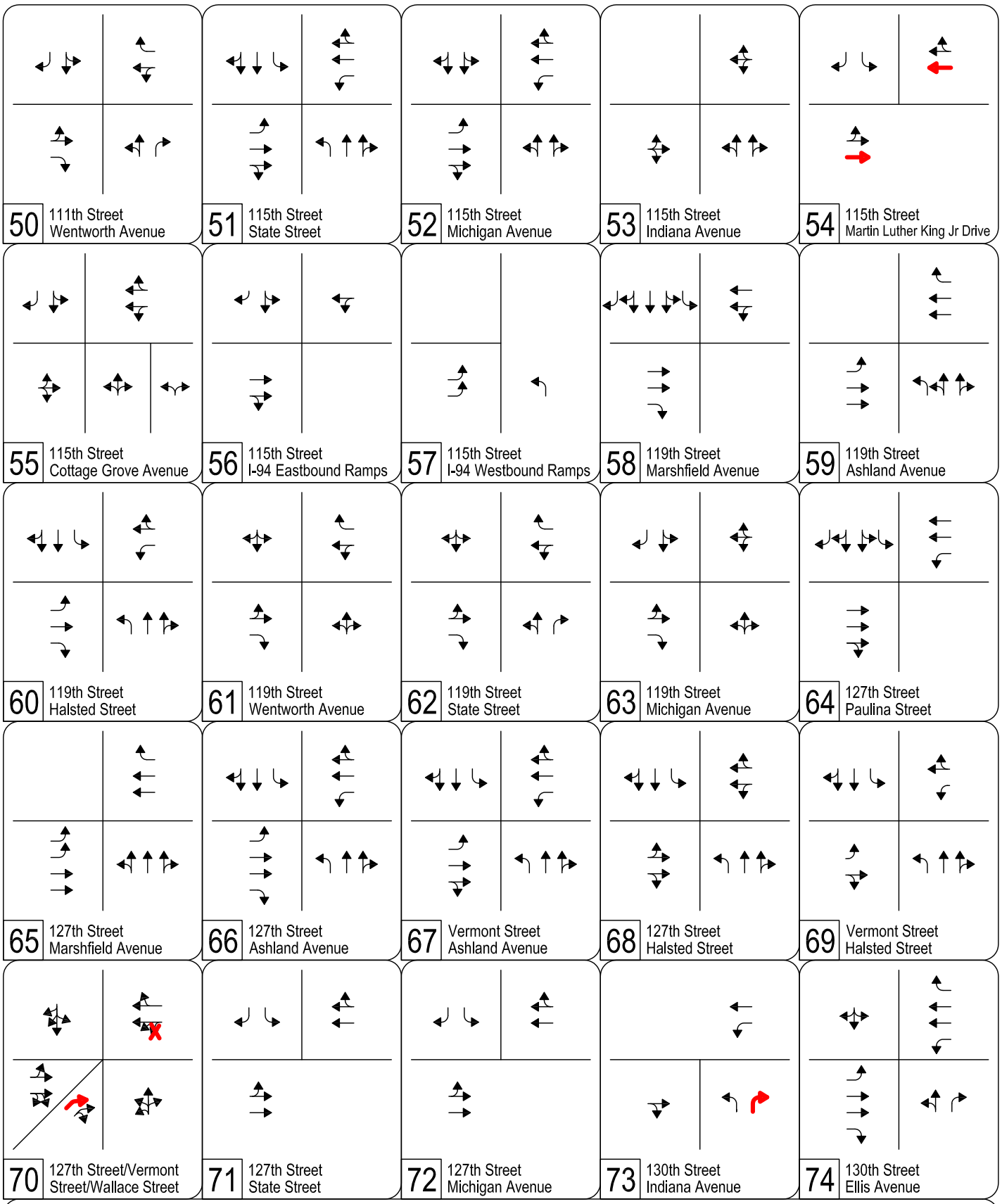
Legend: Existing Added Removed



UPRR ROW Option Alternative Mitigated (2030) Intersection Lane Geometry

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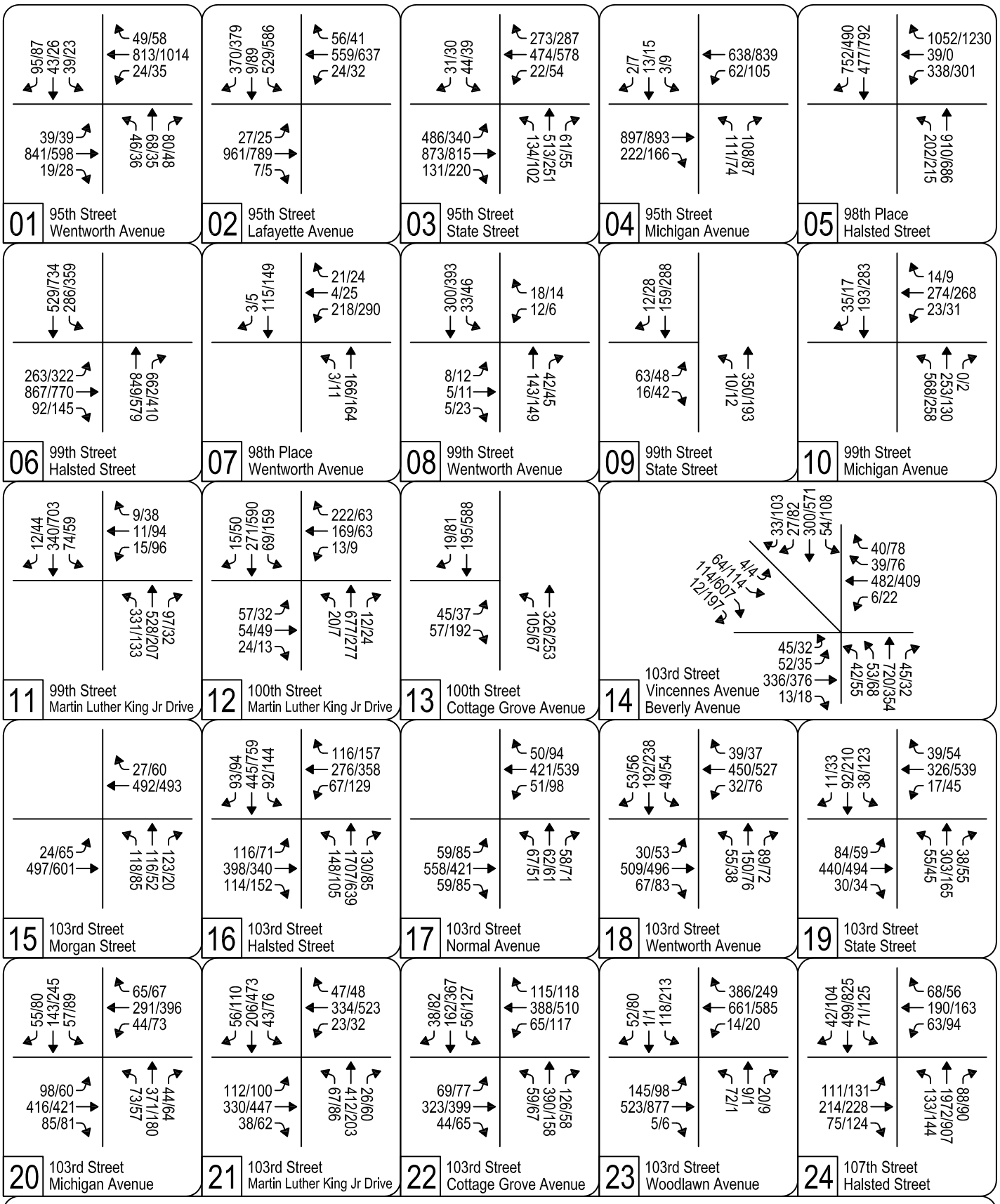
Legend: Existing Added Removed



UPRR ROW Option Alternative Mitigated (2030) Intersection Lane Geometry

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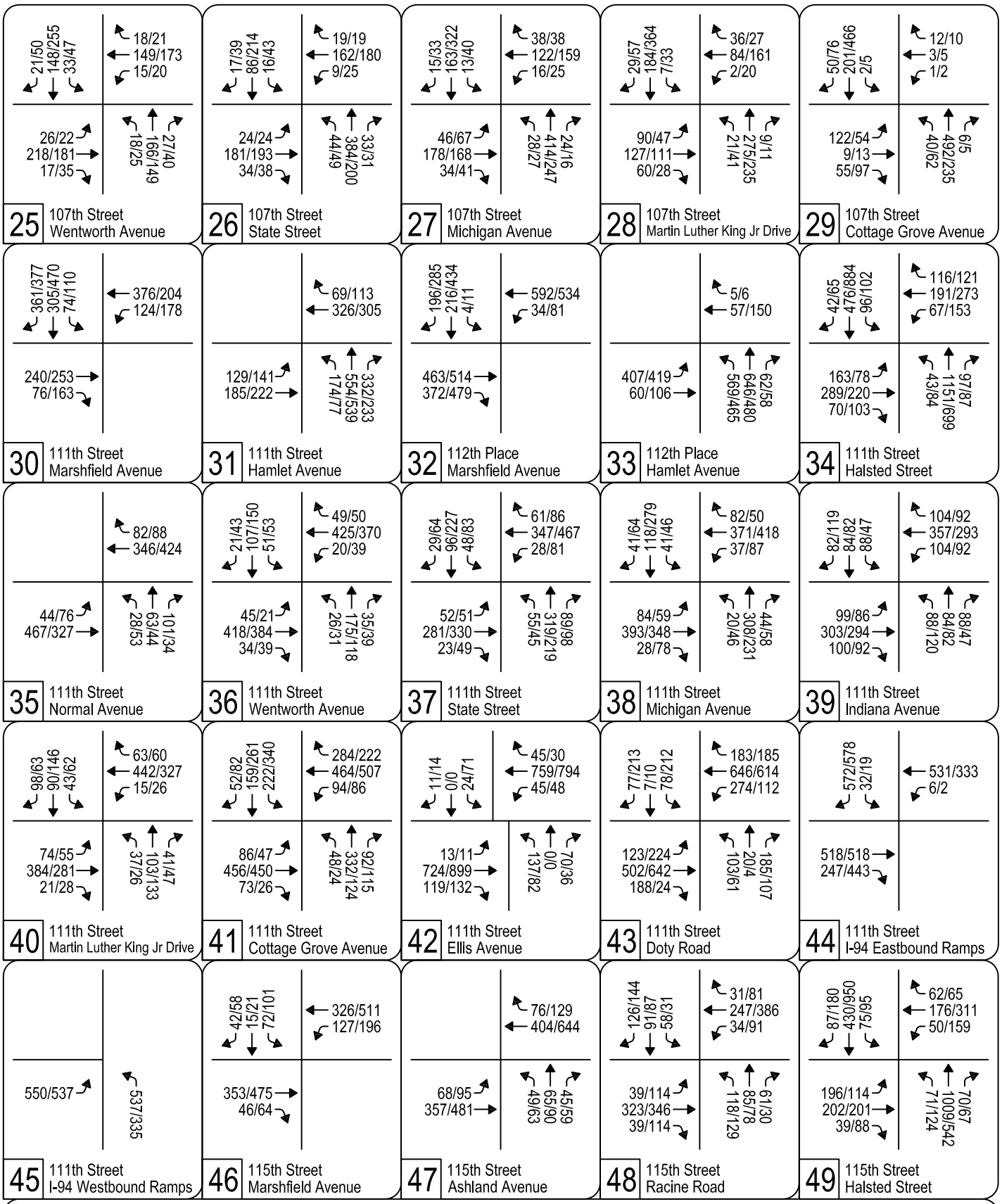
Legend: Existing Added Removed



UPRR ROW Option Alternative Mitigated (2030) Intersection Traffic Volumes

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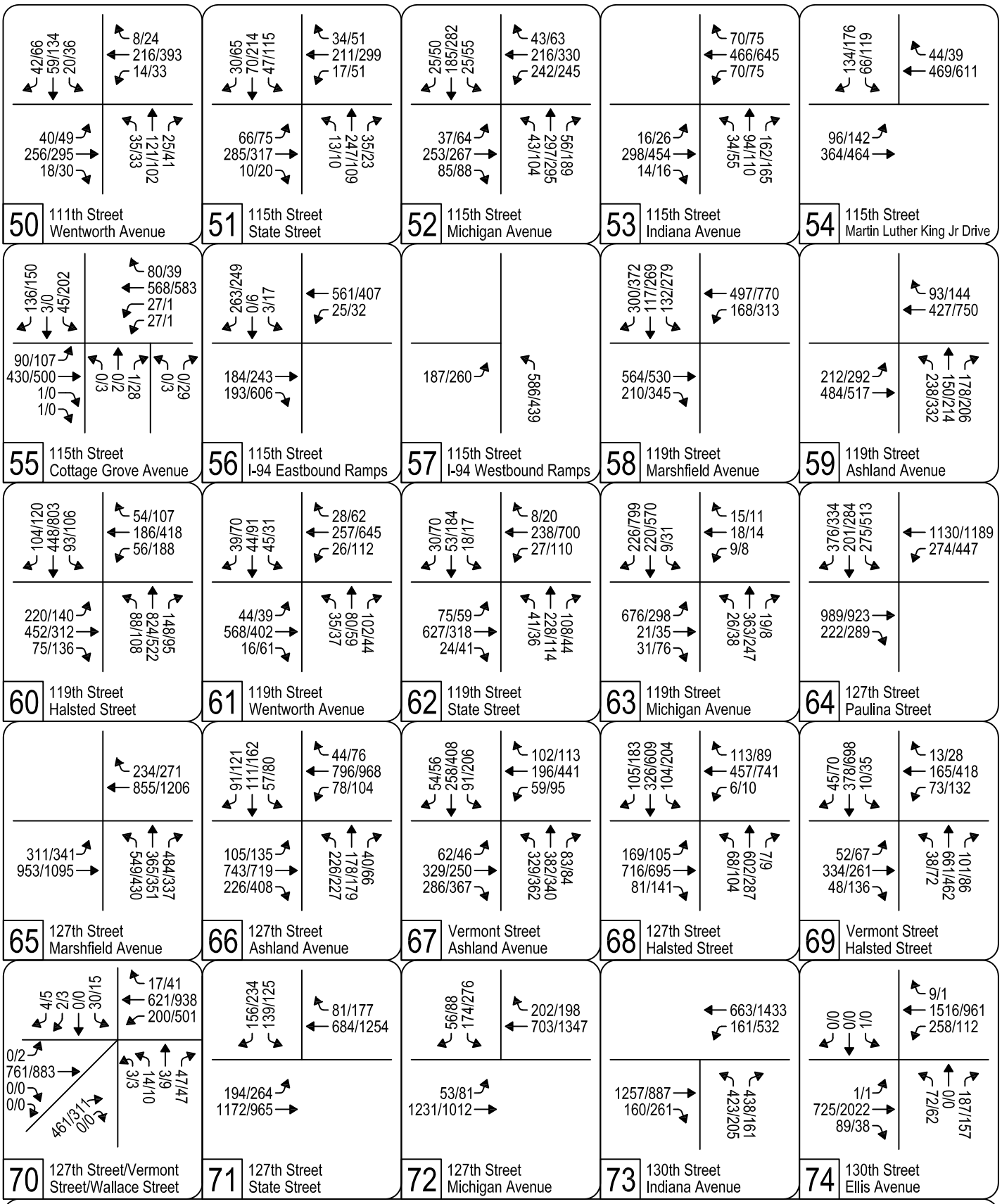
Legend: AM/PM Peak Hour Volumes



UPRR ROW Option Alternative Mitigated (2030) Intersection Traffic Volumes

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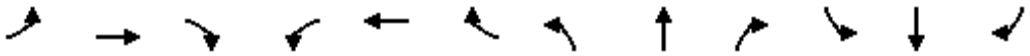
Legend: AM/PM Peak Hour Volumes



UPRR ROW Option Alternative Mitigated (2030) Intersection Traffic Volumes

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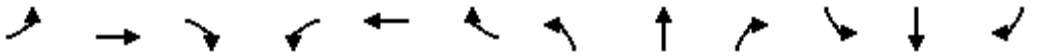
Legend: AM/PM Peak Hour Volumes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	841	19	24	813	49	46	68	80	39	43	95
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	16	10	10	16	8	15	8	8	14	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			0.99			0.99	
Flpb, ped/bikes	0.99	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	0.99			0.94			0.93	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1417	2976		1592	2979			1755			1673	
Flt Permitted	0.25	1.00		0.25	1.00			0.90			0.91	
Satd. Flow (perm)	369	2976		417	2979			1596			1531	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	41	885	20	25	856	52	48	72	84	41	45	100
RTOR Reduction (vph)	0	2	0	0	7	0	0	39	0	0	59	0
Lane Group Flow (vph)	41	903	0	25	901	0	0	165	0	0	127	0
Confl. Peds. (#/hr)	61		11	11		61	3		5	5		3
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	11%	7%	0%	0%	6%	2%	2%	7%	4%	5%	7%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			22.0			22.0	
Effective Green, g (s)	34.0	34.0		34.0	34.0			23.0			23.0	
Actuated g/C Ratio	0.52	0.52		0.52	0.52			0.35			0.35	
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0			5.0	
Lane Grp Cap (vph)	193	1557		218	1558			565			542	
v/s Ratio Prot		c0.30			0.30							
v/s Ratio Perm	0.11			0.06				c0.10			0.08	
v/c Ratio	0.21	0.58		0.11	0.58			0.29			0.23	
Uniform Delay, d1	8.3	10.6		7.9	10.6			15.1			14.8	
Progression Factor	1.00	1.00		0.83	1.16			1.00			1.00	
Incremental Delay, d2	2.5	1.6		0.9	1.4			1.3			1.0	
Delay (s)	10.8	12.2		7.5	13.6			16.4			15.8	
Level of Service	B	B		A	B			B			B	
Approach Delay (s)		12.1			13.5			16.4			15.8	
Approach LOS		B			B			B			B	

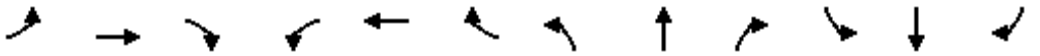
Intersection Summary			
HCM Average Control Delay	13.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	27	961	7	24	559	56	0	0	0	529	9	370
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00				0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.67				1.00	1.00	0.96
Flpb, ped/bikes	0.91	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	778	3285		1710	3138	512				3100	1440	1399
Flt Permitted	0.43	1.00		0.14	1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	352	3285		248	3138	512				3100	1440	1399
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	28	1012	7	25	588	59	0	0	0	557	9	389
RTOR Reduction (vph)	0	1	0	0	0	26	0	0	0	0	0	172
Lane Group Flow (vph)	28	1018	0	25	588	33	0	0	0	557	9	217
Confl. Peds. (#/hr)	354		13	13		354	22		22	22		22
Confl. Bikes (#/hr)	4					4			1	1		
Heavy Vehicles (%)	100%	4%	0%	0%	9%	100%	0%	0%	0%	7%	25%	5%
Turn Type	pm+pt			pm+pt		Perm				Split		Perm
Protected Phases	7	4		3	8					6	6	
Permitted Phases	4			8		8						6
Actuated Green, G (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Effective Green, g (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Actuated g/C Ratio	0.33	0.33		0.56	0.56	0.56				0.23	0.23	0.23
Clearance Time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Grp Cap (vph)	162	1087		634	1762	288				715	332	323
v/s Ratio Prot	0.02	c0.31		0.01	c0.19					c0.18	0.01	
v/s Ratio Perm	0.04			0.01		0.06						0.16
v/c Ratio	0.17	0.94		0.04	0.33	0.12				0.78	0.03	0.67
Uniform Delay, d1	31.6	42.2		15.1	15.4	13.4				46.9	38.7	45.5
Progression Factor	0.80	0.82		0.29	0.63	1.53				1.00	1.00	1.00
Incremental Delay, d2	2.0	14.1		0.1	0.3	0.5				8.2	0.2	10.7
Delay (s)	27.2	48.9		4.5	10.0	20.9				55.1	38.9	56.2
Level of Service	C	D		A	A	C				E	D	E
Approach Delay (s)		48.3			10.7			0.0			55.4	
Approach LOS		D			B			A			E	

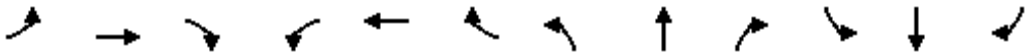
Intersection Summary			
HCM Average Control Delay	41.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	52.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	486	873	131	22	474	273	134	513	61	44	0	31
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.65		1.00	0.94	1.00		0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.98		1.00	1.00	0.85		1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (prot)	3190	3107		1555	2923	944		3300	1417	855		734
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (perm)	3190	3107		1555	2923	944		3300	1417	855		734
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	512	919	138	23	499	287	141	540	64	46	0	33
RTOR Reduction (vph)	0	9	0	0	0	158	0	0	25	0	0	31
Lane Group Flow (vph)	512	1049	0	23	499	129	0	681	39	46	0	2
Confl. Peds. (#/hr)	425		21	21		425	6		34	34		6
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	4%	8%	3%	10%	17%	5%	1%	3%	2%	100%	0%	100%
Turn Type	Prot			Prot		Perm	Split		Perm	Prot		custom
Protected Phases	7	4		3	8		2	2		6		
Permitted Phases						8			2			6
Actuated Green, G (s)	43.0	65.0		9.0	31.0	31.0		30.0	30.0	8.0		8.0
Effective Green, g (s)	43.0	65.0		9.0	31.0	31.0		30.0	30.0	8.0		8.0
Actuated g/C Ratio	0.33	0.50		0.07	0.24	0.24		0.23	0.23	0.06		0.06
Clearance Time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	1055	1554		108	697	225		762	327	53		45
v/s Ratio Prot	0.16	c0.34		0.01	c0.17			c0.21		c0.05		
v/s Ratio Perm						0.14			0.03			0.00
v/c Ratio	0.49	0.67		0.21	0.72	0.57		0.89	0.12	0.87		0.05
Uniform Delay, d1	34.7	24.5		57.2	45.5	43.6		48.5	39.5	60.5		57.4
Progression Factor	0.75	0.20		1.00	1.00	1.00		0.95	0.90	1.00		1.00
Incremental Delay, d2	0.7	1.1		4.5	6.2	10.1		14.9	0.7	76.0		0.4
Delay (s)	26.9	6.0		61.6	51.7	53.8		60.7	36.2	136.5		57.8
Level of Service	C	A		E	D	D		E	D	F		E
Approach Delay (s)		12.8			52.7			58.6			103.6	
Approach LOS		B			D			E			F	

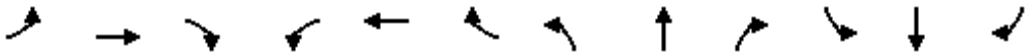
Intersection Summary			
HCM Average Control Delay	35.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	897	222	62	638	0	111	0	108	3	13	2
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	11	11	8	12	12	12	14	15	12
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes		0.99		1.00	1.00		1.00		0.98	1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00		1.00		1.00	0.99	1.00	
Frt		0.97		1.00	1.00		1.00		0.85	1.00	0.98	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		2860		1650	3005		1390		1465	1803	1943	
Flt Permitted		1.00		0.15	1.00		0.75		1.00	0.95	1.00	
Satd. Flow (perm)		2860		267	3005		1093		1465	1803	1943	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	997	247	69	709	0	123	0	120	3	14	2
RTOR Reduction (vph)	0	22	0	0	0	0	0	0	77	0	1	0
Lane Group Flow (vph)	0	1222	0	69	709	0	123	0	43	3	15	0
Confl. Peds. (#/hr)	49		15	15		49			12	12		
Heavy Vehicles (%)	0%	6%	14%	0%	10%	0%	23%	0%	2%	0%	0%	0%
Turn Type				Perm			custom		custom	Perm		
Protected Phases		4			8						6	
Permitted Phases				8			2		2	6		
Actuated Green, G (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Effective Green, g (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Actuated g/C Ratio		0.60		0.60	0.60		0.32		0.32	0.32	0.32	
Clearance Time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)		1716		160	1803		350		469	577	622	
v/s Ratio Prot		c0.43			0.24						0.01	
v/s Ratio Perm				0.26			c0.11		0.03	0.00		
v/c Ratio		0.71		0.43	0.39		0.35		0.09	0.01	0.02	
Uniform Delay, d1		14.0		10.8	10.5		26.0		23.8	23.2	23.3	
Progression Factor		1.00		1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		2.5		8.3	0.6		2.8		0.4	0.0	0.1	
Delay (s)		16.5		19.1	11.1		28.8		24.2	23.2	23.4	
Level of Service		B		B	B		C		C	C	C	
Approach Delay (s)		16.5			11.8			26.5			23.3	
Approach LOS		B			B			C			C	

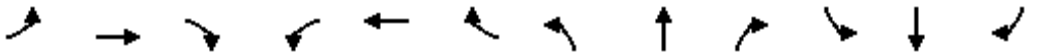
Intersection Summary			
HCM Average Control Delay	16.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	338	39	1052	202	910	0	0	477	752
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	12	10	10	12	12	11	12
Total Lost time (s)				4.0	4.0	5.0	3.0	4.0			4.0	
Lane Util. Factor				0.95	0.95	1.00	1.00	0.91			0.91	
Frpb, ped/bikes				1.00	1.00	0.99	1.00	1.00			0.98	
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00			1.00	
Frt				1.00	1.00	0.85	1.00	1.00			0.91	
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (prot)				1525	1629	1479	1550	4368			3940	
Flt Permitted				0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (perm)				1525	1629	1479	1550	4368			3940	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	345	40	1073	206	929	0	0	487	767
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	345	40	1073	206	929	0	0	1254	0
Confl. Peds. (#/hr)	2					2	12		8	8		12
Heavy Vehicles (%)	0%	0%	0%	3%	5%	2%	3%	5%	0%	0%	5%	8%
Turn Type				Perm		Perm	Prot					
Protected Phases					8		5	2			6	
Permitted Phases				8		8						
Actuated Green, G (s)				30.0	30.0	30.0	32.0	66.0			31.0	
Effective Green, g (s)				31.0	31.0	30.0	32.0	66.0			31.0	
Actuated g/C Ratio				0.30	0.30	0.29	0.30	0.63			0.30	
Clearance Time (s)				5.0	5.0	5.0	3.0	4.0			4.0	
Lane Grp Cap (vph)				450	481	423	472	2746			1163	
v/s Ratio Prot							c0.13	0.21			c0.32	
v/s Ratio Perm				0.23	0.02	c0.73						
v/c Ratio				0.77	0.08	2.54	0.44	0.34			1.91dr	
Uniform Delay, d1				33.7	26.7	37.5	29.3	9.2			37.0	
Progression Factor				1.00	1.00	1.00	0.66	2.38			1.00	
Incremental Delay, d2				11.8	0.3	698.4	2.0	0.2			50.2	
Delay (s)				45.5	27.1	735.9	21.3	22.1			87.2	
Level of Service				D	C	F	C	C			F	
Approach Delay (s)		0.0			553.1			22.0			87.2	
Approach LOS		A			F			C			F	

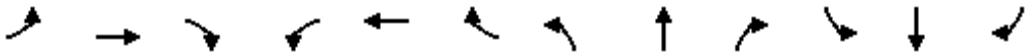
Intersection Summary			
HCM Average Control Delay	244.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.33		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.0%	ICU Level of Service	F
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group



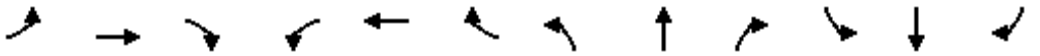
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	263	867	92	0	0	0	0	849	662	286	529	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	13	12	12	12	12	12	10	10	8	12	12	12
Total Lost time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Util. Factor	0.91	0.91						0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00						1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00						1.00	1.00	1.00	1.00	
Frt	1.00	0.99						1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1497	3184						4368	2187	1583	4636	
Flt Permitted	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1497	3184						4368	2187	1583	4636	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	271	894	95	0	0	0	0	875	682	295	545	0
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	244	1009	0	0	0	0	0	875	682	295	545	0
Confl. Peds. (#/hr)	4		14	14		4	4		3	3		4
Heavy Vehicles (%)	7%	1%	0%	0%	0%	0%	0%	5%	4%	8%	6%	0%
Turn Type	Perm								Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Actuated Green, G (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Effective Green, g (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Actuated g/C Ratio	0.32	0.32						0.27	0.27	0.30	0.59	
Clearance Time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Grp Cap (vph)	485	1031						1165	583	467	2737	
v/s Ratio Prot								0.20		c0.19	0.12	
v/s Ratio Perm	0.16	0.32							c0.31			
v/c Ratio	0.50	0.98						0.75	1.17	0.63	0.20	
Uniform Delay, d1	28.7	35.1						35.3	38.5	32.1	10.0	
Progression Factor	1.00	1.00						0.43	0.46	1.06	0.42	
Incremental Delay, d2	3.7	23.4						0.4	78.3	2.2	0.1	
Delay (s)	32.4	58.5						15.7	96.0	36.1	4.3	
Level of Service	C	E						B	F	D	A	
Approach Delay (s)		53.5			0.0			50.9			15.5	
Approach LOS		D			A			D			B	

Intersection Summary			
HCM Average Control Delay	43.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



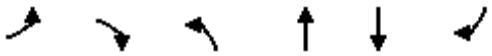
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	218	4	21	3	166	0	0	115	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	14	12	12	16	12
Total Lost time (s)				4.0	4.0		4.0	4.0			-3.0	
Lane Util. Factor				1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes				1.00	0.98		1.00	1.00			1.00	
Flpb, ped/bikes				1.00	1.00		1.00	1.00			1.00	
Frt				1.00	0.87		1.00	1.00			1.00	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1578	2709		1285	1882			1961	
Flt Permitted				0.95	1.00		0.58	1.00			1.00	
Satd. Flow (perm)				1578	2709		782	1882			1961	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	242	4	23	3	184	0	0	128	3
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	242	9	0	3	184	0	0	130	0
Confl. Peds. (#/hr)	2		2	2		2	3					3
Heavy Vehicles (%)	0%	0%	0%	8%	25%	5%	33%	2%	0%	0%	3%	33%
Turn Type				Perm			pm+pt					
Protected Phases					8		7	2			6	
Permitted Phases				8			2					
Actuated Green, G (s)				27.0	27.0		50.0	50.0			40.0	
Effective Green, g (s)				27.0	27.0		50.0	50.0			46.0	
Actuated g/C Ratio				0.32	0.32		0.59	0.59			0.54	
Clearance Time (s)				4.0	4.0		4.0	4.0			3.0	
Lane Grp Cap (vph)				501	861		501	1107			1061	
v/s Ratio Prot					0.00		0.00	c0.10			0.07	
v/s Ratio Perm				c0.15			0.00					
v/c Ratio				0.48	0.01		0.01	0.17			0.12	
Uniform Delay, d1				23.4	19.9		10.0	8.0			9.6	
Progression Factor				1.00	1.00		1.06	1.18			1.00	
Incremental Delay, d2				3.3	0.0		0.0	0.3			0.2	
Delay (s)				26.7	19.9		10.6	9.8			9.8	
Level of Service				C	B		B	A			A	
Approach Delay (s)		0.0			26.0			9.8			9.8	
Approach LOS		A			C			A			A	

Intersection Summary			
HCM Average Control Delay	17.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



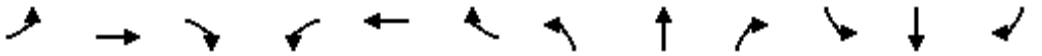
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	8	5	5	12	0	18	0	143	42	33	300	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	16	15	12	8	12	8	12	12	12	10	13	12
Total Lost time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99			1.00			1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00			1.00		1.00	1.00	
Frt	1.00	0.93			0.92			0.97		1.00	1.00	
Flt Protected	0.95	1.00			0.98			1.00		0.95	1.00	
Satd. Flow (prot)	1938	1809			1620			1686		1595	1755	
Flt Permitted	0.74	1.00			0.93			1.00		0.60	1.00	
Satd. Flow (perm)	1502	1809			1543			1686		1005	1755	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	8	5	5	13	0	19	0	151	44	35	316	0
RTOR Reduction (vph)	0	3	0	0	13	0	0	12	0	0	0	0
Lane Group Flow (vph)	8	7	0	0	19	0	0	183	0	35	316	0
Confl. Peds. (#/hr)			3	3			5		2	2		5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	3%	0%	6%	0%
Turn Type	Perm			Perm						pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Effective Green, g (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Actuated g/C Ratio	0.32	0.32			0.32			0.47		0.59	0.59	
Clearance Time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Grp Cap (vph)	477	575			490			793		640	1032	
v/s Ratio Prot		0.00						0.11		0.00	c0.18	
v/s Ratio Perm	0.01				c0.01					0.03		
v/c Ratio	0.02	0.01			0.04			0.23		0.05	0.31	
Uniform Delay, d1	19.9	19.9			20.0			13.4		8.5	8.8	
Progression Factor	1.00	1.00			1.00			1.00		1.01	0.92	
Incremental Delay, d2	0.1	0.0			0.1			0.7		0.2	0.7	
Delay (s)	20.0	19.9			20.2			14.0		8.8	8.9	
Level of Service	B	B			C			B		A	A	
Approach Delay (s)		19.9			20.2			14.0			8.9	
Approach LOS		B			C			B			A	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.21		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



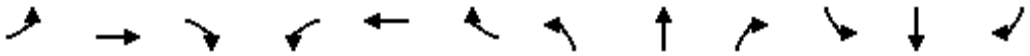
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	63	16	10	350	159	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	14	12	13	12	10	12
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.97		1.00	1.00	0.99	
Flt Protected	0.96		0.95	1.00	1.00	
Satd. Flow (prot)	1787		1767	1765	1634	
Flt Permitted	0.96		0.64	1.00	1.00	
Satd. Flow (perm)	1787		1187	1765	1634	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	70	18	11	389	177	13
RTOR Reduction (vph)	12	0	0	0	4	0
Lane Group Flow (vph)	76	0	11	389	186	0
Confl. Peds. (#/hr)		2				
Heavy Vehicles (%)	0%	0%	0%	2%	2%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.0		36.0	36.0	36.0	
Effective Green, g (s)	21.0		36.0	36.0	36.0	
Actuated g/C Ratio	0.32		0.55	0.55	0.55	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	577		657	978	905	
v/s Ratio Prot	c0.04			c0.22	0.11	
v/s Ratio Perm			0.01			
v/c Ratio	0.13		0.02	0.40	0.21	
Uniform Delay, d1	15.6		6.5	8.3	7.3	
Progression Factor	1.00		0.32	0.52	1.16	
Incremental Delay, d2	0.5		0.0	1.1	0.4	
Delay (s)	16.0		2.2	5.4	8.9	
Level of Service	B		A	A	A	
Approach Delay (s)	16.0			5.3	8.9	
Approach LOS	B			A	A	

Intersection Summary			
HCM Average Control Delay	7.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	39.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	23	274	14	568	253	0	0	193	35
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	14	16	12	12	15	12	12	13	10
Total Lost time (s)					4.0		4.0	4.0			3.0	3.0
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Frt					0.99		1.00	1.00			1.00	0.85
Flt Protected					1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3738		1660	1752			1603	1298
Flt Permitted					1.00		0.57	1.00			1.00	1.00
Satd. Flow (perm)					3738		1002	1752			1603	1298
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	26	304	16	631	281	0	0	214	39
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	0	0	0	22
Lane Group Flow (vph)	0	0	0	0	342	0	631	281	0	0	214	17
Confl. Peds. (#/hr)									30	30		
Heavy Vehicles (%)	0%	0%	0%	11%	2%	0%	3%	13%	0%	0%	16%	10%
Turn Type				Split			pm+pt					Perm
Protected Phases				8	8		7	2			6	
Permitted Phases							2					6
Actuated Green, G (s)					26.0		51.0	51.0			38.0	38.0
Effective Green, g (s)					26.0		51.0	51.0			38.0	38.0
Actuated g/C Ratio					0.31		0.60	0.60			0.45	0.45
Clearance Time (s)					4.0		4.0	4.0			3.0	3.0
Lane Grp Cap (vph)					1143		679	1051			717	580
v/s Ratio Prot					c0.09		c0.11	0.16			0.13	
v/s Ratio Perm							c0.45					0.01
v/c Ratio					0.30		0.93	0.27			0.30	0.03
Uniform Delay, d1					22.5		17.0	8.1			15.0	13.2
Progression Factor					1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2					0.7		21.0	0.6			1.1	0.1
Delay (s)					23.2		38.0	8.7			16.1	13.3
Level of Service					C		D	A			B	B
Approach Delay (s)		0.0			23.2			29.0			15.6	
Approach LOS		A			C			C			B	

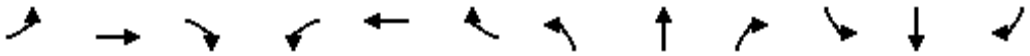
Intersection Summary			
HCM Average Control Delay	25.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	15	11	9	331	528	97	74	340	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	15	12	12	12	12	12	13	12
Total Lost time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.97		1.00	0.98		1.00	1.00	
Flt Protected					0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1803		1692	3236		1707	3352	
Flt Permitted					0.98		0.50	1.00		0.31	1.00	
Satd. Flow (perm)					1803		892	3236		564	3352	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	17	12	10	368	587	108	82	378	13
RTOR Reduction (vph)	0	0	0	0	7	0	0	20	0	0	3	0
Lane Group Flow (vph)	0	0	0	0	32	0	368	675	0	82	388	0
Confl. Peds. (#/hr)	2					2	6		20	20		6
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	0%	0%	0%	11%	0%	1%	3%	0%	0%	5%	0%
Turn Type				Split			pm+pt			pm+pt		
Protected Phases				8	8		5	2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)					23.0		41.0	34.0		41.0	34.0	
Effective Green, g (s)					23.0		41.0	34.0		41.0	34.0	
Actuated g/C Ratio					0.31		0.55	0.45		0.55	0.45	
Clearance Time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Grp Cap (vph)					553		562	1467		415	1520	
v/s Ratio Prot					c0.02		c0.06	0.21		0.02	0.12	
v/s Ratio Perm							c0.30			0.09		
v/c Ratio					0.06		0.65	0.46		0.20	0.26	
Uniform Delay, d1					18.4		13.8	14.2		12.4	12.7	
Progression Factor					1.00		0.69	0.74		1.00	1.00	
Incremental Delay, d2					0.2		5.4	0.9		1.1	0.4	
Delay (s)					18.6		14.9	11.4		13.4	13.1	
Level of Service					B		B	B		B	B	
Approach Delay (s)		0.0			18.6			12.6			13.1	
Approach LOS		A			B			B			B	

Intersection Summary			
HCM Average Control Delay	12.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	15		

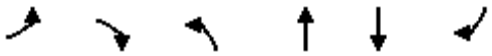
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	57	54	24	13	169	222	20	677	12	69	271	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	16	12	12	10	11	12	12	11	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.93		1.00	1.00		1.00	0.99	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1946			1626		1596	3232		1641	3131	
Flt Permitted		0.68			0.99		0.57	1.00		0.33	1.00	
Satd. Flow (perm)		1354			1613		955	3232		574	3131	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	60	57	25	14	178	234	21	713	13	73	285	16
RTOR Reduction (vph)	0	10	0	0	59	0	0	2	0	0	5	0
Lane Group Flow (vph)	0	132	0	0	367	0	21	724	0	73	296	0
Confl. Peds. (#/hr)									6	6		
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	0%	0%	12%	2%	2%	0%	2%	0%	4%	5%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Effective Green, g (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Actuated g/C Ratio		0.33			0.33		0.56	0.56		0.56	0.56	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		451			538		535	1810		321	1753	
v/s Ratio Prot								c0.22			0.09	
v/s Ratio Perm		0.10			c0.23		0.02			0.13		
v/c Ratio		0.29			0.68		0.04	0.40		0.23	0.17	
Uniform Delay, d1		18.5			21.6		7.4	9.4		8.3	8.0	
Progression Factor		1.00			1.00		1.00	1.00		0.18	0.07	
Incremental Delay, d2		1.6			6.9		0.1	0.7		1.6	0.2	
Delay (s)		20.1			28.4		7.6	10.0		3.1	0.8	
Level of Service		C			C		A	B		A	A	
Approach Delay (s)		20.1			28.4			9.9			1.2	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM Average Control Delay	13.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.9%	ICU Level of Service	C
Analysis Period (min)	15		

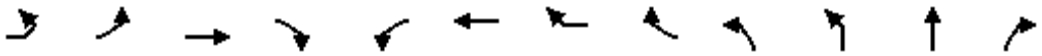
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	45	57	105	326	195	19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	50	63	117	362	217	21

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	113	237	241	144	93
Volume Left (vph)	50	117	0	0	0
Volume Right (vph)	63	0	0	0	21
Hadj (s)	-0.16	0.33	0.08	0.09	-0.07
Departure Headway (s)	5.3	5.4	5.1	5.4	5.2
Degree Utilization, x	0.17	0.36	0.35	0.22	0.14
Capacity (veh/h)	628	653	684	641	660
Control Delay (s)	9.3	10.1	9.6	8.7	7.9
Approach Delay (s)	9.3	9.9		8.4	
Approach LOS	A	A		A	

Intersection Summary			
Delay	9.4		
HCM Level of Service	A		
Intersection Capacity Utilization	35.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	45	52	336	13	6	482	39	40	42	53	720	45
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	0.95	
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.97			1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Frt		1.00	1.00	0.85	1.00	1.00	0.85			1.00	0.99	
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	
Satd. Flow (prot)		1575	1731	1530	1710	1731	1487			1710	3290	
Flt Permitted		0.11	1.00	1.00	0.54	1.00	1.00			0.39	1.00	
Satd. Flow (perm)		187	1731	1530	971	1731	1487			700	3290	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	50	58	373	14	7	536	43	44	47	59	800	50
RTOR Reduction (vph)	0	0	0	7	0	0	31	0	0	0	5	0
Lane Group Flow (vph)	0	108	373	7	7	536	56	0	0	106	845	0
Confl. Peds. (#/hr)		5					5					6
Heavy Vehicles (%)	8%	9%	4%	0%	0%	4%	0%	0%	0%	0%	3%	0%
Turn Type	Perm	pm+pt		Perm	Perm		Perm		Perm	Perm		
Protected Phases		7	4			8					2	
Permitted Phases	4	4		4	8		8		2	2		
Actuated Green, G (s)		50.0	50.0	50.0	32.0	32.0	32.0			25.0	25.0	
Effective Green, g (s)		50.0	50.0	50.0	32.0	32.0	32.0			25.0	25.0	
Actuated g/C Ratio		0.48	0.48	0.48	0.30	0.30	0.30			0.24	0.24	
Clearance Time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Grp Cap (vph)		281	824	729	296	528	453			167	783	
v/s Ratio Prot		0.05	c0.22			c0.31					c0.26	
v/s Ratio Perm		0.13		0.00	0.01		0.04			0.15		
v/c Ratio		0.38	0.45	0.01	0.02	1.02	0.12			0.63	1.08	
Uniform Delay, d1		20.3	18.4	14.5	25.6	36.5	26.4			35.9	40.0	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Incremental Delay, d2		3.9	1.8	0.0	0.1	43.0	0.6			17.0	55.9	
Delay (s)		24.2	20.2	14.5	25.7	79.5	26.9			52.9	95.9	
Level of Service		C	C	B	C	E	C			D	F	
Approach Delay (s)			20.9			71.7					91.1	
Approach LOS			C			E					F	

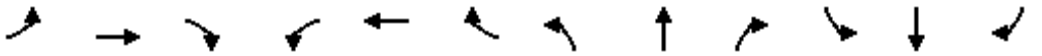
Intersection Summary			
HCM Average Control Delay	62.9	HCM Level of Service	E
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	79.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations								
Volume (vph)	54	300	27	33	4	64	114	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5				4.5	4.5	
Lane Util. Factor	1.00	0.95				1.00	0.88	
Frpb, ped/bikes	1.00	1.00				1.00	1.00	
Flpb, ped/bikes	1.00	1.00				1.00	1.00	
Frt	1.00	0.97				1.00	0.85	
Flt Protected	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1706	3279				1710	2621	
Flt Permitted	0.16	1.00				0.95	1.00	
Satd. Flow (perm)	293	3279				1710	2621	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	60	333	30	37	4	71	127	13
RTOR Reduction (vph)	0	8	0	0	0	0	7	0
Lane Group Flow (vph)	60	392	0	0	0	75	133	0
Confl. Peds. (#/hr)	6							
Heavy Vehicles (%)	0%	2%	0%	0%	0%	0%	3%	0%
Turn Type	Perm				Split		Perm	
Protected Phases		6			9	9		
Permitted Phases	6						9	
Actuated Green, G (s)	24.5	24.5				17.5	17.5	
Effective Green, g (s)	24.5	24.5				17.5	17.5	
Actuated g/C Ratio	0.23	0.23				0.17	0.17	
Clearance Time (s)	4.5	4.5				4.5	4.5	
Lane Grp Cap (vph)	68	765				285	437	
v/s Ratio Prot		0.12				0.04		
v/s Ratio Perm	0.20						c0.05	
v/c Ratio	0.88	0.51				0.26	0.31	
Uniform Delay, d1	38.9	35.1				38.1	38.4	
Progression Factor	1.00	1.00				1.00	1.00	
Incremental Delay, d2	79.4	2.4				2.2	1.8	
Delay (s)	118.3	37.5				40.4	40.2	
Level of Service	F	D				D	D	
Approach Delay (s)		48.0				40.3		
Approach LOS		D				D		

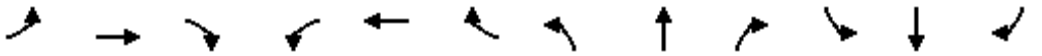
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	497	0	0	492	27	118	116	123	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	11	11	16	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.99			0.95				
Flt Protected		1.00			1.00			0.98				
Satd. Flow (prot)		1653			1929			1769				
Flt Permitted		0.96			1.00			0.98				
Satd. Flow (perm)		1598			1929			1769				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	552	0	0	547	30	131	129	137	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	579	0	0	577	0	0	397	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		31.0			31.0			26.0				
Effective Green, g (s)		31.0			31.0			26.0				
Actuated g/C Ratio		0.48			0.48			0.40				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		762			920			708				
v/s Ratio Prot					0.30							
v/s Ratio Perm		c0.36						0.22				
v/c Ratio		0.76			0.63			0.56				
Uniform Delay, d1		13.9			12.7			15.1				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		7.0			3.2			3.2				
Delay (s)		21.0			15.9			18.3				
Level of Service		C			B			B				
Approach Delay (s)		21.0			15.9			18.3			0.0	
Approach LOS		C			B			B			A	

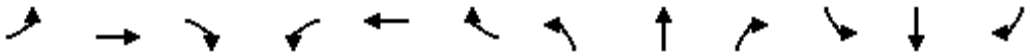
Intersection Summary			
HCM Average Control Delay	18.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	76.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	116	398	114	67	276	116	148	1707	130	92	445	93
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	9	9	10	9
Total Lost time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.96	1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1924	1426		1923	1396	1500	3099	1284	1425	2956	1265
Flt Permitted		0.65	1.00		0.54	1.00	0.40	1.00	1.00	0.09	1.00	1.00
Satd. Flow (perm)		1265	1426		1040	1396	631	3099	1284	142	2956	1265
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	122	419	120	71	291	122	156	1797	137	97	468	98
RTOR Reduction (vph)	0	0	71	0	0	72	0	0	30	0	0	59
Lane Group Flow (vph)	0	541	49	0	362	50	156	1797	107	97	468	39
Confl. Peds. (#/hr)	42		39	39		42	20		8	8		20
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	6%	4%	3%	0%	6%	5%	6%	3%	4%	8%	8%	4%
Turn Type	pm+pt		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		43.0	43.0		43.0	43.0	52.7	44.0	44.0	49.3	42.3	42.3
Effective Green, g (s)		43.0	43.0		43.0	43.0	52.7	44.0	44.0	49.3	42.3	42.3
Actuated g/C Ratio		0.41	0.41		0.41	0.41	0.50	0.42	0.42	0.47	0.40	0.40
Clearance Time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		518	584		426	572	389	1299	538	152	1191	510
v/s Ratio Prot							c0.03	c0.58		c0.04	0.16	
v/s Ratio Perm		c0.43	0.03		0.35	0.04	0.17		0.08	0.26		0.03
v/c Ratio		1.04	0.08		0.85	0.09	0.40	1.38	0.20	0.64	0.39	0.08
Uniform Delay, d1		31.0	19.0		28.1	19.0	14.9	30.5	19.3	23.3	22.2	19.3
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.25	0.75	0.39
Incremental Delay, d2		51.6	0.3		18.7	0.3	0.7	177.4	0.8	8.2	0.9	0.3
Delay (s)		82.6	19.2		46.8	19.3	15.6	207.9	20.2	37.4	17.7	7.9
Level of Service		F	B		D	B	B	F	C	D	B	A
Approach Delay (s)		71.1			39.9			181.2			19.2	
Approach LOS		E			D			F			B	

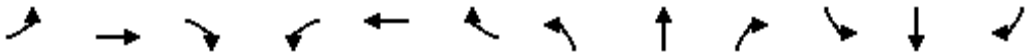
Intersection Summary			
HCM Average Control Delay	117.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.17		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	116.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	558	59	51	421	50	67	62	58	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		0.99			0.99			0.96				
Flt Protected		1.00			1.00			0.98				
Satd. Flow (prot)		1630			1628			1775				
Flt Permitted		0.92			0.89			0.98				
Satd. Flow (perm)		1501			1455			1775				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	66	620	66	57	468	56	74	69	64	0	0	0
RTOR Reduction (vph)	0	5	0	0	6	0	0	25	0	0	0	0
Lane Group Flow (vph)	0	747	0	0	575	0	0	182	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		38.0			38.0			19.0				
Effective Green, g (s)		38.0			38.0			19.0				
Actuated g/C Ratio		0.58			0.58			0.29				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		878			851			519				
v/s Ratio Prot												
v/s Ratio Perm		c0.50			0.40			0.10				
v/c Ratio		0.85			0.68			0.35				
Uniform Delay, d1		11.2			9.3			18.1				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		10.1			4.3			1.9				
Delay (s)		21.3			13.6			20.0				
Level of Service		C			B			C				
Approach Delay (s)		21.3			13.6			20.0			0.0	
Approach LOS		C			B			C			A	

Intersection Summary			
HCM Average Control Delay	18.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.8%	ICU Level of Service	C
Analysis Period (min)	15		

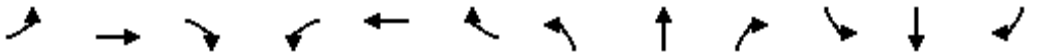
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	509	67	32	450	39	55	150	89	49	192	53
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	11	12	12	15	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.97		1.00	0.95		1.00	0.98		0.98	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		0.99	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.98	
Flt Protected		1.00	1.00		1.00	1.00		0.99	1.00		0.99	
Satd. Flow (prot)		1656	1255		1636	1288		1658	1490		1738	
Flt Permitted		0.96	1.00		0.95	1.00		0.84	1.00		0.92	
Satd. Flow (perm)		1594	1255		1555	1288		1417	1490		1608	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	32	536	71	34	474	41	58	158	94	52	202	56
RTOR Reduction (vph)	0	0	30	0	0	15	0	0	64	0	11	0
Lane Group Flow (vph)	0	568	41	0	508	26	0	216	30	0	299	0
Confl. Peds. (#/hr)	33		15	15		33	68		5	5		68
Confl. Bikes (#/hr)	4					4						
Heavy Vehicles (%)	0%	5%	14%	19%	5%	9%	2%	2%	1%	10%	7%	8%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Effective Green, g (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.32	0.32		0.32	
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Grp Cap (vph)		914	720		892	738		453	477		515	
v/s Ratio Prot												
v/s Ratio Perm		c0.36	0.03		0.33	0.02		0.15	0.02		c0.19	
v/c Ratio		0.62	0.06		0.57	0.03		0.48	0.06		0.58	
Uniform Delay, d1		10.6	7.1		10.1	7.0		20.5	17.7		21.3	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		3.2	0.1		2.6	0.1		3.6	0.3		4.7	
Delay (s)		13.8	7.2		12.8	7.1		24.0	18.0		26.0	
Level of Service		B	A		B	A		C	B		C	
Approach Delay (s)		13.0			12.3			22.2			26.0	
Approach LOS		B			B			C			C	

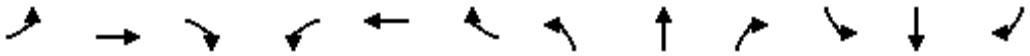
Intersection Summary			
HCM Average Control Delay	16.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	95.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	84	440	30	17	326	39	55	303	38	38	92	11
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	11	16	8	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.98	1.00	1.00	0.99
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1464	2990		1459	3535		1534	1647	1301	1517	1541	1156
Flt Permitted	0.50	1.00		0.43	1.00		0.69	1.00	1.00	0.45	1.00	1.00
Satd. Flow (perm)	777	2990		656	3535		1116	1647	1301	720	1541	1156
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	93	489	33	19	362	43	61	337	42	42	102	12
RTOR Reduction (vph)	0	7	0	0	14	0	0	0	22	0	0	7
Lane Group Flow (vph)	93	515	0	19	391	0	61	337	20	42	102	5
Confl. Peds. (#/hr)	16		9	9		16	1		5	5		1
Heavy Vehicles (%)	8%	6%	0%	13%	8%	3%	4%	2%	8%	5%	9%	22%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Effective Green, g (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	371	1426		313	1686		446	659	520	288	616	462
v/s Ratio Prot		c0.17			0.11			c0.20			0.07	
v/s Ratio Perm	0.12			0.03			0.05		0.02	0.06		0.00
v/c Ratio	0.25	0.36		0.06	0.23		0.14	0.51	0.04	0.15	0.17	0.01
Uniform Delay, d1	10.1	10.7		9.2	10.0		12.4	14.7	11.9	12.4	12.5	11.7
Progression Factor	1.00	1.00		1.00	1.00		0.60	0.75	0.30	0.53	0.54	0.28
Incremental Delay, d2	1.6	0.7		0.4	0.3		0.6	2.8	0.1	1.1	0.6	0.0
Delay (s)	11.7	11.5		9.5	10.3		8.0	13.7	3.7	7.7	7.3	3.4
Level of Service	B	B		A	B		A	B	A	A	A	A
Approach Delay (s)		11.5			10.3			12.0			7.1	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	10.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

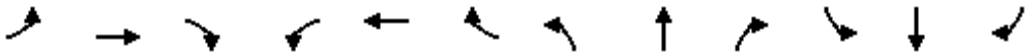


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	98	416	85	44	291	65	73	371	44	57	143	55
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	11	10	11	11	10	11	11	10	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.96	1.00		1.00	1.00		0.98	1.00		0.97	1.00	
Frt	1.00	0.97		1.00	0.97		1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1465	3058		1588	3012		1541	3022		1403	2767	
Flt Permitted	0.52	1.00		0.42	1.00		0.62	1.00		0.46	1.00	
Satd. Flow (perm)	799	3058		697	3012		1007	3022		678	2767	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	103	438	89	46	306	68	77	391	46	60	151	58
RTOR Reduction (vph)	0	0	0	0	0	0	0	12	0	0	34	0
Lane Group Flow (vph)	103	527	0	46	374	0	77	425	0	60	175	0
Confl. Peds. (#/hr)	98		10	10		98	28		52	52		28
Heavy Vehicles (%)	5%	5%	4%	0%	5%	7%	2%	6%	13%	10%	11%	20%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.41	0.41		0.41	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	384	1468		335	1446		416	1249		280	1144	
v/s Ratio Prot		c0.17			0.12			c0.14			0.06	
v/s Ratio Perm	0.13			0.07			0.08			0.09		
v/c Ratio	0.27	0.36		0.14	0.26		0.19	0.34		0.21	0.15	
Uniform Delay, d1	11.6	12.3		10.9	11.6		14.0	15.0		14.2	13.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.7	0.7		0.9	0.4		1.0	0.7		1.7	0.3	
Delay (s)	13.3	12.9		11.7	12.0		15.0	15.8		15.9	14.1	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		13.0			12.0			15.6			14.5	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	112	330	38	23	334	47	67	412	26	43	206	56
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	8	16	12	9	10	10	9	10	10
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1533	1576		1474	1842		1533	3073		1372	2877	
Flt Permitted	0.44	1.00		0.46	1.00		0.58	1.00		0.41	1.00	
Satd. Flow (perm)	709	1576		711	1842		940	3073		597	2877	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	118	347	40	24	352	49	71	434	27	45	217	59
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	118	387	0	24	401	0	71	461	0	45	276	0
Confl. Peds. (#/hr)	7		23	23		7	10		8	8		10
Confl. Bikes (#/hr)	1		2	2		1	1		1	1		1
Heavy Vehicles (%)	4%	8%	10%	0%	9%	5%	0%	3%	0%	12%	7%	6%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	47.0	41.8		40.6	38.6		26.8	22.2		23.6	20.6	
Effective Green, g (s)	47.0	39.8		40.6	36.6		26.8	20.2		23.6	18.6	
Actuated g/C Ratio	0.55	0.47		0.48	0.43		0.32	0.24		0.28	0.22	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	442	738		358	793		328	730		193	630	
v/s Ratio Prot	c0.02	c0.25		0.00	0.22		c0.01	c0.15		0.01	0.10	
v/s Ratio Perm	0.13			0.03			0.06			0.06		
v/c Ratio	0.27	0.52		0.07	0.51		0.22	0.63		0.23	0.44	
Uniform Delay, d1	13.8	15.9		15.0	17.6		21.6	29.1		26.1	28.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	2.7		0.1	2.3		0.3	4.1		0.6	2.2	
Delay (s)	14.1	18.6		15.1	19.9		21.9	33.2		26.8	30.9	
Level of Service	B	B		B	B		C	C		C	C	
Approach Delay (s)		17.5			19.6			31.7			30.3	
Approach LOS		B			B			C			C	

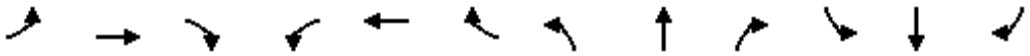
Intersection Summary			
HCM Average Control Delay	24.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	63.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	69	323	44	65	388	115	59	390	126	56	162	38
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	11	11	11	11	12	12	10	10	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		0.99	1.00	
Frt		0.98			0.97		1.00	0.96		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3493			2914		1614	3156		1581	2918	
Flt Permitted		0.78			0.84		0.61	1.00		0.38	1.00	
Satd. Flow (perm)		2745			2468		1041	3156		628	2918	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	77	359	49	72	431	128	66	433	140	62	180	42
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	485	0	0	631	0	66	573	0	62	222	0
Confl. Peds. (#/hr)	20		16	16		20	5		33	33		5
Confl. Bikes (#/hr)	2					2			2	2		
Heavy Vehicles (%)	9%	9%	0%	24%	7%	6%	2%	4%	2%	0%	5%	9%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.0			33.0		32.0	32.0		32.0	32.0	
Effective Green, g (s)		34.0			34.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio		0.45			0.45		0.44	0.44		0.44	0.44	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		1244			1119		458	1389		276	1284	
v/s Ratio Prot								c0.18			0.08	
v/s Ratio Perm		0.18			c0.26		0.06			0.10		
v/c Ratio		0.39			0.56		0.14	0.41		0.22	0.17	
Uniform Delay, d1		13.6			15.1		12.6	14.4		13.0	12.7	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.9			2.1		0.7	0.9		1.9	0.3	
Delay (s)		14.5			17.1		13.2	15.3		14.9	13.0	
Level of Service		B			B		B	B		B	B	
Approach Delay (s)		14.5			17.1			15.1			13.4	
Approach LOS		B			B			B			B	

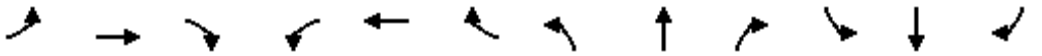
Intersection Summary			
HCM Average Control Delay	15.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	145	523	5	14	661	386	72	9	20	118	1	52
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	12	12	12	12	12	13	13	13
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	1.00		1.00	1.00	0.85		0.97			0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97			0.97	
Satd. Flow (prot)	1574	3144		1629	3257	1457		1611			3105	
Flt Permitted	0.35	1.00		0.42	1.00	1.00		0.69			0.75	
Satd. Flow (perm)	581	3144		720	3257	1457		1158			2398	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	161	581	6	16	734	429	80	10	22	131	1	58
RTOR Reduction (vph)	0	1	0	0	0	150	0	12	0	0	44	0
Lane Group Flow (vph)	161	586	0	16	734	279	0	100	0	0	146	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	46.0	46.0		46.0	46.0	46.0		16.7			16.7	
Effective Green, g (s)	46.0	46.0		46.0	46.0	46.0		16.7			16.7	
Actuated g/C Ratio	0.65	0.65		0.65	0.65	0.65		0.24			0.24	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		8.0			8.0	
Lane Grp Cap (vph)	378	2046		468	2119	948		274			566	
v/s Ratio Prot		0.19			0.23							
v/s Ratio Perm	c0.28			0.02		0.19		c0.09			0.06	
v/c Ratio	0.43	0.29		0.03	0.35	0.29		0.36			0.26	
Uniform Delay, d1	6.0	5.3		4.4	5.6	5.3		22.6			22.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	3.5	0.4		0.1	0.4	0.8		3.5			1.0	
Delay (s)	9.5	5.7		4.5	6.0	6.1		26.1			23.0	
Level of Service	A	A		A	A	A		C			C	
Approach Delay (s)		6.5			6.0			26.1			23.0	
Approach LOS		A			A			C			C	

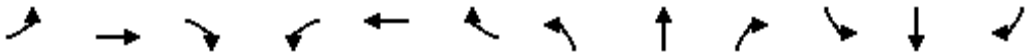
Intersection Summary			
HCM Average Control Delay	8.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	70.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	111	214	75	63	190	68	133	1972	88	71	499	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	9	12	10	10	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.96	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.96		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1548	1499		1547	1586		1493	3069	1271	1452	2983	1301
Flt Permitted	0.38	1.00		0.32	1.00		0.39	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	617	1499		524	1586		612	3069	1271	180	2983	1301
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	117	225	79	66	200	72	140	2076	93	75	525	44
RTOR Reduction (vph)	0	15	0	0	16	0	0	0	18	0	0	26
Lane Group Flow (vph)	117	289	0	66	256	0	140	2076	75	75	525	18
Confl. Peds. (#/hr)	4		9	9		4	6		16	16		6
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	3%	3%	4%	3%	1%	2%	3%	4%	4%	6%	7%	3%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	28.0	21.0		28.0	21.0		42.0	35.0	35.0	42.0	35.0	35.0
Effective Green, g (s)	26.0	22.0		26.0	22.0		40.0	35.0	35.0	40.0	35.0	35.0
Actuated g/C Ratio	0.31	0.26		0.31	0.26		0.47	0.41	0.41	0.47	0.41	0.41
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	254	388		232	410		350	1264	523	174	1228	536
v/s Ratio Prot	c0.03	c0.19		0.02	0.16		0.03	c0.68		c0.03	0.18	
v/s Ratio Perm	0.11			0.07			0.16		0.06	0.17		0.01
v/c Ratio	0.46	0.75		0.28	0.63		0.40	1.64	0.14	0.43	0.43	0.03
Uniform Delay, d1	22.5	28.9		21.9	27.9		13.3	25.0	15.6	18.1	17.8	14.9
Progression Factor	1.00	1.00		1.00	1.00		0.61	0.71	0.49	1.00	1.00	1.00
Incremental Delay, d2	5.9	12.3		3.1	7.0		2.8	292.0	0.5	7.6	1.1	0.1
Delay (s)	28.4	41.2		24.9	34.9		10.9	309.7	8.1	25.7	18.9	15.0
Level of Service	C	D		C	C		B	F	A	C	B	B
Approach Delay (s)		37.6			32.9			279.4			19.5	
Approach LOS		D			C			F			B	

Intersection Summary			
HCM Average Control Delay	184.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	96.6%	ICU Level of Service	F
Analysis Period (min)	15		

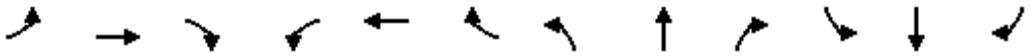
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	26	218	17	15	149	18	18	166	27	33	148	21
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	14	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.99			0.98			0.99	
Flt Protected		1.00			1.00			1.00			0.99	
Satd. Flow (prot)		1850			1836			1902			1931	
Flt Permitted		0.96			0.97			0.97			0.94	
Satd. Flow (perm)		1792			1790			1856			1823	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	27	225	18	15	154	19	19	171	28	34	153	22
RTOR Reduction (vph)	0	4	0	0	6	0	0	8	0	0	6	0
Lane Group Flow (vph)	0	266	0	0	182	0	0	210	0	0	203	0
Confl. Peds. (#/hr)	5		11	11		5	7		34	34		7
Confl. Bikes (#/hr)			3	3								
Heavy Vehicles (%)	4%	2%	0%	20%	1%	0%	12%	3%	8%	0%	3%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.42			0.42			0.46			0.46	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		744			744			857			841	
v/s Ratio Prot												
v/s Ratio Perm		c0.15			0.10			c0.11			0.11	
v/c Ratio		0.36			0.24			0.24			0.24	
Uniform Delay, d1		13.0			12.4			10.6			10.6	
Progression Factor		1.00			0.64			1.04			1.00	
Incremental Delay, d2		1.3			0.8			0.6			0.7	
Delay (s)		14.4			8.7			11.7			11.3	
Level of Service		B			A			B			B	
Approach Delay (s)		14.4			8.7			11.7			11.3	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	11.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.2%	ICU Level of Service	A
Analysis Period (min)	15		

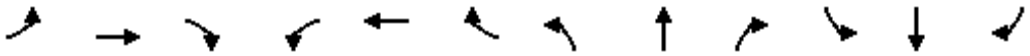
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	181	34	9	162	19	44	384	33	16	86	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.95	1.00		1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1465	2994		1302	3037		1529	3093		1492	2868	
Flt Permitted	0.63	1.00		0.60	1.00		0.68	1.00		0.48	1.00	
Satd. Flow (perm)	965	2994		827	3037		1093	3093		757	2868	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	201	38	10	180	21	49	427	37	18	96	19
RTOR Reduction (vph)	0	24	0	0	13	0	0	10	0	0	8	0
Lane Group Flow (vph)	27	215	0	10	188	0	49	454	0	18	107	0
Confl. Peds. (#/hr)	35		6	6		35	18					18
Confl. Bikes (#/hr)	14		32	32		14	23		7	7		23
Heavy Vehicles (%)	4%	4%	0%	22%	2%	6%	3%	2%	0%	7%	8%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0		39.0	39.0		39.0	39.0	
Effective Green, g (s)	19.0	19.0		19.0	19.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.58	0.58		0.58	0.58	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	282	875		242	888		639	1808		443	1677	
v/s Ratio Prot		c0.07			0.06			c0.15			0.04	
v/s Ratio Perm	0.03			0.01			0.04			0.02		
v/c Ratio	0.10	0.25		0.04	0.21		0.08	0.25		0.04	0.06	
Uniform Delay, d1	16.7	17.5		16.5	17.3		5.9	6.6		5.7	5.8	
Progression Factor	0.73	0.73		0.75	0.74		0.94	1.00		0.49	0.44	
Incremental Delay, d2	0.6	0.6		0.3	0.5		0.2	0.3		0.2	0.1	
Delay (s)	12.9	13.5		12.6	13.4		5.7	6.9		3.0	2.6	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		13.4			13.3			6.8			2.7	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	9.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.7%	ICU Level of Service	A
Analysis Period (min)	15		

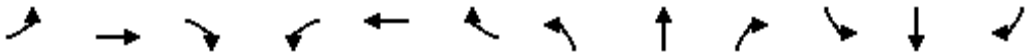
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	46	178	34	16	122	38	28	414	24	13	163	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	9	9	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.98		1.00	0.96			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1556	2952		1515	2868			1878			1807	
Flt Permitted	0.64	1.00		0.60	1.00			0.98			0.96	
Satd. Flow (perm)	1047	2952		965	2868			1839			1749	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	51	198	38	18	136	42	31	460	27	14	181	17
RTOR Reduction (vph)	0	23	0	0	25	0	0	3	0	0	5	0
Lane Group Flow (vph)	51	213	0	18	153	0	0	515	0	0	207	0
Confl. Peds. (#/hr)	10		29	29		10	17		10	10		17
Confl. Bikes (#/hr)									2	2		
Heavy Vehicles (%)	2%	4%	10%	0%	4%	0%	0%	8%	4%	0%	13%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Effective Green, g (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40			0.48			0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	419	1181		386	1147			877			834	
v/s Ratio Prot		c0.07			0.05							
v/s Ratio Perm	0.05			0.02				c0.28			0.12	
v/c Ratio	0.12	0.18		0.05	0.13			0.59			0.25	
Uniform Delay, d1	12.3	12.6		11.9	12.4			12.4			10.1	
Progression Factor	1.02	0.93		0.86	0.87			0.92			1.00	
Incremental Delay, d2	0.6	0.3		0.2	0.2			2.8			0.7	
Delay (s)	13.1	12.0		10.5	11.0			14.1			10.8	
Level of Service	B	B		B	B			B			B	
Approach Delay (s)		12.2			11.0			14.1			10.8	
Approach LOS		B			B			B			B	

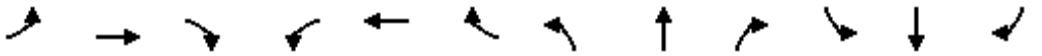
Intersection Summary			
HCM Average Control Delay	12.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



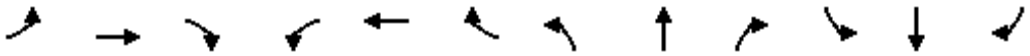
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	90	127	60	2	84	36	21	275	9	7	184	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	16	12	10	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.95		1.00	0.95			1.00			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1605	1879		1587	1870			1971			1933	
Flt Permitted	0.67	1.00		0.57	1.00			0.98			0.99	
Satd. Flow (perm)	1135	1879		950	1870			1928			1916	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	100	141	67	2	93	40	23	306	10	8	204	32
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	100	208	0	2	133	0	0	339	0	0	244	0
Confl. Peds. (#/hr)			8	8			1		8	8		1
Heavy Vehicles (%)	3%	3%	2%	0%	6%	0%	0%	3%	0%	0%	4%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Effective Green, g (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Actuated g/C Ratio	0.31	0.31		0.31	0.31			0.57			0.57	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	349	578		292	575			1097			1091	
v/s Ratio Prot		c0.11			0.07							
v/s Ratio Perm	0.09			0.00				c0.18			0.13	
v/c Ratio	0.29	0.36		0.01	0.23			0.31			0.22	
Uniform Delay, d1	17.1	17.5		15.6	16.8			7.3			6.9	
Progression Factor	0.91	0.90		0.89	0.92			0.99			1.00	
Incremental Delay, d2	2.0	1.7		0.0	0.9			0.7			0.5	
Delay (s)	17.5	17.5		14.0	16.4			7.9			7.4	
Level of Service	B	B		B	B			A			A	
Approach Delay (s)		17.5			16.3			7.9			7.4	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	122	9	55	1	3	12	40	492	6	2	201	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	10	11	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.97		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	0.98	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.87		1.00	0.88		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1603	1672		1710	1422		1491	1631	1392	1649	1907	1427
Flt Permitted	0.75	1.00		0.71	1.00		0.62	1.00	1.00	0.37	1.00	1.00
Satd. Flow (perm)	1260	1672		1279	1422		971	1631	1392	648	1907	1427
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	136	10	61	1	3	13	44	547	7	2	223	56
RTOR Reduction (vph)	0	44	0	0	9	0	0	0	3	0	0	22
Lane Group Flow (vph)	136	27	0	1	7	0	44	547	4	2	223	34
Confl. Peds. (#/hr)	9					9	1		6	6		1
Heavy Vehicles (%)	5%	14%	5%	0%	67%	12%	7%	3%	0%	0%	7%	5%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	17.0	17.0		17.0	17.0		39.0	39.0	39.0	39.0	39.0	39.0
Effective Green, g (s)	18.0	18.0		18.0	18.0		39.0	39.0	39.0	39.0	39.0	39.0
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.60	0.60	0.60	0.60	0.60	0.60
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	349	463		354	394		583	979	835	389	1144	856
v/s Ratio Prot		0.02			0.00			c0.34			0.12	
v/s Ratio Perm	c0.11			0.00			0.05		0.00	0.00		0.02
v/c Ratio	0.39	0.06		0.00	0.02		0.08	0.56	0.01	0.01	0.19	0.04
Uniform Delay, d1	19.0	17.3		17.0	17.1		5.4	7.8	5.2	5.2	5.9	5.3
Progression Factor	1.46	2.42		1.00	1.00		1.17	1.10	1.32	1.00	1.00	1.00
Incremental Delay, d2	3.2	0.2		0.0	0.1		0.2	1.7	0.0	0.0	0.4	0.1
Delay (s)	31.1	42.0		17.0	17.1		6.5	10.3	6.9	5.2	6.3	5.4
Level of Service	C	D		B	B		A	B	A	A	A	A
Approach Delay (s)		34.8			17.1			10.0			6.1	
Approach LOS		C			B			A			A	

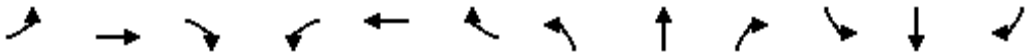
Intersection Summary			
HCM Average Control Delay	13.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	240	76	124	376	0	0	0	0	74	305	361
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)		4.0		3.0	3.0					5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	
Frpb, ped/bikes		0.99		1.00	1.00					1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Frt		0.96		1.00	1.00					1.00	0.92	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		2826		1621	3288					1574	2907	
Flt Permitted		1.00		0.50	1.00					0.95	1.00	
Satd. Flow (perm)		2826		848	3288					1574	2907	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	253	80	131	396	0	0	0	0	78	321	380
RTOR Reduction (vph)	0	30	0	0	0	0	0	0	0	0	214	0
Lane Group Flow (vph)	0	303	0	131	396	0	0	0	0	78	487	0
Confl. Peds. (#/hr)	14		32	32		14	14					14
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	9%	4%	5%	4%	0%	0%	0%	0%	5%	2%	4%
Turn Type				D.P+P						custom		
Protected Phases		8		7	7 8					6	6	
Permitted Phases				8						6		
Actuated Green, G (s)		33.0		56.0	59.0					32.0	32.0	
Effective Green, g (s)		33.0		56.0	59.0					32.0	32.0	
Actuated g/C Ratio		0.33		0.56	0.59					0.32	0.32	
Clearance Time (s)		4.0		3.0						5.0	5.0	
Lane Grp Cap (vph)		933		653	1940					504	930	
v/s Ratio Prot		c0.11		0.05	c0.12					0.05	c0.17	
v/s Ratio Perm				0.07								
v/c Ratio		0.32		0.20	0.20					0.15	0.52	
Uniform Delay, d1		25.1		10.6	9.6					24.3	27.8	
Progression Factor		1.00		1.95	2.06					1.00	1.00	
Incremental Delay, d2		0.9		0.6	0.2					0.7	2.1	
Delay (s)		26.1		21.2	19.8					25.0	29.9	
Level of Service		C		C	B					C	C	
Approach Delay (s)		26.1			20.2			0.0			29.4	
Approach LOS		C			C			A			C	

Intersection Summary			
HCM Average Control Delay	25.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

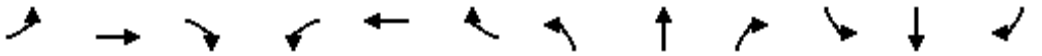
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	129	185	0	0	326	69	174	554	332	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	9	12	13	12	13	12	12	12
Total Lost time (s)	4.0	4.0			4.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.97		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1673	3054			2832		1750	1782	1514			
Flt Permitted	0.34	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	599	3054			2832		1750	1782	1514			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	136	195	0	0	343	73	183	583	349	0	0	0
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	234	0	0	0
Lane Group Flow (vph)	136	195	0	0	398	0	183	583	115	0	0	0
Confl. Peds. (#/hr)	14		16	16		14			1	1		
Confl. Bikes (#/hr)	1					1			1	1		
Heavy Vehicles (%)	2%	12%	0%	0%	5%	4%	1%	1%	3%	0%	0%	0%
Turn Type	pm+pt						custom		Perm			
Protected Phases	4	1 4			1		2	2				
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	54.0	58.0			21.0		33.0	33.0	33.0			
Effective Green, g (s)	54.0	58.0			21.0		33.0	33.0	33.0			
Actuated g/C Ratio	0.54	0.58			0.21		0.33	0.33	0.33			
Clearance Time (s)	4.0				4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	678	1771			595		578	588	500			
v/s Ratio Prot	c0.07	0.06			c0.14		0.10	c0.33				
v/s Ratio Perm	0.04								0.08			
v/c Ratio	0.20	0.11			0.67		0.32	0.99	0.23			
Uniform Delay, d1	11.8	9.4			36.3		25.1	33.4	24.3			
Progression Factor	0.25	0.25			1.00		0.75	0.79	1.91			
Incremental Delay, d2	0.6	0.1			5.9		0.9	27.8	0.7			
Delay (s)	3.5	2.5			42.2		19.8	54.1	47.1			
Level of Service	A	A			D		B	D	D			
Approach Delay (s)		2.9			42.2			46.3			0.0	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM Average Control Delay	37.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

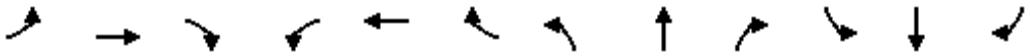
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	463	372	34	592	0	0	0	0	4	216	196
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	11	12	12	12	12	10	10	12
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	1.00
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.93		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3108		1613	3273					1596	3160	1443
Flt Permitted		1.00		0.16	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3108		279	3273					1596	3160	1443
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	482	388	35	617	0	0	0	0	4	225	204
RTOR Reduction (vph)	0	145	0	0	0	0	0	0	0	0	0	135
Lane Group Flow (vph)	0	725	0	35	617	0	0	0	0	4	225	69
Confl. Peds. (#/hr)	22		3	3		22						
Confl. Bikes (#/hr)	4					4			32	32		
Heavy Vehicles (%)	0%	2%	2%	6%	1%	0%	0%	0%	0%	0%	1%	6%
Turn Type				pm+pt						Split		Prot
Protected Phases		8		7	7 8					6	6	6
Permitted Phases				7 8								
Actuated Green, G (s)		36.0		54.0	58.0					34.0	34.0	34.0
Effective Green, g (s)		36.0		54.0	58.0					34.0	34.0	34.0
Actuated g/C Ratio		0.36		0.54	0.58					0.34	0.34	0.34
Clearance Time (s)		4.0		4.0						4.0	4.0	4.0
Lane Grp Cap (vph)		1119		391	1898					543	1074	491
v/s Ratio Prot		c0.23		0.02	c0.19					0.00	c0.07	0.05
v/s Ratio Perm				0.03								
v/c Ratio		0.65		0.09	0.33					0.01	0.21	0.14
Uniform Delay, d1		26.7		12.5	10.9					21.8	23.5	22.9
Progression Factor		1.00		0.54	0.68					0.73	0.79	0.92
Incremental Delay, d2		2.9		0.2	0.2					0.0	0.4	0.5
Delay (s)		29.6		7.0	7.6					16.0	18.8	21.5
Level of Service		C		A	A					B	B	C
Approach Delay (s)		29.6			7.6			0.0			20.1	
Approach LOS		C			A			A			C	

Intersection Summary			
HCM Average Control Delay	20.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.6%	ICU Level of Service	E
Analysis Period (min)	15		

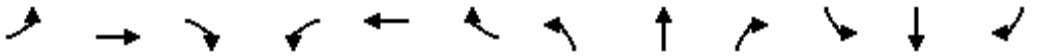
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	407	60	0	0	57	5	569	646	62	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	10	12	11	11	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	0.91	0.91			0.95		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	1.00			
Flpb, ped/bikes	0.99	0.99			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.99		1.00	1.00	0.85			
Flt Protected	0.95	0.96			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1444	3041			3079		1555	1637	1500			
Flt Permitted	0.71	0.74			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	1084	2338			3079		1555	1637	1500			
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	420	62	0	0	59	5	587	666	64	0	0	0
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	38	0	0	0
Lane Group Flow (vph)	210	272	0	0	60	0	587	666	26	0	0	0
Confl. Peds. (#/hr)	30		2	2		30			4	4		
Confl. Bikes (#/hr)	3					3			2	2		
Heavy Vehicles (%)	3%	2%	0%	0%	2%	0%	1%	1%	2%	0%	0%	0%
Turn Type	pm+pt						custom		custom			
Protected Phases	4	1 4			1		2	2	2			
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Effective Green, g (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Actuated g/C Ratio	0.51	0.51			0.15		0.37	0.37	0.37			
Clearance Time (s)	4.0				4.0		4.0	4.0	4.0			
Lane Grp Cap (vph)	682	1445			462		575	606	555			
v/s Ratio Prot	c0.11	0.07			0.02		0.38	c0.41	0.02			
v/s Ratio Perm	c0.05	0.03										
v/c Ratio	0.31	0.19			0.13		1.02	1.10	0.05			
Uniform Delay, d1	14.0	13.3			36.8		31.5	31.5	20.2			
Progression Factor	0.23	0.25			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.8	0.2			0.6		42.9	66.6	0.2			
Delay (s)	4.1	3.5			37.4		74.4	98.1	20.4			
Level of Service	A	A			D		E	F	C			
Approach Delay (s)		3.8			37.4			83.8			0.0	
Approach LOS		A			D			F			A	

Intersection Summary			
HCM Average Control Delay	61.5	HCM Level of Service	E
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.6%	ICU Level of Service	E
Analysis Period (min)	15		

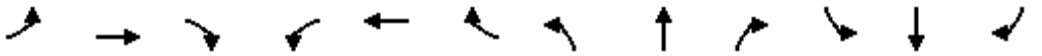
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	163	289	70	67	191	116	43	1151	97	96	476	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	9	10	9	9	10	9
Total Lost time (s)		4.0			4.0		4.0	3.5	4.0	4.0	3.5	4.0
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00			0.98		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.98			0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.98			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		2843			2772		1447	3069	1336	1494	2956	1270
Flt Permitted		0.66			0.78		0.39	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)		1909			2178		600	3069	1336	197	2956	1270
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	170	301	73	70	199	121	45	1199	101	100	496	44
RTOR Reduction (vph)	0	14	0	0	61	0	0	0	38	0	0	27
Lane Group Flow (vph)	0	530	0	0	329	0	45	1199	63	100	496	17
Confl. Peds. (#/hr)	49		20	20		49	26		8	8		26
Confl. Bikes (#/hr)	2					2						
Heavy Vehicles (%)	10%	7%	4%	9%	7%	5%	6%	4%	0%	3%	8%	5%
Turn Type	pm+pt			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		35.0			27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)		36.0			28.0		36.0	33.5	33.0	36.0	33.5	33.0
Actuated g/C Ratio		0.42			0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)		5.0			5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)		874			717		294	1210	519	144	1165	493
v/s Ratio Prot		c0.04					0.01	c0.39		c0.03	0.17	
v/s Ratio Perm		0.21			c0.15		0.06		0.05	0.26		0.01
v/c Ratio		0.61			0.46		0.15	0.99	0.12	0.69	0.43	0.03
Uniform Delay, d1		19.0			22.5		14.7	25.6	16.7	19.1	18.7	16.1
Progression Factor		1.00			1.00		1.32	0.87	1.41	1.83	1.64	3.16
Incremental Delay, d2		3.1			2.1		0.6	17.5	0.3	22.2	1.0	0.1
Delay (s)		22.1			24.6		20.1	39.9	23.8	57.2	31.8	51.1
Level of Service		C			C		C	D	C	E	C	D
Approach Delay (s)		22.1			24.6			38.0			37.1	
Approach LOS		C			C			D			D	

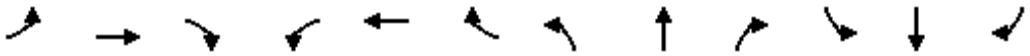
Intersection Summary			
HCM Average Control Delay	33.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	81.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	44	467	0	0	346	82	28	63	101	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.97			0.93				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		1707			1670			1581				
Flt Permitted		0.94			1.00			0.99				
Satd. Flow (perm)		1604			1670			1581				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	49	519	0	0	384	91	31	70	112	0	0	0
RTOR Reduction (vph)	0	0	0	0	13	0	0	61	0	0	0	0
Lane Group Flow (vph)	0	568	0	0	462	0	0	152	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		34.0			34.0			23.0				
Effective Green, g (s)		34.0			34.0			23.0				
Actuated g/C Ratio		0.52			0.52			0.35				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		839			874			559				
v/s Ratio Prot					0.28							
v/s Ratio Perm		c0.35						0.10				
v/c Ratio		0.68			0.53			0.27				
Uniform Delay, d1		11.4			10.2			15.0				
Progression Factor		1.00			0.66			1.00				
Incremental Delay, d2		4.4			1.8			1.2				
Delay (s)		15.8			8.5			16.2				
Level of Service		B			A			B				
Approach Delay (s)		15.8			8.5			16.2			0.0	
Approach LOS		B			A			B			A	

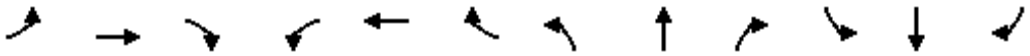
Intersection Summary			
HCM Average Control Delay	13.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	74.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	45	418	34	20	425	49	26	175	35	51	107	21
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.99			0.98			0.98	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1886			1843			3185			3148	
Flt Permitted		0.93			0.97			0.91			0.83	
Satd. Flow (perm)		1759			1795			2928			2639	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	50	464	38	22	472	54	29	194	39	57	119	23
RTOR Reduction (vph)	0	4	0	0	6	0	0	22	0	0	13	0
Lane Group Flow (vph)	0	548	0	0	542	0	0	240	0	0	186	0
Confl. Peds. (#/hr)	29		16	16		29	28		14	14		28
Confl. Bikes (#/hr)	1					1	1					1
Heavy Vehicles (%)	3%	7%	4%	12%	8%	13%	0%	4%	4%	4%	4%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0			27.0			27.0	
Effective Green, g (s)		30.0			30.0			27.0			27.0	
Actuated g/C Ratio		0.46			0.46			0.42			0.42	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		812			828			1216			1096	
v/s Ratio Prot												
v/s Ratio Perm		c0.31			0.30			c0.08			0.07	
v/c Ratio		0.67			0.65			0.20			0.17	
Uniform Delay, d1		13.7			13.5			12.1			11.9	
Progression Factor		0.67			0.55			0.86			0.55	
Incremental Delay, d2		3.5			3.9			0.4			0.3	
Delay (s)		12.7			11.3			10.8			6.9	
Level of Service		B			B			B			A	
Approach Delay (s)		12.7			11.3			10.8			6.9	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	11.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	81.1%	ICU Level of Service	D
Analysis Period (min)	15		

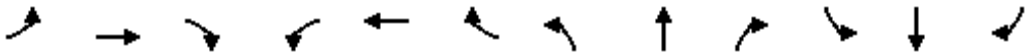
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	52	281	23	28	347	61	55	319	89	48	96	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	9	10	10	9	10	10	12	10	10	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.98		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1503	2933		1584	2945		1497	3034		1594	2899	
Flt Permitted	0.43	1.00		0.53	1.00		0.66	1.00		0.48	1.00	
Satd. Flow (perm)	684	2933		884	2945		1046	3034		809	2899	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	58	312	26	31	386	68	61	354	99	53	107	32
RTOR Reduction (vph)	0	9	0	0	22	0	0	39	0	0	15	0
Lane Group Flow (vph)	58	329	0	31	432	0	61	414	0	53	124	0
Confl. Peds. (#/hr)	25		14	14		25	12		4	4		12
Confl. Bikes (#/hr)	1					1			1	1		
Heavy Vehicles (%)	5%	7%	12%	0%	6%	2%	6%	1%	3%	0%	4%	12%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	232	993		299	997		563	1634		436	1561	
v/s Ratio Prot		0.11			c0.15			c0.14			0.04	
v/s Ratio Perm	0.08			0.04			0.06			0.07		
v/c Ratio	0.25	0.33		0.10	0.43		0.11	0.25		0.12	0.08	
Uniform Delay, d1	15.5	16.0		14.7	16.7		7.4	8.0		7.4	7.2	
Progression Factor	0.58	0.55		0.76	0.79		0.70	0.75		1.30	1.35	
Incremental Delay, d2	2.1	0.7		0.7	1.3		0.4	0.4		0.6	0.1	
Delay (s)	11.0	9.6		11.9	14.4		5.5	6.3		10.2	9.8	
Level of Service	B	A		B	B		A	A		B	A	
Approach Delay (s)		9.8			14.3			6.2			9.9	
Approach LOS		A			B			A			A	

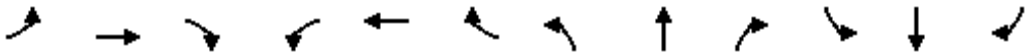
Intersection Summary			
HCM Average Control Delay	10.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	84	393	28	37	371	82	20	308	44	41	118	41
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	9	10	9	9	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00			0.99	
Flpb, ped/bikes	0.97	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.97			0.98			0.97	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1385	3013		1335	3540			3438			3303	
Flt Permitted	0.46	1.00		0.48	1.00			0.94			0.84	
Satd. Flow (perm)	665	3013		672	3540			3226			2808	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	88	414	29	39	391	86	21	324	46	43	124	43
RTOR Reduction (vph)	0	8	0	0	29	0	0	16	0	0	26	0
Lane Group Flow (vph)	88	435	0	39	448	0	0	375	0	0	184	0
Confl. Peds. (#/hr)	53		34	34		53	67		28	28		67
Heavy Vehicles (%)	8%	5%	0%	14%	6%	1%	0%	9%	20%	5%	15%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Effective Green, g (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48			0.40			0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	317	1437		320	1688			1290			1123	
v/s Ratio Prot		c0.14			0.13							
v/s Ratio Perm	0.13			0.06				c0.12			0.07	
v/c Ratio	0.28	0.30		0.12	0.27			0.29			0.16	
Uniform Delay, d1	10.2	10.4		9.4	10.2			13.2			12.5	
Progression Factor	1.59	1.64		0.78	0.77			0.23			0.64	
Incremental Delay, d2	2.1	0.5		0.7	0.3			0.5			0.3	
Delay (s)	18.5	17.6		8.1	8.1			3.6			8.3	
Level of Service	B	B		A	A			A			A	
Approach Delay (s)		17.7			8.1			3.6			8.3	
Approach LOS		B			A			A			A	

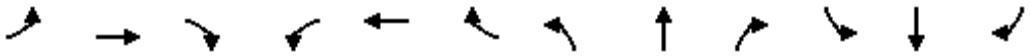
Intersection Summary			
HCM Average Control Delay	10.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	99	303	100	104	357	104	88	84	88	88	84	82
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	16	12	12	16	12
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		0.95			1.00			1.00	
Frt		1.00	0.85		0.97			0.95			0.96	
Flt Protected		0.99	1.00		0.99			0.98			0.98	
Satd. Flow (prot)		1637	1409		3034			1823			1826	
Flt Permitted		0.74	1.00		0.76			0.79			0.78	
Satd. Flow (perm)		1227	1409		2325			1456			1442	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	110	337	111	116	397	116	98	93	98	98	93	91
RTOR Reduction (vph)	0	0	53	0	30	0	0	28	0	0	26	0
Lane Group Flow (vph)	0	447	58	0	599	0	0	261	0	0	256	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		34.0	34.0		34.0			21.0			21.0	
Effective Green, g (s)		34.0	34.0		34.0			21.0			21.0	
Actuated g/C Ratio		0.52	0.52		0.52			0.32			0.32	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Grp Cap (vph)		642	737		1216			470			466	
v/s Ratio Prot												
v/s Ratio Perm		c0.36	0.04		0.26			c0.18			0.18	
v/c Ratio		0.70	0.08		0.49			0.55			0.55	
Uniform Delay, d1		11.6	7.7		10.0			18.1			18.1	
Progression Factor		2.00	5.72		0.42			1.00			1.00	
Incremental Delay, d2		6.0	0.2		1.4			4.7			4.6	
Delay (s)		29.3	44.3		5.6			22.8			22.7	
Level of Service		C	D		A			C			C	
Approach Delay (s)		32.3			5.6			22.8			22.7	
Approach LOS		C			A			C			C	

Intersection Summary			
HCM Average Control Delay	19.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	72.3%	ICU Level of Service	C
Analysis Period (min)	15		

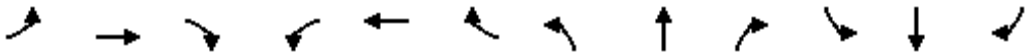
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	74	384	21	15	442	63	37	103	41	43	90	98
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	15	8	16	8	8	16	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00			0.99	
Flpb, ped/bikes	0.99	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.98			0.97			0.94	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1475	3018		1573	3002			3454			3403	
Flt Permitted	0.39	1.00		0.46	1.00			0.87			0.88	
Satd. Flow (perm)	606	3018		768	3002			3030			3014	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	82	427	23	17	491	70	41	114	46	48	100	109
RTOR Reduction (vph)	0	6	0	0	17	0	0	25	0	0	60	0
Lane Group Flow (vph)	82	444	0	17	544	0	0	176	0	0	197	0
Confl. Peds. (#/hr)	22		40	40		22	18		3	3		18
Confl. Bikes (#/hr)			2	2			1					1
Heavy Vehicles (%)	7%	5%	0%	0%	4%	2%	0%	3%	22%	0%	3%	8%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	28.0	28.0		28.0	28.0			29.0			29.0	
Effective Green, g (s)	28.0	28.0		28.0	28.0			29.0			29.0	
Actuated g/C Ratio	0.43	0.43		0.43	0.43			0.45			0.45	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	261	1300		331	1293			1352			1345	
v/s Ratio Prot		0.15			c0.18							
v/s Ratio Perm	0.14			0.02				0.06			c0.07	
v/c Ratio	0.31	0.34		0.05	0.42			0.13			0.15	
Uniform Delay, d1	12.2	12.3		10.8	12.9			10.6			10.7	
Progression Factor	0.97	1.00		1.15	0.99			1.05			0.80	
Incremental Delay, d2	2.4	0.5		0.1	0.5			0.2			0.2	
Delay (s)	14.1	12.9		12.5	13.2			11.3			8.8	
Level of Service	B	B		B	B			B			A	
Approach Delay (s)		13.0			13.2			11.3			8.8	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	12.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.6%	ICU Level of Service	B
Analysis Period (min)	15		

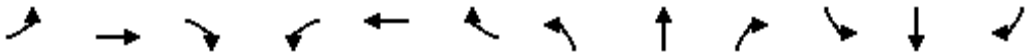
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	86	456	73	94	464	284	48	332	92	222	159	52
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.98			0.95			0.97			0.98	
Flt Protected		0.99			0.99			0.99			0.98	
Satd. Flow (prot)		3177			3075			3146			3118	
Flt Permitted		0.63			0.74			0.88			0.63	
Satd. Flow (perm)		2018			2281			2771			2008	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	96	507	81	104	516	316	53	369	102	247	177	58
RTOR Reduction (vph)	0	16	0	0	99	0	0	33	0	0	17	0
Lane Group Flow (vph)	0	668	0	0	837	0	0	491	0	0	465	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		26.0			26.0			29.0			20.0	
Effective Green, g (s)		26.0			26.0			29.0			20.0	
Actuated g/C Ratio		0.40			0.40			0.45			0.31	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		807			912			1271			618	
v/s Ratio Prot								c0.04				
v/s Ratio Perm		0.33			c0.37			0.14			c0.23	
v/c Ratio		0.83			0.92			0.39			0.96dl	
Uniform Delay, d1		17.5			18.5			12.0			20.3	
Progression Factor		1.74			1.00			1.00			0.89	
Incremental Delay, d2		9.4			15.5			0.9			8.3	
Delay (s)		39.8			34.0			12.9			26.3	
Level of Service		D			C			B			C	
Approach Delay (s)		39.8			34.0			12.9			26.3	
Approach LOS		D			C			B			C	

Intersection Summary			
HCM Average Control Delay	29.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	88.6%	ICU Level of Service	E
Analysis Period (min)	15		

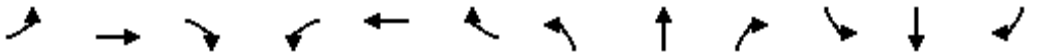
dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	724	119	45	759	0	137	0	70	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	10	10	12	12	12	12	10	10	10
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			1.00				
Frt		0.98			1.00			0.95				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		2976			3032			1583				
Flt Permitted		1.00			0.84			0.80				
Satd. Flow (perm)		2976			2543			1310				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	804	132	50	843	0	152	0	78	0	0	0
RTOR Reduction (vph)	0	18	0	0	0	0	0	21	0	0	0	0
Lane Group Flow (vph)	0	918	0	0	893	0	0	209	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	custom			Perm			Perm			Perm		
Protected Phases		4 5 6 11			8			2			2	
Permitted Phases	4 6 11			8			2			2		
Actuated Green, G (s)		65.0			33.0			16.0				
Effective Green, g (s)		58.0			33.0			16.0				
Actuated g/C Ratio		0.64			0.37			0.18				
Clearance Time (s)					5.0			5.0				
Lane Grp Cap (vph)		1918			932			233				
v/s Ratio Prot		c0.31										
v/s Ratio Perm					c0.35			c0.16				
v/c Ratio		0.48			0.96			0.90				
Uniform Delay, d1		8.2			27.8			36.2				
Progression Factor		0.04			1.57			1.00				
Incremental Delay, d2		0.4			18.9			37.6				
Delay (s)		0.7			62.5			73.8				
Level of Service		A			E			E				
Approach Delay (s)		0.7			62.5			73.8			0.0	
Approach LOS		A			E			E			A	

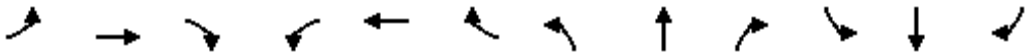
Intersection Summary			
HCM Average Control Delay	35.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	73.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	123	502	188	274	646	183	103	20	185	78	7	77
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	10	12	12	12	12	16	12	12	12	12
Total Lost time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	1.00
Frt	1.00	0.96		1.00	1.00	0.85		0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (prot)	1520	3020		1629	3257	1457		1756		1629	1714	1457
Flt Permitted	0.32	1.00		0.20	1.00	1.00		0.89		0.40	1.00	1.00
Satd. Flow (perm)	508	3020		339	3257	1457		1581		690	1714	1457
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	137	558	209	304	718	203	114	22	206	87	8	86
RTOR Reduction (vph)	0	42	0	0	0	104	0	74	0	0	0	46
Lane Group Flow (vph)	137	725	0	304	718	99	0	268	0	87	8	40
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	40.0	30.6		47.6	35.2	43.8		20.8		32.4	32.4	41.8
Effective Green, g (s)	40.0	30.6		47.6	35.2	43.8		20.8		32.4	32.4	41.8
Actuated g/C Ratio	0.44	0.34		0.53	0.39	0.49		0.23		0.36	0.36	0.46
Clearance Time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Vehicle Extension (s)	4.0	3.0		4.0	3.0	3.0		4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	331	1027		380	1274	709		365		338	617	677
v/s Ratio Prot	0.04	0.24		c0.12	0.22	0.01				c0.02	0.00	0.01
v/s Ratio Perm	0.14			c0.30		0.05		c0.17		0.07		0.02
v/c Ratio	0.41	0.71		0.80	0.56	0.14		0.73		0.26	0.01	0.06
Uniform Delay, d1	15.4	25.8		14.8	21.4	12.7		32.0		21.2	18.5	13.3
Progression Factor	1.91	1.58		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	1.0	3.7		12.0	1.8	0.1		8.0		0.4	0.0	0.1
Delay (s)	30.5	44.5		26.8	23.2	12.8		40.0		21.6	18.5	13.3
Level of Service	C	D		C	C	B		D		C	B	B
Approach Delay (s)		42.3			22.4			40.0			17.5	
Approach LOS		D			C			D			B	

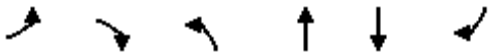
Intersection Summary			
HCM Average Control Delay	31.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	74.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	518	247	6	531	0	0	0	0	32	0	572
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	576	274	7	590	0	0	0	0	36	0	636
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		498										
pX, platoon unblocked												
vC, conflicting volume	590			576			884	1179	288	891	1179	295
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	590			576			884	1179	288	891	1179	295
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	100	100	85	100	8
cM capacity (veh/h)	961			973			19	184	700	231	184	692

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	288	288	274	203	393	36	636
Volume Left	0	0	0	7	0	36	0
Volume Right	0	0	274	0	0	0	636
cSH	1700	1700	1700	973	1700	231	692
Volume to Capacity	0.17	0.17	0.16	0.01	0.23	0.15	0.92
Queue Length 95th (ft)	0	0	0	1	0	13	307
Control Delay (s)	0.0	0.0	0.0	0.4	0.0	23.4	41.6
Lane LOS				A		C	E
Approach Delay (s)	0.0			0.1		40.6	
Approach LOS						E	

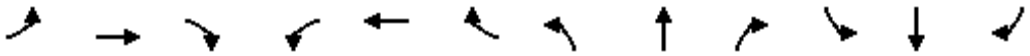
Intersection Summary				
Average Delay	12.9			
Intersection Capacity Utilization	59.7%	ICU Level of Service		B
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	550	0	537	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	611	0	597	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	306	306	597
Volume Left (vph)	306	306	597
Volume Right (vph)	0	0	0
Hadj (s)	0.58	0.58	0.29
Departure Headway (s)	7.0	7.0	5.8
Degree Utilization, x	0.59	0.59	0.95
Capacity (veh/h)	513	513	618
Control Delay (s)	18.3	18.3	49.2
Approach Delay (s)	18.3		49.2
Approach LOS	C		E

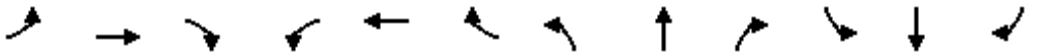
Intersection Summary			
Delay	33.5		
HCM Level of Service	D		
Intersection Capacity Utilization	54.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	353	46	127	326	0	0	0	0	72	15	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)		3.0		4.0	4.0						5.0	
Lane Util. Factor		0.95		1.00	0.95						0.95	
Frt		0.98		1.00	1.00						0.95	
Flt Protected		1.00		0.95	1.00						0.97	
Satd. Flow (prot)		3094		1574	3149						3014	
Flt Permitted		1.00		0.44	1.00						0.97	
Satd. Flow (perm)		3094		730	3149						3014	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	392	51	141	362	0	0	0	0	80	17	47
RTOR Reduction (vph)	0	12	0	0	0	0	0	0	0	0	32	0
Lane Group Flow (vph)	0	431	0	141	362	0	0	0	0	0	112	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type				pm+pt						Split		
Protected Phases		4		3	8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		36.0		49.0	49.0						27.0	
Effective Green, g (s)		36.0		49.0	49.0						27.0	
Actuated g/C Ratio		0.42		0.58	0.58						0.32	
Clearance Time (s)		3.0		4.0	4.0						5.0	
Lane Grp Cap (vph)		1310		520	1815						957	
v/s Ratio Prot		c0.14		c0.03	0.11						c0.04	
v/s Ratio Perm				0.12								
v/c Ratio		0.33		0.27	0.20						0.12	
Uniform Delay, d1		16.4		11.5	8.6						20.6	
Progression Factor		1.00		0.27	0.24						1.00	
Incremental Delay, d2		0.7		1.2	0.2						0.2	
Delay (s)		17.1		4.4	2.3						20.8	
Level of Service		B		A	A						C	
Approach Delay (s)		17.1			2.9			0.0			20.8	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	11.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	34.2%	ICU Level of Service	A
Analysis Period (min)	15		

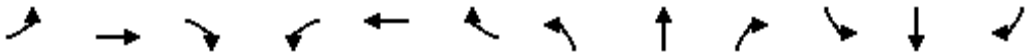
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	68	357	0	0	404	76	49	65	45	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	11	11	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0			3.0			5.0				
Lane Util. Factor	1.00	0.95			0.95			0.91				
Frt	1.00	1.00			0.98			0.96				
Flt Protected	0.95	1.00			1.00			0.98				
Satd. Flow (prot)	1629	3257			3074			4413				
Flt Permitted	0.38	1.00			1.00			0.98				
Satd. Flow (perm)	650	3257			3074			4413				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	76	397	0	0	449	84	54	72	50	0	0	0
RTOR Reduction (vph)	0	0	0	0	18	0	0	34	0	0	0	0
Lane Group Flow (vph)	76	397	0	0	515	0	0	142	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	pm+pt						Split					
Protected Phases	7	4			8		2	2				
Permitted Phases	4											
Actuated Green, G (s)	48.0	48.0			35.0			27.0				
Effective Green, g (s)	48.0	48.0			35.0			27.0				
Actuated g/C Ratio	0.56	0.56			0.41			0.32				
Clearance Time (s)	5.0	5.0			3.0			5.0				
Lane Grp Cap (vph)	482	1839			1266			1402				
v/s Ratio Prot	0.02	c0.12			c0.17			c0.03				
v/s Ratio Perm	0.07											
v/c Ratio	0.16	0.22			0.41			0.10				
Uniform Delay, d1	12.2	9.2			17.7			20.4				
Progression Factor	0.33	0.32			1.00			1.00				
Incremental Delay, d2	0.7	0.3			1.0			0.1				
Delay (s)	4.6	3.2			18.6			20.6				
Level of Service	A	A			B			C				
Approach Delay (s)		3.5			18.6			20.6			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM Average Control Delay	12.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	34.2%	ICU Level of Service	A
Analysis Period (min)	15		

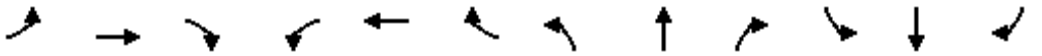
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	323	39	34	247	31	118	85	61	58	91	126
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	12	15	12	12	15	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		0.99			0.99			0.97			0.94	
Flt Protected		1.00			0.99			0.98			0.99	
Satd. Flow (prot)		2982			2979			1787			1750	
Flt Permitted		0.89			0.87			0.75			0.88	
Satd. Flow (perm)		2664			2613			1378			1560	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	43	359	43	38	274	34	131	94	68	64	101	140
RTOR Reduction (vph)	0	12	0	0	13	0	0	17	0	0	47	0
Lane Group Flow (vph)	0	433	0	0	333	0	0	276	0	0	258	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		23.0			23.0			32.0			32.0	
Effective Green, g (s)		23.0			23.0			32.0			32.0	
Actuated g/C Ratio		0.35			0.35			0.49			0.49	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		943			925			678			768	
v/s Ratio Prot												
v/s Ratio Perm		c0.16			0.13			c0.20			0.17	
v/c Ratio		0.46			0.36			0.41			0.34	
Uniform Delay, d1		16.2			15.6			10.5			10.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.6			1.1			1.8			1.2	
Delay (s)		17.8			16.6			12.3			11.2	
Level of Service		B			B			B			B	
Approach Delay (s)		17.8			16.6			12.3			11.2	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	14.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	63.7%	ICU Level of Service	B
Analysis Period (min)	15		

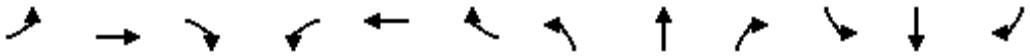
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	196	202	39	50	176	62	71	1009	70	75	430	87
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	12	10	16	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.96
Flpb, ped/bikes	0.99	1.00		1.00	1.00		0.99	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1548	3005		1592	3512		1486	3040	1347	1494	3011	1271
Flt Permitted	0.59	1.00		0.58	1.00		0.43	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	954	3005		975	3512		673	3040	1347	197	3011	1271
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	206	213	41	53	185	65	75	1062	74	79	453	92
RTOR Reduction (vph)	0	19	0	0	41	0	0	0	43	0	0	56
Lane Group Flow (vph)	206	235	0	53	209	0	75	1062	31	79	453	36
Confl. Peds. (#/hr)	31		7	7		31	37		12	12		37
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	2%	4%	0%	0%	6%	2%	3%	5%	0%	3%	6%	4%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	32.0	27.0		32.0	27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)	30.0	28.0		30.0	28.0		36.0	33.0	33.0	36.0	33.0	33.0
Actuated g/C Ratio	0.35	0.33		0.35	0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	365	990		373	1157		323	1180	523	144	1169	493
v/s Ratio Prot	c0.03	0.08		0.01	0.06		0.01	c0.35		c0.03	0.15	
v/s Ratio Perm	c0.17			0.04			0.09		0.02	0.21		0.03
v/c Ratio	0.56	0.24		0.14	0.18		0.23	0.90	0.06	0.55	0.39	0.07
Uniform Delay, d1	21.3	20.7		18.4	20.3		15.0	24.4	16.3	17.5	18.7	16.4
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	2.00	0.61	0.80
Incremental Delay, d2	6.2	0.6		0.8	0.3		1.7	11.0	0.2	12.9	0.9	0.3
Delay (s)	27.5	21.3		19.2	20.7		16.7	35.5	16.5	47.9	12.3	13.4
Level of Service	C	C		B	C		B	D	B	D	B	B
Approach Delay (s)		24.1			20.4			33.1			16.9	
Approach LOS		C			C			C			B	

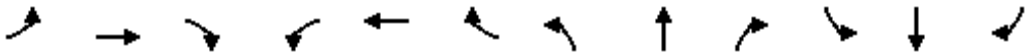
Intersection Summary			
HCM Average Control Delay	26.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	72.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	256	18	14	216	8	35	121	25	20	59	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	16	12	12	16	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00	0.99		1.00	0.98
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		0.99	1.00
Satd. Flow (prot)		1929	1382		1950	1331		1973	1452		1928	1430
Flt Permitted		0.94	1.00		0.98	1.00		0.94	1.00		0.93	1.00
Satd. Flow (perm)		1823	1382		1910	1331		1866	1452		1811	1430
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	42	269	19	15	227	8	37	127	26	21	62	44
RTOR Reduction (vph)	0	0	10	0	0	4	0	0	15	0	0	26
Lane Group Flow (vph)	0	311	9	0	242	4	0	164	11	0	83	18
Confl. Peds. (#/hr)	5		21	21		5	9		1	1		9
Heavy Vehicles (%)	5%	5%	6%	7%	4%	12%	6%	1%	4%	0%	6%	5%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Effective Green, g (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Actuated g/C Ratio		0.46	0.46		0.46	0.46		0.42	0.42		0.42	0.42
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		841	638		882	614		775	603		752	594
v/s Ratio Prot												
v/s Ratio Perm		c0.17	0.01		0.13	0.00		c0.09	0.01		0.05	0.01
v/c Ratio		0.37	0.01		0.27	0.01		0.21	0.02		0.11	0.03
Uniform Delay, d1		11.4	9.5		10.8	9.4		12.2	11.2		11.6	11.3
Progression Factor		1.00	1.00		0.47	0.37		1.12	1.39		0.95	0.86
Incremental Delay, d2		1.3	0.0		0.8	0.0		0.6	0.1		0.3	0.1
Delay (s)		12.6	9.5		5.8	3.5		14.2	15.6		11.3	9.8
Level of Service		B	A		A	A		B	B		B	A
Approach Delay (s)		12.4			5.7			14.4			10.8	
Approach LOS		B			A			B			B	

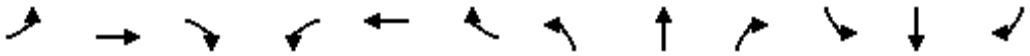
Intersection Summary			
HCM Average Control Delay	10.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	66	285	10	17	211	34	13	247	35	47	70	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.98		1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1520	3025		1520	2976		1520	2983		1520	2904	
Flt Permitted	0.95	1.00		0.55	1.00		0.68	1.00		0.54	1.00	
Satd. Flow (perm)	1520	3025		886	2976		1091	2983		871	2904	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	73	317	11	19	234	38	14	274	39	52	78	33
RTOR Reduction (vph)	0	4	0	0	20	0	0	17	0	0	19	0
Lane Group Flow (vph)	73	324	0	19	252	0	14	296	0	52	92	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Prot			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Effective Green, g (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.11	0.49		0.34	0.34		0.42	0.42		0.42	0.42	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	164	1489		300	1007		453	1239		362	1206	
v/s Ratio Prot	c0.05	0.11			c0.08			c0.10			0.03	
v/s Ratio Perm				0.02			0.01			0.06		
v/c Ratio	0.45	0.22		0.06	0.25		0.03	0.24		0.14	0.08	
Uniform Delay, d1	27.2	9.4		14.5	15.5		11.3	12.3		11.8	11.5	
Progression Factor	0.85	0.48		1.01	1.00		0.45	0.45		1.15	1.16	
Incremental Delay, d2	8.3	0.3		0.4	0.6		0.1	0.3		0.8	0.1	
Delay (s)	31.5	4.9		15.1	16.2		5.1	5.8		14.4	13.4	
Level of Service	C	A		B	B		A	A		B	B	
Approach Delay (s)		9.7			16.1			5.8			13.7	
Approach LOS		A			B			A			B	

Intersection Summary			
HCM Average Control Delay	10.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	37.0%	ICU Level of Service	A
Analysis Period (min)	15		

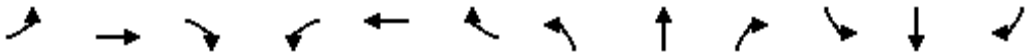
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	37	253	85	242	216	43	43	297	56	25	185	25
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.96		1.00	0.97			0.98			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1520	2926		1520	2964			3171			3188	
Flt Permitted	0.58	1.00		0.95	1.00			0.89			0.88	
Satd. Flow (perm)	921	2926		1520	2964			2842			2834	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	41	281	94	269	240	48	48	330	62	28	206	28
RTOR Reduction (vph)	0	51	0	0	21	0	0	20	0	0	14	0
Lane Group Flow (vph)	41	324	0	269	267	0	0	420	0	0	248	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Prot			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4						2			6		
Actuated Green, G (s)	15.0	15.0		19.0	37.0			17.0			17.0	
Effective Green, g (s)	15.0	15.0		19.0	37.0			17.0			17.0	
Actuated g/C Ratio	0.23	0.23		0.29	0.57			0.26			0.26	
Clearance Time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	213	675		444	1687			743			741	
v/s Ratio Prot		c0.11		c0.18	0.09							
v/s Ratio Perm	0.04							c0.15			0.09	
v/c Ratio	0.19	0.48		0.61	0.16			0.57			0.33	
Uniform Delay, d1	20.1	21.6		19.8	6.6			20.8			19.4	
Progression Factor	0.64	0.60		1.47	1.29			1.03			0.76	
Incremental Delay, d2	2.0	2.4		4.4	0.1			1.5			1.2	
Delay (s)	14.8	15.3		33.4	8.7			23.0			16.0	
Level of Service	B	B		C	A			C			B	
Approach Delay (s)		15.2			20.6			23.0			16.0	
Approach LOS		B			C			C			B	

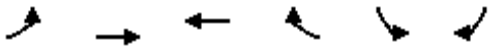
Intersection Summary			
HCM Average Control Delay	19.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	56.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	16	298	14	70	466	70	34	94	162	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	14	12	10	15	10
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			0.95				
Frt		0.99			0.98			0.92				
Flt Protected		1.00			0.99			0.99				
Satd. Flow (prot)		1587			1566			3164				
Flt Permitted		0.97			0.92			0.99				
Satd. Flow (perm)		1535			1451			3164				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	18	331	16	78	518	78	38	104	180	0	0	0
RTOR Reduction (vph)	0	2	0	0	6	0	0	138	0	0	0	0
Lane Group Flow (vph)	0	363	0	0	668	0	0	184	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		41.9			41.9			15.1				
Effective Green, g (s)		41.9			41.9			15.1				
Actuated g/C Ratio		0.64			0.64			0.23				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		3.0			3.0			8.0				
Lane Grp Cap (vph)		989			935			735				
v/s Ratio Prot												
v/s Ratio Perm		0.24			c0.46			0.06				
v/c Ratio		0.37			0.71			0.25				
Uniform Delay, d1		5.4			7.6			20.3				
Progression Factor		2.77			1.00			1.00				
Incremental Delay, d2		0.9			4.6			0.8				
Delay (s)		15.8			12.3			21.1				
Level of Service		B			B			C				
Approach Delay (s)		15.8			12.3			21.1			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM Average Control Delay	15.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	72.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	96	364	469	44	66	134
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	101	383	494	46	69	141
Pedestrians		3	5		21	
Lane Width (ft)		16.0	16.0		10.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1319	491			
pX, platoon unblocked						
vC, conflicting volume	561				937	294
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	561				937	294
tC, single (s)	4.3				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	89				70	80
cM capacity (veh/h)	927				230	690

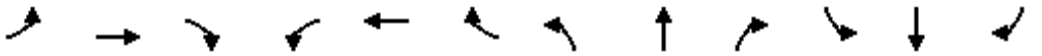
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	SB 2
Volume Total	229	255	329	211	69	141
Volume Left	101	0	0	0	69	0
Volume Right	0	0	0	46	0	141
cSH	927	1700	1700	1700	230	690
Volume to Capacity	0.11	0.15	0.19	0.12	0.30	0.20
Queue Length 95th (ft)	9	0	0	0	31	19
Control Delay (s)	4.8	0.0	0.0	0.0	27.3	11.6
Lane LOS	A				D	B
Approach Delay (s)	2.2		0.0		16.7	
Approach LOS					C	

Intersection Summary			
Average Delay	3.7		
Intersection Capacity Utilization	43.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	472	1	27	675	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0			4.0		
Lane Util. Factor	1.00			1.00		
Frt	1.00			1.00		
Flt Protected	1.00			1.00		
Satd. Flow (prot)	1714			1711		
Flt Permitted	1.00			0.97		
Satd. Flow (perm)	1714			1663		
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	524	1	30	750	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	525	0	0	780	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type			Perm			
Protected Phases	1 2 4			4	3	
Permitted Phases			4			
Actuated Green, G (s)	73.0			43.0		
Effective Green, g (s)	69.0			43.0		
Actuated g/C Ratio	0.77			0.48		
Clearance Time (s)				4.0		
Lane Grp Cap (vph)	1314			795		
v/s Ratio Prot	c0.31					
v/s Ratio Perm				c0.47		
v/c Ratio	0.40			0.98		
Uniform Delay, d1	3.5			23.1		
Progression Factor	0.03			1.00		
Incremental Delay, d2	0.5			27.7		
Delay (s)	0.6			50.8		
Level of Service	A			D		
Approach Delay (s)	0.6			50.8	0.0	
Approach LOS	A			D	A	

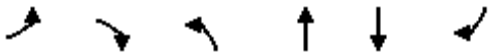
Intersection Summary			
HCM Average Control Delay	30.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	63.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	184	193	25	561	0	0	0	0	3	0	263
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	204	214	28	623	0	0	0	0	3	0	292
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	623			204			991	991	209	781	883	623
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	623			204			991	991	209	781	883	623
tC, single (s)	4.1			5.5			7.5	6.5	6.9	7.5	6.5	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.9			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			100	100	100	99	100	31
cM capacity (veh/h)	968			985			62	241	803	282	279	424

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	136	283	651	3	292
Volume Left	0	0	28	3	0
Volume Right	0	214	0	0	292
cSH	1700	1700	985	282	424
Volume to Capacity	0.08	0.17	0.03	0.01	0.69
Queue Length 95th (ft)	0	0	2	1	127
Control Delay (s)	0.0	0.0	0.7	17.9	30.3
Lane LOS			A	C	D
Approach Delay (s)	0.0		0.7	30.2	
Approach LOS				D	

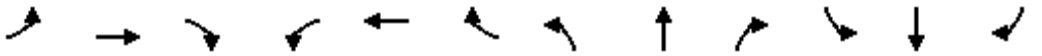
Intersection Summary			
Average Delay	6.9		
Intersection Capacity Utilization	57.9%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	187	0	586	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	208	0	651	0	0	0

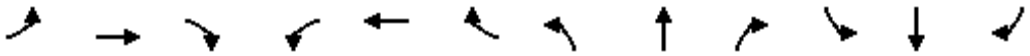
Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	104	104	651
Volume Left (vph)	104	104	651
Volume Right (vph)	0	0	0
Hadj (s)	0.58	0.58	0.29
Departure Headway (s)	6.8	6.8	4.9
Degree Utilization, x	0.20	0.20	0.88
Capacity (veh/h)	511	512	734
Control Delay (s)	10.3	10.3	32.1
Approach Delay (s)	10.3		32.1
Approach LOS	B		D

Intersection Summary			
Delay	26.8		
HCM Level of Service	D		
Intersection Capacity Utilization	46.6%	ICU Level of Service	A
Analysis Period (min)	15		



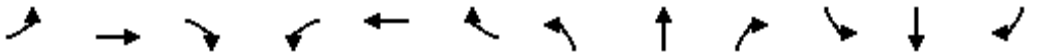
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	564	210	168	497	0	0	0	0	132	117	300
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	13	12	12	12	12	10	10	11
Total Lost time (s)		6.0	6.0		6.0					6.0	6.0	6.0
Lane Util. Factor		0.95	1.00		0.95					0.86	0.81	0.86
Frpb, ped/bikes		1.00	0.98		1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	0.93	0.85
Flt Protected		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (prot)		2978	1202		3372					1346	3693	1122
Flt Permitted		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (perm)		2978	1202		3372					1346	3693	1122
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	594	221	177	523	0	0	0	0	139	123	316
RTOR Reduction (vph)	0	0	142	0	0	0	0	0	0	0	113	94
Lane Group Flow (vph)	0	594	79	0	700	0	0	0	0	76	231	64
Confl. Peds. (#/hr)	5		3	3		5						
Heavy Vehicles (%)	0%	11%	9%	2%	4%	0%	0%	0%	0%	2%	2%	2%
Parking (#/hr)			0									0
Turn Type			Perm	Split						Split		custom
Protected Phases		2		10 12 14	10 12 14					4	4	
Permitted Phases			2									4 2
Actuated Green, G (s)		31.0	31.0		62.6					19.5	19.5	56.5
Effective Green, g (s)		31.0	31.0		62.6					19.5	19.5	56.5
Actuated g/C Ratio		0.22	0.22		0.45					0.14	0.14	0.40
Clearance Time (s)		6.0	6.0							6.0	6.0	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		659	266		1508					187	514	453
v/s Ratio Prot		c0.20			c0.21					0.06	c0.06	
v/s Ratio Perm			0.07									0.06
v/c Ratio		0.90	0.30		0.46					0.41	0.45	0.14
Uniform Delay, d1		53.0	45.4		27.0					55.0	55.3	26.4
Progression Factor		1.00	1.00		0.02					1.00	1.00	1.00
Incremental Delay, d2		17.8	2.8		0.1					1.4	0.6	0.1
Delay (s)		70.8	48.3		0.6					56.4	56.0	26.5
Level of Service		E	D		A					E	E	C
Approach Delay (s)		64.7			0.6			0.0			48.0	
Approach LOS		E			A			A			D	

Intersection Summary			
HCM Average Control Delay	38.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	28.9
Intersection Capacity Utilization	56.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



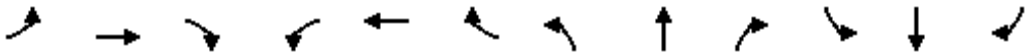
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	212	484	0	0	427	93	238	150	178	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	13	12	12	11	12	13	13	14	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0				
Lane Util. Factor	1.00	0.95			0.95	1.00	0.91	0.91				
Frt	1.00	1.00			1.00	0.85	1.00	0.93				
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (prot)	1574	3366			3149	1457	1531	2975				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (perm)	1574	3366			3149	1457	1531	2975				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	236	538	0	0	474	103	264	167	198	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	85	0	117	0	0	0	0
Lane Group Flow (vph)	236	538	0	0	474	18	216	296	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Split					Perm	Split					
Protected Phases	2 4 8	2 4 8			10		12	12				
Permitted Phases						10						
Actuated Green, G (s)	69.4	69.4			24.7	24.7	19.9	19.9				
Effective Green, g (s)	69.4	69.4			24.7	24.7	19.9	19.9				
Actuated g/C Ratio	0.50	0.50			0.18	0.18	0.14	0.14				
Clearance Time (s)					6.0	6.0	6.0	6.0				
Vehicle Extension (s)					3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	780	1669			556	257	218	423				
v/s Ratio Prot	0.15	c0.16			c0.15		c0.14	0.10				
v/s Ratio Perm						0.01						
v/c Ratio	0.30	0.32			0.85	0.07	0.99	0.70				
Uniform Delay, d1	20.9	21.2			55.9	48.1	60.0	57.2				
Progression Factor	0.07	0.07			1.00	1.00	1.00	1.00				
Incremental Delay, d2	0.1	0.1			12.0	0.1	58.2	5.2				
Delay (s)	1.7	1.6			67.9	48.2	118.1	62.4				
Level of Service	A	A			E	D	F	E				
Approach Delay (s)		1.6			64.4			81.5			0.0	
Approach LOS		A			E			F			A	

Intersection Summary			
HCM Average Control Delay	45.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	28.0
Intersection Capacity Utilization	51.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	220	452	75	56	186	54	88	824	148	93	448	104
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	14	12	10	10	12	9	10	12
Total Lost time (s)	4.0	4.0	5.0	4.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.99	1.00	1.00	1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1538	1556	1327	1596	1724		1525	2931		1509	2870	
Flt Permitted	0.46	1.00	1.00	0.20	1.00		0.34	1.00		0.12	1.00	
Satd. Flow (perm)	749	1556	1327	340	1724		542	2931		192	2870	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	232	476	79	59	196	57	93	867	156	98	472	109
RTOR Reduction (vph)	0	0	53	0	12	0	0	16	0	0	22	0
Lane Group Flow (vph)	232	476	26	59	241	0	93	1007	0	98	559	0
Confl. Peds. (#/hr)	33		3	3		33	42		8	8		42
Confl. Bikes (#/hr)							1					1
Heavy Vehicles (%)	3%	8%	6%	0%	7%	5%	4%	5%	11%	2%	6%	9%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	36.3	29.3	29.3	33.3	27.8		39.6	34.1		39.6	34.1	
Effective Green, g (s)	34.3	30.3	29.3	31.3	27.8		37.6	34.1		37.6	34.1	
Actuated g/C Ratio	0.38	0.34	0.33	0.35	0.31		0.42	0.38		0.42	0.38	
Clearance Time (s)	3.0	5.0	5.0	3.0	5.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	340	527	435	182	536		277	1118		147	1095	
v/s Ratio Prot	c0.05	c0.31		0.02	0.14		0.02	c0.34		c0.03	0.19	
v/s Ratio Perm	0.22		0.02	0.10			0.12			0.25		
v/c Ratio	0.68	0.90	0.06	0.32	0.45		0.34	0.90		0.67	0.51	
Uniform Delay, d1	22.7	28.2	20.6	21.1	24.7		16.3	26.1		18.8	21.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	5.6	21.4	0.3	1.0	2.7		0.7	11.6		10.9	1.7	
Delay (s)	28.3	49.5	20.9	22.1	27.4		17.0	37.6		29.6	22.9	
Level of Service	C	D	C	C	C		B	D		C	C	
Approach Delay (s)		40.4			26.4			35.9			23.9	
Approach LOS		D			C			D			C	

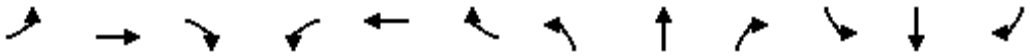
Intersection Summary			
HCM Average Control Delay	33.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	89.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	79.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	44	568	16	26	257	28	35	80	102	45	44	39
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	10	10	10	12	15	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Frpb, ped/bikes		1.00	0.97		1.00	0.97		0.99			0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.94			0.96	
Flt Protected		1.00	1.00		1.00	1.00		0.99			0.98	
Satd. Flow (prot)		1908	1482		1599	1198		1812			1823	
Flt Permitted		0.96	1.00		0.93	1.00		0.95			0.86	
Satd. Flow (perm)		1844	1482		1499	1198		1732			1604	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	46	598	17	27	271	29	37	84	107	47	46	41
RTOR Reduction (vph)	0	0	6	0	0	15	0	49	0	0	24	0
Lane Group Flow (vph)	0	644	11	0	298	14	0	179	0	0	110	0
Confl. Peds. (#/hr)	6		11	11		6	4		8	8		4
Confl. Bikes (#/hr)	1		1	1		1			1	1		
Heavy Vehicles (%)	0%	7%	0%	0%	5%	16%	0%	0%	0%	10%	0%	3%
Turn Type	Perm		Perm	Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Effective Green, g (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Actuated g/C Ratio		0.49	0.49		0.49	0.49		0.42			0.42	
Clearance Time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		908	730		738	590		719			666	
v/s Ratio Prot												
v/s Ratio Perm		c0.35	0.01		0.20	0.01		c0.10			0.07	
v/c Ratio		0.71	0.01		0.40	0.02		0.25			0.17	
Uniform Delay, d1		12.9	8.4		10.5	8.5		12.4			11.9	
Progression Factor		1.00	1.00		0.67	0.46		1.00			1.37	
Incremental Delay, d2		4.7	0.0		1.6	0.1		0.8			0.5	
Delay (s)		17.5	8.5		8.5	4.0		13.2			16.8	
Level of Service		B	A		A	A		B			B	
Approach Delay (s)		17.3			8.1			13.2			16.8	
Approach LOS		B			A			B			B	

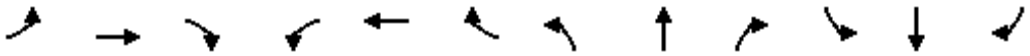
Intersection Summary			
HCM Average Control Delay	14.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	74.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	75	627	24	27	238	8	41	228	108	18	53	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.97		1.00	0.98		1.00	0.95		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.96	
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		0.99	
Satd. Flow (prot)		1657	1407		1581	1503		1754	1366		1651	
Flt Permitted		0.94	1.00		0.91	1.00		0.94	1.00		0.91	
Satd. Flow (perm)		1557	1407		1447	1503		1655	1366		1520	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	79	660	25	28	251	8	43	240	114	19	56	32
RTOR Reduction (vph)	0	0	8	0	0	3	0	0	67	0	23	0
Lane Group Flow (vph)	0	739	17	0	279	5	0	283	47	0	84	0
Confl. Peds. (#/hr)	11		17	17		11	4		17	17		4
Confl. Bikes (#/hr)	1		1	1		1	1					1
Heavy Vehicles (%)	0%	9%	5%	33%	11%	0%	6%	1%	6%	0%	0%	8%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		39.0	39.0		39.0	39.0		16.0	16.0		16.0	
Effective Green, g (s)		39.0	39.0		39.0	39.0		16.0	16.0		16.0	
Actuated g/C Ratio		0.60	0.60		0.60	0.60		0.25	0.25		0.25	
Clearance Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Grp Cap (vph)		934	844		868	902		407	336		374	
v/s Ratio Prot												
v/s Ratio Perm		c0.47	0.01		0.19	0.00		c0.17	0.03		0.06	
v/c Ratio		0.79	0.02		0.32	0.01		0.70	0.14		0.22	
Uniform Delay, d1		9.9	5.3		6.4	5.2		22.3	19.1		19.5	
Progression Factor		2.05	2.13		0.96	0.82		1.00	1.00		0.68	
Incremental Delay, d2		5.5	0.0		0.9	0.0		9.4	0.9		1.4	
Delay (s)		25.7	11.2		7.0	4.3		31.7	20.0		14.6	
Level of Service		C	B		A	A		C	B		B	
Approach Delay (s)		25.3			7.0			28.4			14.6	
Approach LOS		C			A			C			B	

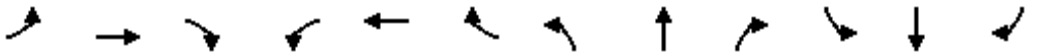
Intersection Summary			
HCM Average Control Delay	21.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	88.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	676	21	31	9	18	15	26	363	19	9	220	226
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.98		0.98			1.00			1.00	0.92
Flpb, ped/bikes		0.99	1.00		1.00			1.00			1.00	1.00
Frt		1.00	0.85		0.95			0.99			1.00	0.85
Flt Protected		0.95	1.00		0.99			1.00			1.00	1.00
Satd. Flow (prot)		1763	1398		1778			1976			1873	1296
Flt Permitted		0.72	1.00		0.90			0.97			0.99	1.00
Satd. Flow (perm)		1323	1398		1610			1926			1851	1296
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	751	23	34	10	20	17	29	403	21	10	244	251
RTOR Reduction (vph)	0	0	10	0	9	0	0	3	0	0	0	178
Lane Group Flow (vph)	0	774	24	0	38	0	0	450	0	0	254	73
Confl. Peds. (#/hr)	49		22	22		49	34		17	17		34
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	9%	0%	7%	0%	0%	0%	0%	2%	0%	0%	9%	9%
Turn Type	pm+pt		Perm	Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		40.0	40.0		32.0			19.0			19.0	19.0
Effective Green, g (s)		40.0	40.0		32.0			19.0			19.0	19.0
Actuated g/C Ratio		0.62	0.62		0.49			0.29			0.29	0.29
Clearance Time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		855	860		793			563			541	379
v/s Ratio Prot		c0.08										
v/s Ratio Perm		0.47	0.02		0.02			c0.23			0.14	0.06
v/c Ratio		0.91	0.03		0.05			0.80			0.47	0.19
Uniform Delay, d1		10.9	4.9		8.6			21.2			18.9	17.3
Progression Factor		0.59	1.03		1.00			1.00			1.19	2.16
Incremental Delay, d2		11.3	0.0		0.1			11.3			2.6	1.0
Delay (s)		17.7	5.1		8.7			32.6			25.0	38.2
Level of Service		B	A		A			C			C	D
Approach Delay (s)		17.2			8.7			32.6			31.6	
Approach LOS		B			A			C			C	

Intersection Summary			
HCM Average Control Delay	24.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	93.7%	ICU Level of Service	F
Analysis Period (min)	15		

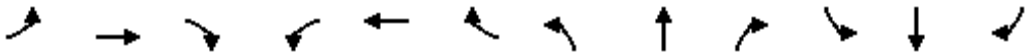
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	989	222	274	1130	0	0	0	0	275	201	376
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	11	8	8	8	11	12	14
Total Lost time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Lane Util. Factor		0.91		1.00	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00		1.00	1.00					1.00	0.99	0.99
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.97		1.00	1.00					1.00	0.94	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.99	1.00
Satd. Flow (prot)		4322		1589	3226					1419	2711	1355
Flt Permitted		1.00		0.13	1.00					0.95	0.99	1.00
Satd. Flow (perm)		4322		214	3226					1419	2711	1355
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1041	234	288	1189	0	0	0	0	289	212	396
RTOR Reduction (vph)	0	37	0	0	0	0	0	0	0	0	56	56
Lane Group Flow (vph)	0	1238	0	288	1189	0	0	0	0	234	397	154
Confl. Peds. (#/hr)	6		4	4		6	2					2
Heavy Vehicles (%)	0%	11%	7%	4%	6%	0%	0%	0%	0%	6%	4%	8%
Turn Type				pm+pt						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Actuated Green, G (s)		38.9		57.4	57.4					20.6	20.6	20.6
Effective Green, g (s)		38.9		57.4	57.4					20.6	20.6	20.6
Actuated g/C Ratio		0.43		0.64	0.64					0.23	0.23	0.23
Clearance Time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Vehicle Extension (s)		7.0		3.5	7.0					3.5	3.5	3.5
Lane Grp Cap (vph)		1868		350	2057					325	621	310
v/s Ratio Prot		0.29		c0.13	0.37							
v/s Ratio Perm				c0.40						c0.16	0.15	0.11
v/c Ratio		0.66		0.82	0.58					0.72	0.64	0.50
Uniform Delay, d1		20.3		17.9	9.4					32.0	31.4	30.2
Progression Factor		1.00		1.50	0.23					1.00	1.00	1.00
Incremental Delay, d2		1.9		8.0	0.6					7.7	2.4	1.5
Delay (s)		22.2		35.0	2.8					39.7	33.7	31.7
Level of Service		C		C	A					D	C	C
Approach Delay (s)		22.2			9.1			0.0			34.8	
Approach LOS		C			A			A			C	

Intersection Summary			
HCM Average Control Delay	20.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	105.5%	ICU Level of Service	G
Analysis Period (min)	15		

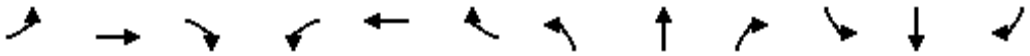
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	311	953	0	0	855	234	549	365	484	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	11	12	12	12	12	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0		6.0				
Lane Util. Factor	0.97	0.95			0.95	1.00		0.91				
Frpb, ped/bikes	1.00	1.00			1.00	0.98		1.00				
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00				
Frt	1.00	1.00			1.00	0.85		0.95				
Flt Protected	0.95	1.00			1.00	1.00		0.98				
Satd. Flow (prot)	2915	3138			3119	1449		4390				
Flt Permitted	0.19	1.00			1.00	1.00		0.98				
Satd. Flow (perm)	595	3138			3119	1449		4390				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	327	1003	0	0	900	246	578	384	509	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	139	0	51	0	0	0	0
Lane Group Flow (vph)	327	1003	0	0	900	107	0	1420	0	0	0	0
Confl. Peds. (#/hr)	4					4						
Heavy Vehicles (%)	10%	9%	0%	0%	6%	4%	4%	3%	5%	0%	0%	0%
Turn Type	pm+pt					Perm	Perm					
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8					
Actuated Green, G (s)	45.5	45.5			32.0	32.0		32.5				
Effective Green, g (s)	45.5	45.5			32.0	32.0		32.5				
Actuated g/C Ratio	0.51	0.51			0.36	0.36		0.36				
Clearance Time (s)	6.0	6.0			6.0	6.0		6.0				
Vehicle Extension (s)	3.5	7.0			7.0	7.0		5.0				
Lane Grp Cap (vph)	494	1586			1109	515		1585				
v/s Ratio Prot	0.06	c0.32			c0.29							
v/s Ratio Perm	0.28					0.07		0.32				
v/c Ratio	0.66	0.63			0.81	0.21		0.90				
Uniform Delay, d1	27.4	16.2			26.3	20.2		27.2				
Progression Factor	0.59	0.53			0.47	0.28		1.00				
Incremental Delay, d2	2.6	1.5			5.0	0.7		7.5				
Delay (s)	18.7	10.1			17.3	6.3		34.6				
Level of Service	B	B			B	A		C				
Approach Delay (s)		12.2			14.9			34.6			0.0	
Approach LOS		B			B			C			A	

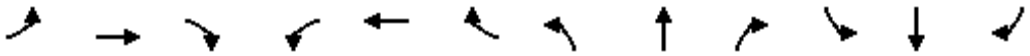
Intersection Summary			
HCM Average Control Delay	21.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	105.5%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	105	743	226	78	796	44	226	178	40	57	111	91
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	11	12	12	10	10	13	10	10	10
Total Lost time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.97		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1564	3061	1293	1604	3233		1447	3009		1544	2783	
Flt Permitted	0.28	1.00	1.00	0.18	1.00		0.51	1.00		0.61	1.00	
Satd. Flow (perm)	463	3061	1293	309	3233		775	3009		990	2783	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	111	782	238	82	838	46	238	187	42	60	117	96
RTOR Reduction (vph)	0	0	110	0	4	0	0	22	0	0	79	0
Lane Group Flow (vph)	111	782	128	82	880	0	238	207	0	60	134	0
Confl. Peds. (#/hr)	3		12	12		3	9		6	6		9
Heavy Vehicles (%)	2%	8%	5%	3%	5%	3%	10%	3%	2%	3%	7%	4%
Parking (#/hr)			0									
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	38.9	36.4	48.5	33.9	33.9		31.8	24.7		19.8	16.2	
Effective Green, g (s)	38.9	36.4	48.5	33.9	33.9		31.8	24.7		19.8	16.2	
Actuated g/C Ratio	0.43	0.40	0.54	0.38	0.38		0.35	0.27		0.22	0.18	
Clearance Time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0		3.0	7.0		3.0	7.0	
Lane Grp Cap (vph)	308	1238	697	207	1218		364	826		240	501	
v/s Ratio Prot	0.04	c0.26	0.02	0.03	c0.27		c0.09	0.07		0.01	0.05	
v/s Ratio Perm	0.12		0.07	0.12			c0.14			0.05		
v/c Ratio	0.36	0.63	0.18	0.40	0.72		0.65	0.25		0.25	0.27	
Uniform Delay, d1	21.2	21.4	10.6	19.6	24.0		22.6	25.4		28.5	31.8	
Progression Factor	0.67	0.67	0.56	0.87	0.94		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.2	1.7	0.1	1.2	3.5		4.2	0.6		0.5	1.0	
Delay (s)	16.5	16.0	6.0	18.2	26.2		26.8	26.0		29.0	32.8	
Level of Service	B	B	A	B	C		C	C		C	C	
Approach Delay (s)		14.0			25.6			26.4			32.0	
Approach LOS		B			C			C			C	

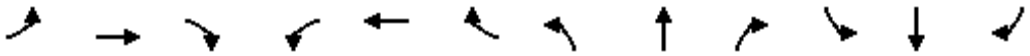
Intersection Summary			
HCM Average Control Delay	21.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.5
Intersection Capacity Utilization	73.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	62	329	286	59	196	102	329	382	83	91	258	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	12	11	12	12	11	13	12	10	11	12
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.93		1.00	0.95		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1635	2916		1463	3036		1589	3237		1549	3135	
Flt Permitted	0.53	1.00		0.24	1.00		0.46	1.00		0.47	1.00	
Satd. Flow (perm)	914	2916		367	3036		772	3237		772	3135	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	65	346	301	62	206	107	346	402	87	96	272	57
RTOR Reduction (vph)	0	144	0	0	61	0	0	17	0	0	17	0
Lane Group Flow (vph)	65	503	0	62	252	0	346	472	0	96	312	0
Confl. Peds. (#/hr)	20					20	1		2	2		1
Heavy Vehicles (%)	4%	5%	6%	13%	6%	5%	4%	6%	5%	3%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	35.7	28.7		35.9	28.8		53.2	41.9		38.6	31.3	
Effective Green, g (s)	35.7	28.7		35.9	28.8		53.2	41.9		38.6	31.3	
Actuated g/C Ratio	0.34	0.27		0.34	0.27		0.51	0.40		0.37	0.30	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.5	7.0		3.5	7.0		3.5	7.0		3.5	7.0	
Lane Grp Cap (vph)	359	797		200	833		530	1292		338	935	
v/s Ratio Prot	0.01	c0.17		c0.02	0.08		c0.11	0.15		0.02	0.10	
v/s Ratio Perm	0.05			0.09			c0.22			0.08		
v/c Ratio	0.18	0.63		0.31	0.30		0.65	0.36		0.28	0.33	
Uniform Delay, d1	23.8	33.5		24.5	30.2		16.6	22.2		22.4	28.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	3.8		1.0	0.9		3.0	0.8		0.5	1.0	
Delay (s)	24.1	37.3		25.5	31.1		19.6	23.0		22.9	29.7	
Level of Service	C	D		C	C		B	C		C	C	
Approach Delay (s)		36.1			30.2			21.6			28.2	
Approach LOS		D			C			C			C	

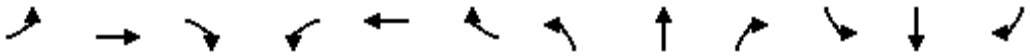
Intersection Summary			
HCM Average Control Delay	28.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	72.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	169	716	81	6	457	113	68	602	7	104	326	105
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	9	11	12	9	9	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.99			0.97		1.00	1.00		1.00	0.96	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		2929			2898		1436	3186		1451	2786	
Flt Permitted		0.64			0.94		0.33	1.00		0.18	1.00	
Satd. Flow (perm)		1882			2736		506	3186		274	2786	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	188	796	90	7	508	126	76	669	8	116	362	117
RTOR Reduction (vph)	0	7	0	0	24	0	0	1	0	0	35	0
Lane Group Flow (vph)	0	1067	0	0	617	0	76	676	0	116	444	0
Confl. Peds. (#/hr)	9		11	11		9	11		14	14		11
Heavy Vehicles (%)	3%	6%	18%	50%	6%	6%	7%	3%	50%	6%	7%	2%
Turn Type	pm+pt			Perm			pm+pt			pm+pt		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		51.0			43.0		27.0	23.0		27.0	23.0	
Effective Green, g (s)		51.0			43.0		27.0	23.0		27.0	23.0	
Actuated g/C Ratio		0.57			0.48		0.30	0.26		0.30	0.26	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		1113			1307		193	814		135	712	
v/s Ratio Prot		c0.04					0.02	0.21		c0.04	0.16	
v/s Ratio Perm		c0.50			0.23		0.10			c0.22		
v/c Ratio		0.96			0.47		0.39	0.83		0.86	0.62	
Uniform Delay, d1		18.5			15.8		23.6	31.7		28.2	29.7	
Progression Factor		0.55			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		17.4			1.2		5.9	9.6		46.8	4.1	
Delay (s)		27.6			17.1		29.5	41.3		75.0	33.8	
Level of Service		C			B		C	D		E	C	
Approach Delay (s)		27.6			17.1			40.1			41.8	
Approach LOS		C			B			D			D	

Intersection Summary			
HCM Average Control Delay	31.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	83.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	52	334	48	73	165	13	38	661	101	10	378	45
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1666	1916		1618	1943		1658	3200		1139	3197	
Flt Permitted	0.64	1.00		0.39	1.00		0.50	1.00		0.30	1.00	
Satd. Flow (perm)	1126	1916		660	1943		870	3200		355	3197	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	54	344	49	75	170	13	39	681	104	10	390	46
RTOR Reduction (vph)	0	8	0	0	4	0	0	19	0	0	14	0
Lane Group Flow (vph)	54	385	0	75	179	0	39	766	0	10	422	0
Confl. Peds. (#/hr)	10		16	16		10	4		6	6		4
Confl. Bikes (#/hr)			4	4								
Heavy Vehicles (%)	2%	4%	5%	5%	4%	0%	3%	4%	8%	50%	5%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.48	0.48		0.48	0.48	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	416	707		244	717		415	1526		169	1525	
v/s Ratio Prot		c0.20			0.09			c0.24			0.13	
v/s Ratio Perm	0.05			0.11			0.04			0.03		
v/c Ratio	0.13	0.54		0.31	0.25		0.09	0.50		0.06	0.28	
Uniform Delay, d1	13.6	16.2		14.6	14.2		9.3	11.7		9.2	10.2	
Progression Factor	1.00	1.00		1.33	1.36		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.6	3.0		2.2	0.6		0.4	1.2		0.7	0.5	
Delay (s)	14.2	19.2		21.5	19.9		9.8	12.9		9.8	10.7	
Level of Service	B	B		C	B		A	B		A	B	
Approach Delay (s)		18.6			20.4			12.7			10.7	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM Average Control Delay	14.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	68.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR	SBR2
Lane Configurations												
Volume (vph)	761	200	621	17	3	14	3	47	30	0	2	4
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	12	12	16	12	12	16	12	12
Total Lost time (s)	5.0		5.0				4.0			4.0		
Lane Util. Factor	0.95		0.95				1.00			1.00		
Frpb, ped/bikes	1.00		1.00				1.00			1.00		
Flpb, ped/bikes	1.00		1.00				1.00			1.00		
Frt	1.00		1.00				0.91			0.98		
Flt Protected	1.00		0.99				0.99			0.96		
Satd. Flow (prot)	2956		2954				1732			1908		
Flt Permitted	1.00		0.51				0.94			0.79		
Satd. Flow (perm)	2956		1535				1643			1562		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	801	211	654	18	3	15	3	49	32	0	2	4
RTOR Reduction (vph)	0	0	2	0	0	0	38	0	0	3	0	0
Lane Group Flow (vph)	801	0	881	0	0	0	32	0	0	35	0	0
Confl. Peds. (#/hr)		7		6		3					3	
Confl. Bikes (#/hr)		1										
Heavy Vehicles (%)	8%	8%	6%	0%	0%	8%	0%	5%	0%	0%	0%	0%
Turn Type		Perm			Perm	Perm			Perm			
Protected Phases	8		4				2			6		
Permitted Phases		4			2	2			6			
Actuated Green, G (s)	21.3		42.0				14.0			14.0		
Effective Green, g (s)	21.3		42.0				14.0			14.0		
Actuated g/C Ratio	0.33		0.65				0.22			0.22		
Clearance Time (s)	5.0		5.0				4.0			4.0		
Lane Grp Cap (vph)	969		992				354			336		
v/s Ratio Prot	0.27											
v/s Ratio Perm			c0.57				0.02			c0.02		
v/c Ratio	0.83		1.94dl				0.09			0.10		
Uniform Delay, d1	20.1		9.5				20.4			20.5		
Progression Factor	1.00		1.00				1.00			1.00		
Incremental Delay, d2	8.0		11.7				0.5			0.6		
Delay (s)	28.2		21.2				20.9			21.1		
Level of Service	C		C				C			C		
Approach Delay (s)	28.2		21.2				20.9			21.1		
Approach LOS	C		C				C			C		

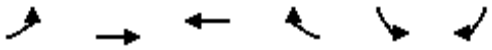
Intersection Summary			
HCM Average Control Delay	25.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	72.0%	ICU Level of Service	C
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group



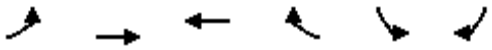
Movement	NER
Lane Configurations	
Volume (vph)	461
Ideal Flow (vphpl)	1800
Lane Width	12
Total Lost time (s)	5.0
Lane Util. Factor	0.88
Frpb, ped/bikes	1.00
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	2470
Flt Permitted	1.00
Satd. Flow (perm)	2470
Peak-hour factor, PHF	0.95
Adj. Flow (vph)	485
RTOR Reduction (vph)	0
Lane Group Flow (vph)	485
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Heavy Vehicles (%)	9%
Turn Type	custom
Protected Phases	7
Permitted Phases	
Actuated Green, G (s)	15.7
Effective Green, g (s)	15.7
Actuated g/C Ratio	0.24
Clearance Time (s)	5.0
Lane Grp Cap (vph)	597
v/s Ratio Prot	0.20
v/s Ratio Perm	
v/c Ratio	0.81
Uniform Delay, d1	23.3
Progression Factor	0.85
Incremental Delay, d2	10.2
Delay (s)	30.1
Level of Service	C
Approach Delay (s)	
Approach LOS	

Intersection Summary



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	194	1172	684	81	139	156
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frt		1.00	0.98		1.00	0.85
Flt Protected		0.99	1.00		0.95	1.00
Satd. Flow (prot)		3234	3205		1629	1457
Flt Permitted		0.66	1.00		0.95	1.00
Satd. Flow (perm)		2146	3205		1629	1457
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	216	1302	760	90	154	173
RTOR Reduction (vph)	0	0	10	0	0	144
Lane Group Flow (vph)	0	1518	840	0	154	29
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		67.0	67.0		15.0	15.0
Effective Green, g (s)		67.0	67.0		15.0	15.0
Actuated g/C Ratio		0.74	0.74		0.17	0.17
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1598	2386		272	243
v/s Ratio Prot			0.26		c0.09	
v/s Ratio Perm		c0.71				0.02
v/c Ratio		0.95	0.35		0.57	0.12
Uniform Delay, d1		10.0	4.0		34.5	31.9
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		13.4	0.4		8.3	1.0
Delay (s)		23.4	4.4		42.8	32.9
Level of Service		C	A		D	C
Approach Delay (s)		23.4	4.4		37.5	
Approach LOS		C	A		D	

Intersection Summary			
HCM Average Control Delay	19.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	81.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	53	1231	703	202	174	56
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	12	10	11	12	10	10
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frpb, ped/bikes		1.00	1.00		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.97		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2928	2920		1464	1373
Flt Permitted		0.88	1.00		0.95	1.00
Satd. Flow (perm)		2576	2920		1464	1373
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	56	1296	740	213	183	59
RTOR Reduction (vph)	0	0	44	0	0	45
Lane Group Flow (vph)	0	1352	909	0	183	14
Confl. Peds. (#/hr)	1			1		
Confl. Bikes (#/hr)	1			1		
Heavy Vehicles (%)	4%	9%	8%	12%	9%	4%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		38.0	38.0		14.0	14.0
Effective Green, g (s)		38.0	38.0		14.0	14.0
Actuated g/C Ratio		0.63	0.63		0.23	0.23
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1631	1849		342	320
v/s Ratio Prot			0.31		c0.12	
v/s Ratio Perm		c0.52				0.01
v/c Ratio		0.83	0.49		0.54	0.04
Uniform Delay, d1		8.5	5.9		20.1	17.8
Progression Factor		1.00	1.31		1.00	1.00
Incremental Delay, d2		5.0	0.7		5.9	0.3
Delay (s)		13.5	8.4		26.0	18.1
Level of Service		B	A		C	B
Approach Delay (s)		13.5	8.4		24.1	
Approach LOS		B	A		C	

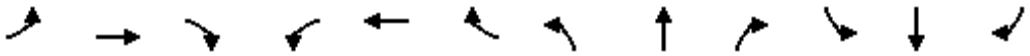
Intersection Summary			
HCM Average Control Delay	12.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	85.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



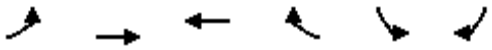
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1257	160	161	663	423	438
Ideal Flow (vphpl)	2300	1800	1800	2300	1800	1800
Lane Width	15	12	14	16	15	12
Total Lost time (s)	5.0		3.0	5.0	5.0	5.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.98		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	2248		1771	2436	1844	1500
Flt Permitted	1.00		0.05	1.00	0.95	1.00
Satd. Flow (perm)	2248		98	2436	1844	1500
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	1283	163	164	677	432	447
RTOR Reduction (vph)	4	0	0	0	0	43
Lane Group Flow (vph)	1442	0	164	677	432	404
Confl. Peds. (#/hr)		4	4			8
Heavy Vehicles (%)	11%	7%	3%	7%	2%	2%
Turn Type			pm+pt			pt+ov
Protected Phases	4		3	8	2	2 3
Permitted Phases			8			
Actuated Green, G (s)	73.0		83.0	83.0	27.0	39.0
Effective Green, g (s)	73.0		83.0	83.0	27.0	39.0
Actuated g/C Ratio	0.61		0.69	0.69	0.22	0.32
Clearance Time (s)	5.0		3.0	5.0	5.0	
Lane Grp Cap (vph)	1368		165	1685	415	488
v/s Ratio Prot	c0.64		0.06	0.28	c0.23	c0.27
v/s Ratio Perm			0.63			
v/c Ratio	1.05		0.99	0.40	1.04	0.83
Uniform Delay, d1	23.5		40.4	7.9	46.5	37.4
Progression Factor	0.80		1.00	1.00	1.00	1.00
Incremental Delay, d2	34.8		68.5	0.7	55.2	14.8
Delay (s)	53.7		108.9	8.6	101.7	52.2
Level of Service	D		F	A	F	D
Approach Delay (s)	53.7			28.2	76.6	
Approach LOS	D			C	E	

Intersection Summary			
HCM Average Control Delay	53.3	HCM Level of Service	D
HCM Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	108.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	725	89	258	1516	9	72	0	187	1	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	15	13	11	11	12	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0	4.0	3.0	3.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00		0.95	
Satd. Flow (prot)	1881	3213	1422	1589	3138	1366		1642	1443		969	
Flt Permitted	0.14	1.00	1.00	0.26	1.00	1.00		0.76	1.00		0.70	
Satd. Flow (perm)	285	3213	1422	435	3138	1366		1309	1443		719	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	806	99	287	1684	10	80	0	208	1	0	0
RTOR Reduction (vph)	0	0	48	0	0	2	0	0	182	0	0	0
Lane Group Flow (vph)	1	806	51	287	1684	8	0	80	26	0	1	0
Heavy Vehicles (%)	0%	10%	4%	4%	9%	12%	18%	0%	6%	100%	0%	0%
Turn Type	Perm		Perm	custom		custom	Perm		Perm	Perm		
Protected Phases		4		3	3 8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)	43.7	43.7	43.7	66.4	66.4	66.4		10.6	10.6		10.6	
Effective Green, g (s)	43.7	43.7	43.7	66.4	66.4	66.4		10.6	10.6		10.6	
Actuated g/C Ratio	0.51	0.51	0.51	0.78	0.78	0.78		0.12	0.12		0.12	
Clearance Time (s)	4.0	4.0	4.0	3.0		4.0		4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0		3.0	
Lane Grp Cap (vph)	147	1652	731	607	2451	1067		163	180		90	
v/s Ratio Prot		0.25		0.11	c0.54							
v/s Ratio Perm	0.00		0.04	0.26		0.01		c0.06	0.02		0.00	
v/c Ratio	0.01	0.49	0.07	0.47	0.69	0.01		0.49	0.14		0.01	
Uniform Delay, d1	10.1	13.4	10.4	4.1	4.4	2.0		34.7	33.2		32.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	0.1	1.0	0.2	0.6	0.8	0.0		2.3	0.4		0.0	
Delay (s)	10.2	14.4	10.6	4.7	5.2	2.1		37.0	33.5		32.7	
Level of Service	B	B	B	A	A	A		D	C		C	
Approach Delay (s)		14.0			5.1			34.5			32.7	
Approach LOS		B			A			C			C	

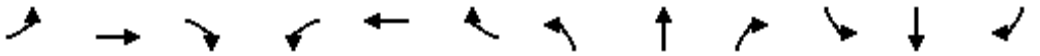
Intersection Summary			
HCM Average Control Delay	10.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	62.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	13	819	851	45	24	11
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	12	10	10
Total Lost time (s)		5.0	5.0		3.0	
Lane Util. Factor		0.95	0.95		1.00	
Frt		1.00	0.99		0.96	
Flt Protected		1.00	1.00		0.97	
Satd. Flow (prot)		3038	3017		1482	
Flt Permitted		0.93	1.00		0.97	
Satd. Flow (perm)		2834	3017		1482	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	14	910	946	50	27	12
RTOR Reduction (vph)	0	0	4	0	11	0
Lane Group Flow (vph)	0	924	992	0	28	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type	Perm					
Protected Phases		4	8 2 11		5	
Permitted Phases	4					
Actuated Green, G (s)		33.0	64.0		7.0	
Effective Green, g (s)		33.0	64.0		7.0	
Actuated g/C Ratio		0.37	0.71		0.08	
Clearance Time (s)		5.0			3.0	
Lane Grp Cap (vph)		1039	2145		115	
v/s Ratio Prot			c0.33		c0.02	
v/s Ratio Perm		c0.33				
v/c Ratio		0.89	0.46		0.24	
Uniform Delay, d1		26.8	5.6		39.0	
Progression Factor		1.00	0.00		1.00	
Incremental Delay, d2		11.3	0.2		4.9	
Delay (s)		38.1	0.3		44.0	
Level of Service		D	A		D	
Approach Delay (s)		38.1	0.3		44.0	
Approach LOS		D	A		D	

Intersection Summary			
HCM Average Control Delay	19.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	44.5%	ICU Level of Service	A
Analysis Period (min)	15		

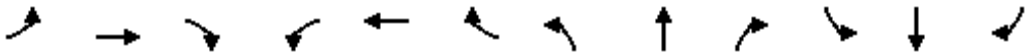
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	90	430	1	27	568	80	0	0	1	45	3	136
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12	12	11	12	11
Total Lost time (s)		4.0			4.0			3.0			3.0	3.0
Lane Util. Factor		1.00			0.95			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			0.92			1.00	0.96
Flpb, ped/bikes		1.00			1.00			1.00			0.98	1.00
Frt		1.00			0.98			0.86			1.00	0.85
Flt Protected		0.99			1.00			1.00			0.95	1.00
Satd. Flow (prot)		1727			3232			1427			1606	1277
Flt Permitted		0.77			0.92			1.00			0.90	1.00
Satd. Flow (perm)		1343			2977			1427			1513	1277
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	100	478	1	30	631	89	0	0	1	50	3	151
RTOR Reduction (vph)	0	0	0	0	12	0	0	1	0	0	0	107
Lane Group Flow (vph)	0	579	0	0	738	0	0	0	0	0	53	44
Confl. Peds. (#/hr)	33		13	13		33	29		13	13		29
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	4%	3%	0%	0%	4%	0%	0%	0%	0%	5%	0%	11%
Turn Type	Perm			custom			Perm			pm+pt		Perm
Protected Phases		4			3 4			1		2	1 2	
Permitted Phases	4			3	3		1	1		1 2		1 2
Actuated Green, G (s)		43.0			56.0			9.0			23.0	26.0
Effective Green, g (s)		43.0			56.0			9.0			23.0	26.0
Actuated g/C Ratio		0.48			0.62			0.10			0.26	0.29
Clearance Time (s)		4.0						3.0				
Lane Grp Cap (vph)		642			1852			143			401	369
v/s Ratio Prot								0.00			0.02	
v/s Ratio Perm		c0.43			c0.25						c0.01	c0.03
v/c Ratio		0.90			0.40			0.00			0.13	0.12
Uniform Delay, d1		21.6			8.5			36.5			25.8	23.6
Progression Factor		1.00			0.14			1.00			1.00	1.00
Incremental Delay, d2		18.2			0.2			0.0			0.7	0.7
Delay (s)		39.8			1.4			36.5			26.5	24.2
Level of Service		D			A			D			C	C
Approach Delay (s)		39.8			1.4			36.5			24.8	
Approach LOS		D			A			D			C	

Intersection Summary			
HCM Average Control Delay	19.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	73.0%	ICU Level of Service	C
Analysis Period (min)	15		

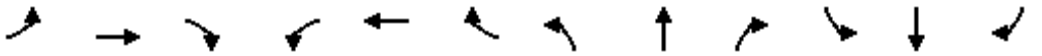
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	598	28	35	1014	58	36	35	48	23	26	87
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	16	10	10	16	8	15	8	8	14	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			0.98	
Flpb, ped/bikes	0.98	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.99			0.95			0.91	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1557	3022		1587	3021			1816			1706	
Flt Permitted	0.17	1.00		0.36	1.00			0.89			0.95	
Satd. Flow (perm)	277	3022		604	3021			1649			1630	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	41	629	29	37	1067	61	38	37	51	24	27	92
RTOR Reduction (vph)	0	5	0	0	6	0	0	33	0	0	21	0
Lane Group Flow (vph)	41	653	0	37	1122	0	0	93	0	0	122	0
Confl. Peds. (#/hr)	145		16	16		145	17		19	19		17
Confl. Bikes (#/hr)	5					5			2	2		
Heavy Vehicles (%)	0%	5%	0%	0%	4%	2%	0%	0%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			22.0			22.0	
Effective Green, g (s)	34.0	34.0		34.0	34.0			23.0			23.0	
Actuated g/C Ratio	0.52	0.52		0.52	0.52			0.35			0.35	
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0			5.0	
Lane Grp Cap (vph)	145	1581		316	1580			583			577	
v/s Ratio Prot		0.22			c0.37							
v/s Ratio Perm	0.15			0.06				0.06			c0.07	
v/c Ratio	0.28	0.41		0.12	0.71			0.16			0.21	
Uniform Delay, d1	8.7	9.4		7.9	11.8			14.4			14.7	
Progression Factor	1.00	1.00		0.70	1.41			1.00			1.00	
Incremental Delay, d2	4.8	0.8		0.7	2.4			0.6			0.8	
Delay (s)	13.5	10.2		6.2	19.1			15.0			15.5	
Level of Service	B	B		A	B			B			B	
Approach Delay (s)		10.4			18.6			15.0			15.5	
Approach LOS		B			B			B			B	

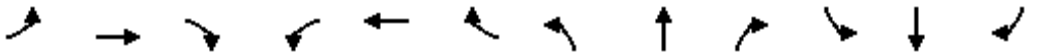
Intersection Summary			
HCM Average Control Delay	15.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	789	5	32	637	41	0	0	0	586	89	379
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00				0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.67				1.00	1.00	0.98
Flpb, ped/bikes	0.93	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	793	3379		1710	3226	514				3285	1731	1481
Flt Permitted	0.40	1.00		0.14	1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	331	3379		248	3226	514				3285	1731	1481
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	26	831	5	34	671	43	0	0	0	617	94	399
RTOR Reduction (vph)	0	0	0	0	0	19	0	0	0	0	0	166
Lane Group Flow (vph)	26	836	0	34	671	24	0	0	0	617	94	233
Confl. Peds. (#/hr)	350		4	4		350	8		6	6		8
Confl. Bikes (#/hr)	7		1	1		7						
Heavy Vehicles (%)	100%	1%	20%	0%	6%	100%	0%	0%	0%	1%	4%	1%
Turn Type	pm+pt			pm+pt		Perm				Split		Perm
Protected Phases	7	4		3	8					6	6	
Permitted Phases	4			8		8						6
Actuated Green, G (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Effective Green, g (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Actuated g/C Ratio	0.33	0.33		0.56	0.56	0.56				0.23	0.23	0.23
Clearance Time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Grp Cap (vph)	159	1118		634	1812	289				758	399	342
v/s Ratio Prot	0.02	c0.25		0.02	c0.21					c0.19	0.05	
v/s Ratio Perm	0.04			0.01		0.05						0.16
v/c Ratio	0.16	0.75		0.05	0.37	0.08				0.81	0.24	0.68
Uniform Delay, d1	31.6	38.7		15.2	15.8	13.1				47.4	40.7	45.6
Progression Factor	0.85	0.86		0.33	0.75	1.24				1.00	1.00	1.00
Incremental Delay, d2	2.1	4.4		0.1	0.4	0.4				9.3	1.4	10.5
Delay (s)	28.9	37.6		5.1	12.2	16.6				56.7	42.1	56.1
Level of Service	C	D		A	B	B				E	D	E
Approach Delay (s)		37.3			12.2			0.0			55.2	
Approach LOS		D			B			A			E	

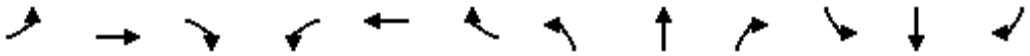
Intersection Summary			
HCM Average Control Delay	37.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	53.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	340	815	220	54	578	287	102	251	55	39	0	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.67		1.00	0.91	1.00		0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.97		1.00	1.00	0.85		1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (prot)	3285	3262		1710	3138	1018		3301	1359	855		734
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (perm)	3285	3262		1710	3138	1018		3301	1359	855		734
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	358	858	232	57	608	302	107	264	58	41	0	32
RTOR Reduction (vph)	0	18	0	0	0	228	0	0	42	0	0	30
Lane Group Flow (vph)	358	1072	0	57	608	74	0	371	16	41	0	2
Confl. Peds. (#/hr)	327		13	13		327	6		60	60		6
Confl. Bikes (#/hr)	6					6						
Heavy Vehicles (%)	1%	1%	0%	0%	9%	1%	0%	3%	2%	100%	0%	100%
Turn Type	Prot			Prot		Perm	Split		Perm	Prot		custom
Protected Phases	7	4		3	8		2	2		6		
Permitted Phases						8			2			6
Actuated Green, G (s)	44.0	68.0		8.0	32.0	32.0		28.0	28.0	8.0		8.0
Effective Green, g (s)	44.0	68.0		8.0	32.0	32.0		28.0	28.0	8.0		8.0
Actuated g/C Ratio	0.34	0.52		0.06	0.25	0.25		0.22	0.22	0.06		0.06
Clearance Time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	1112	1706		105	772	251		711	293	53		45
v/s Ratio Prot	0.11	c0.33		0.03	c0.19			c0.11		c0.05		
v/s Ratio Perm						0.07			0.01			0.00
v/c Ratio	0.32	0.63		0.54	0.79	0.30		0.52	0.06	0.77		0.04
Uniform Delay, d1	31.9	22.0		59.2	45.8	39.8		45.1	40.5	60.1		57.4
Progression Factor	0.95	0.16		1.00	1.00	1.00		0.94	0.99	1.00		1.00
Incremental Delay, d2	0.5	1.1		18.7	8.0	3.0		2.7	0.4	49.7		0.4
Delay (s)	30.7	4.7		77.9	53.8	42.8		45.3	40.6	109.9		57.8
Level of Service	C	A		E	D	D		D	D	F		E
Approach Delay (s)		11.1			51.8			44.7			87.0	
Approach LOS		B			D			D			F	

Intersection Summary			
HCM Average Control Delay	31.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	68.3%	ICU Level of Service	C
Analysis Period (min)	15		

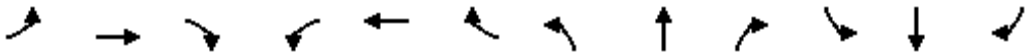
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	893	166	105	839	0	74	0	87	9	15	7
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	11	11	8	12	12	12	14	15	12
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes		0.99		1.00	1.00		1.00		0.98	1.00	0.98	
Flpb, ped/bikes		1.00		1.00	1.00		0.97		1.00	0.99	1.00	
Frt		0.98		1.00	1.00		1.00		0.85	1.00	0.95	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		2997		1649	3149		1388		1451	1803	1857	
Flt Permitted		1.00		0.17	1.00		0.74		1.00	0.95	1.00	
Satd. Flow (perm)		2997		299	3149		1082		1451	1803	1857	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	992	184	117	932	0	82	0	97	10	17	8
RTOR Reduction (vph)	0	15	0	0	0	0	0	0	66	0	5	0
Lane Group Flow (vph)	0	1161	0	117	932	0	82	0	31	10	20	0
Confl. Peds. (#/hr)	67		19	19		67	38		12	12		38
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	2%	11%	0%	5%	0%	19%	0%	3%	0%	0%	0%
Turn Type				Perm			custom		custom	Perm		
Protected Phases		4			8						6	
Permitted Phases				8			2		2	6		
Actuated Green, G (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Effective Green, g (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Actuated g/C Ratio		0.60		0.60	0.60		0.32		0.32	0.32	0.32	
Clearance Time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)		1798		179	1889		346		464	577	594	
v/s Ratio Prot		0.39			0.30						0.01	
v/s Ratio Perm				c0.39			c0.08		0.02	0.01		
v/c Ratio		0.65		0.65	0.49		0.24		0.07	0.02	0.03	
Uniform Delay, d1		13.1		13.2	11.4		25.0		23.6	23.2	23.4	
Progression Factor		1.00		1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		1.8		17.1	0.9		1.6		0.3	0.1	0.1	
Delay (s)		14.9		30.3	12.3		26.6		23.9	23.3	23.5	
Level of Service		B		C	B		C		C	C	C	
Approach Delay (s)		14.9			14.3			25.2			23.4	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	15.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.4%	ICU Level of Service	B
Analysis Period (min)	15		

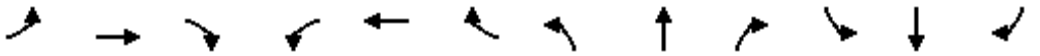
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	301	0	1230	215	686	0	0	792	490
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	12	10	10	12	12	11	12
Total Lost time (s)				4.0		5.0	3.0	4.0			4.0	
Lane Util. Factor				0.95		1.00	1.00	0.91			0.91	
Frpb, ped/bikes				1.00		1.00	1.00	1.00			0.98	
Flpb, ped/bikes				1.00		1.00	1.00	1.00			1.00	
Frt				1.00		0.85	1.00	1.00			0.94	
Flt Protected				0.95		1.00	0.95	1.00			1.00	
Satd. Flow (prot)				1540		1530	1535	4327			4271	
Flt Permitted				0.95		1.00	0.95	1.00			1.00	
Satd. Flow (perm)				1540		1530	1535	4327			4271	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	307	0	1255	219	700	0	0	808	500
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	307	0	1255	219	700	0	0	1308	0
Confl. Peds. (#/hr)	2					2	18		3	3		18
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%	4%	6%	0%	0%	4%	1%
Turn Type				Split		Prot	Prot					
Protected Phases				8	8	8	5	2			6	
Permitted Phases												
Actuated Green, G (s)				30.0		30.0	32.0	66.0			31.0	
Effective Green, g (s)				31.0		30.0	32.0	66.0			31.0	
Actuated g/C Ratio				0.30		0.29	0.30	0.63			0.30	
Clearance Time (s)				5.0		5.0	3.0	4.0			4.0	
Lane Grp Cap (vph)				455		437	468	2720			1261	
v/s Ratio Prot				0.20		c0.82	c0.14	0.16			c0.31	
v/s Ratio Perm												
v/c Ratio				0.67		2.87	0.47	0.26			1.16dr	
Uniform Delay, d1				32.6		37.5	29.6	8.6			37.0	
Progression Factor				1.00		1.00	0.63	2.06			1.00	
Incremental Delay, d2				7.8		848.6	2.8	0.2			35.5	
Delay (s)				40.4		886.1	21.4	18.0			72.5	
Level of Service				D		F	C	B			E	
Approach Delay (s)		0.0			719.9			18.8			72.5	
Approach LOS		A			F			B			E	

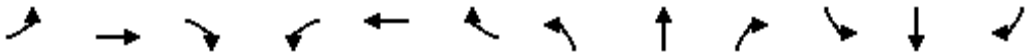
Intersection Summary			
HCM Average Control Delay	326.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.43		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	102.1%	ICU Level of Service	G
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	322	770	145	0	0	0	0	579	410	359	734	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	13	12	12	12	12	12	10	10	8	12	12	12
Total Lost time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Util. Factor	0.91	0.91						0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00						1.00	1.00	1.00	1.00	
Flpb, ped/bikes	0.99	1.00						1.00	1.00	1.00	1.00	
Frt	1.00	0.98						1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1509	3157						4368	2244	1598	4680	
Flt Permitted	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1509	3157						4368	2244	1598	4680	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	332	794	149	0	0	0	0	597	423	370	757	0
RTOR Reduction (vph)	0	14	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	299	962	0	0	0	0	0	597	423	370	757	0
Confl. Peds. (#/hr)	6		1	1		6	6					6
Heavy Vehicles (%)	6%	1%	0%	0%	0%	0%	0%	5%	4%	7%	5%	0%
Turn Type	Perm								Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Actuated Green, G (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Effective Green, g (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Actuated g/C Ratio	0.32	0.32						0.27	0.27	0.30	0.59	
Clearance Time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Grp Cap (vph)	489	1022						1165	598	472	2763	
v/s Ratio Prot								0.14		c0.23	0.16	
v/s Ratio Perm	0.20	0.30							c0.19			
v/c Ratio	0.61	0.94						0.51	0.71	0.78	0.27	
Uniform Delay, d1	29.9	34.5						32.7	34.8	33.9	10.5	
Progression Factor	1.00	1.00						1.00	1.00	0.86	0.22	
Incremental Delay, d2	5.6	17.2						1.6	6.9	4.8	0.1	
Delay (s)	35.5	51.7						34.3	41.7	34.1	2.4	
Level of Service	D	D						C	D	C	A	
Approach Delay (s)		47.9			0.0			37.4			12.8	
Approach LOS		D			A			D			B	

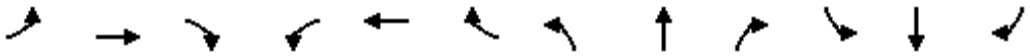
Intersection Summary			
HCM Average Control Delay	33.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	102.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	290	25	24	11	164	0	0	149	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	14	12	12	16	12
Total Lost time (s)				4.0	4.0		4.0	4.0			-3.0	
Lane Util. Factor				1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes				1.00	0.99		1.00	1.00			1.00	
Flpb, ped/bikes				1.00	1.00		1.00	1.00			1.00	
Frt				1.00	0.93		1.00	1.00			1.00	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1688	3132		1710	1846			1955	
Flt Permitted				0.95	1.00		0.54	1.00			1.00	
Satd. Flow (perm)				1688	3132		974	1846			1955	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	322	28	27	12	182	0	0	166	6
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	322	37	0	12	182	0	0	171	0
Confl. Peds. (#/hr)	2		2	2		2			6	6		
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	0%	4%	0%	0%	4%	0%
Turn Type				Perm			pm+pt					
Protected Phases					8		7	2			6	
Permitted Phases				8			2					
Actuated Green, G (s)				27.0	27.0		50.0	50.0			40.0	
Effective Green, g (s)				27.0	27.0		50.0	50.0			46.0	
Actuated g/C Ratio				0.32	0.32		0.59	0.59			0.54	
Clearance Time (s)				4.0	4.0		4.0	4.0			3.0	
Lane Grp Cap (vph)				536	995		634	1086			1058	
v/s Ratio Prot					0.01		0.00	c0.10			0.09	
v/s Ratio Perm				c0.19			0.01					
v/c Ratio				0.60	0.04		0.02	0.17			0.16	
Uniform Delay, d1				24.5	20.0		10.5	8.0			9.8	
Progression Factor				1.00	1.00		1.04	1.18			1.00	
Incremental Delay, d2				4.9	0.1		0.1	0.3			0.3	
Delay (s)				29.4	20.1		11.0	9.7			10.1	
Level of Service				C	C		B	A			B	
Approach Delay (s)		0.0			28.0			9.8			10.1	
Approach LOS		A			C			A			B	

Intersection Summary			
HCM Average Control Delay	19.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	37.0%	ICU Level of Service	A
Analysis Period (min)	15		

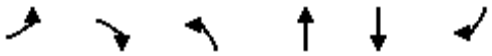
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	12	11	23	6	0	14	0	149	45	46	393	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	16	15	12	8	12	8	12	12	12	10	13	12
Total Lost time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.97			0.98			0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00			1.00		1.00	1.00	
Frt	1.00	0.90			0.90			0.97		1.00	1.00	
Flt Protected	0.95	1.00			0.99			1.00		0.95	1.00	
Satd. Flow (prot)	1935	1735			1571			1718		1590	1860	
Flt Permitted	0.74	1.00			0.96			1.00		0.59	1.00	
Satd. Flow (perm)	1515	1735			1529			1718		987	1860	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	13	12	24	6	0	15	0	157	47	48	414	0
RTOR Reduction (vph)	0	16	0	0	10	0	0	13	0	0	0	0
Lane Group Flow (vph)	13	20	0	0	11	0	0	191	0	48	414	0
Confl. Peds. (#/hr)	1		11	11		1	1		10	10		1
Confl. Bikes (#/hr)			2	2			1		2	2		1
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Turn Type	Perm			Perm						pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Effective Green, g (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Actuated g/C Ratio	0.32	0.32			0.32			0.47		0.59	0.59	
Clearance Time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Grp Cap (vph)	481	551			486			808		630	1094	
v/s Ratio Prot		c0.01						0.11		0.01	c0.22	
v/s Ratio Perm	0.01				0.01					0.04		
v/c Ratio	0.03	0.04			0.02			0.24		0.08	0.38	
Uniform Delay, d1	20.0	20.0			19.9			13.4		8.8	9.3	
Progression Factor	1.00	1.00			1.00			1.00		0.98	0.87	
Incremental Delay, d2	0.1	0.1			0.1			0.7		0.2	0.9	
Delay (s)	20.1	20.1			20.0			14.1		8.8	9.0	
Level of Service	C	C			C			B		A	A	
Approach Delay (s)		20.1			20.0			14.1			9.0	
Approach LOS		C			C			B			A	

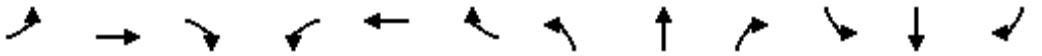
Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	41.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	48	42	12	193	288	28
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	14	12	13	12	10	12
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.94		1.00	1.00	0.99	
Flt Protected	0.97		0.95	1.00	1.00	
Satd. Flow (prot)	1752		1765	1782	1657	
Flt Permitted	0.97		0.50	1.00	1.00	
Satd. Flow (perm)	1752		937	1782	1657	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	53	47	13	214	320	31
RTOR Reduction (vph)	32	0	0	0	5	0
Lane Group Flow (vph)	68	0	13	214	346	0
Confl. Peds. (#/hr)			2			2
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.0		36.0	36.0	36.0	
Effective Green, g (s)	21.0		36.0	36.0	36.0	
Actuated g/C Ratio	0.32		0.55	0.55	0.55	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	566		519	987	918	
v/s Ratio Prot	c0.04			0.12	c0.21	
v/s Ratio Perm			0.01			
v/c Ratio	0.12		0.03	0.22	0.38	
Uniform Delay, d1	15.5		6.6	7.4	8.2	
Progression Factor	1.00		0.51	0.63	1.43	
Incremental Delay, d2	0.4		0.1	0.5	1.0	
Delay (s)	15.9		3.4	5.1	12.7	
Level of Service	B		A	A	B	
Approach Delay (s)	15.9			5.0	12.7	
Approach LOS	B			A	B	

Intersection Summary			
HCM Average Control Delay	10.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	30.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

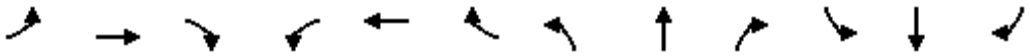


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	31	268	9	258	130	2	0	283	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	14	16	12	12	15	12	12	13	10
Total Lost time (s)					4.0		4.0	4.0			3.0	3.0
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Frt					1.00		1.00	1.00			1.00	0.85
Flt Protected					1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3772		1693	1677			1738	1428
Flt Permitted					1.00		0.47	1.00			1.00	1.00
Satd. Flow (perm)					3772		844	1677			1738	1428
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	34	298	10	287	144	2	0	314	19
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	0	0	0	11
Lane Group Flow (vph)	0	0	0	0	339	0	287	146	0	0	314	8
Confl. Peds. (#/hr)	1					1			5	5		
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	1%	18%	0%	0%	7%	0%
Turn Type				Split			pm+pt					Perm
Protected Phases				8	8		7	2			6	
Permitted Phases							2					6
Actuated Green, G (s)					26.0		51.0	51.0			38.0	38.0
Effective Green, g (s)					26.0		51.0	51.0			38.0	38.0
Actuated g/C Ratio					0.31		0.60	0.60			0.45	0.45
Clearance Time (s)					4.0		4.0	4.0			3.0	3.0
Lane Grp Cap (vph)					1154		606	1006			777	638
v/s Ratio Prot					c0.09		c0.06	0.09			0.18	
v/s Ratio Perm							c0.23					0.01
v/c Ratio					0.29		0.47	0.14			0.40	0.01
Uniform Delay, d1					22.5		13.7	7.4			15.9	13.1
Progression Factor					1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2					0.6		2.6	0.3			1.6	0.0
Delay (s)					23.1		16.4	7.7			17.4	13.1
Level of Service					C		B	A			B	B
Approach Delay (s)		0.0			23.1			13.5			17.2	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM Average Control Delay	17.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	96	94	38	133	207	32	59	703	44
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	15	12	12	12	12	12	13	12
Total Lost time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.98		1.00	0.98		1.00	0.99	
Flt Protected					0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1896		1710	3282		1707	3467	
Flt Permitted					0.98		0.25	1.00		0.59	1.00	
Satd. Flow (perm)					1896		446	3282		1056	3467	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	107	104	42	148	230	36	66	781	49
RTOR Reduction (vph)	0	0	0	0	10	0	0	16	0	0	6	0
Lane Group Flow (vph)	0	0	0	0	243	0	148	250	0	66	824	0
Confl. Peds. (#/hr)							5		5	5		5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	1%	0%
Turn Type				Split			pm+pt			pm+pt		
Protected Phases				8	8		5	2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)					23.0		41.0	34.0		41.0	34.0	
Effective Green, g (s)					23.0		41.0	34.0		41.0	34.0	
Actuated g/C Ratio					0.31		0.55	0.45		0.55	0.45	
Clearance Time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Grp Cap (vph)					581		362	1488		638	1572	
v/s Ratio Prot					c0.13		c0.04	0.08		0.01	c0.24	
v/s Ratio Perm							0.19			0.05		
v/c Ratio					0.42		0.41	0.17		0.10	0.52	
Uniform Delay, d1					20.7		16.4	12.1		8.2	14.7	
Progression Factor					1.00		0.83	0.82		1.00	1.00	
Incremental Delay, d2					2.2		3.4	0.2		0.3	1.3	
Delay (s)					22.9		17.0	10.2		8.5	16.0	
Level of Service					C		B	B		A	B	
Approach Delay (s)		0.0			22.9			12.7			15.4	
Approach LOS		A			C			B			B	

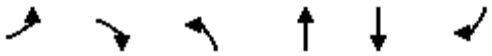
Intersection Summary			
HCM Average Control Delay	15.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	53.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	32	49	13	9	63	63	7	277	24	159	590	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	16	12	12	10	11	12	12	11	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.94		1.00	0.99		1.00	0.99	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1964			1655		1595	3173		1704	3231	
Flt Permitted		0.89			0.99		0.36	1.00		0.56	1.00	
Satd. Flow (perm)		1775			1637		599	3173		1004	3231	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	34	52	14	9	66	66	7	292	25	167	621	53
RTOR Reduction (vph)	0	8	0	0	42	0	0	8	0	0	8	0
Lane Group Flow (vph)	0	92	0	0	99	0	7	309	0	167	666	0
Confl. Peds. (#/hr)	2					2	1		6	6		1
Confl. Bikes (#/hr)			1	1			3					3
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	0%	3%	0%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Effective Green, g (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Actuated g/C Ratio		0.33			0.33		0.56	0.56		0.56	0.56	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		592			546		335	1777		562	1809	
v/s Ratio Prot								0.10			c0.21	
v/s Ratio Perm		0.05			c0.06		0.01			0.17		
v/c Ratio		0.16			0.18		0.02	0.17		0.30	0.37	
Uniform Delay, d1		17.6			17.7		7.3	8.0		8.7	9.1	
Progression Factor		1.00			1.00		1.00	1.00		0.27	0.25	
Incremental Delay, d2		0.6			0.7		0.1	0.2		1.2	0.5	
Delay (s)		18.1			18.5		7.5	8.3		3.5	2.8	
Level of Service		B			B		A	A		A	A	
Approach Delay (s)		18.1			18.5			8.2			3.0	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	6.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	48.4%	ICU Level of Service	A
Analysis Period (min)	15		

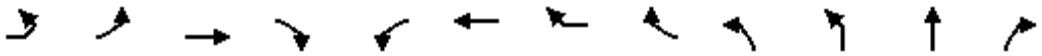
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	37	192	67	253	588	81
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	41	213	74	281	653	90

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	254	168	187	436	308
Volume Left (vph)	41	74	0	0	0
Volume Right (vph)	213	0	0	0	90
Hadj (s)	-0.42	0.27	0.05	0.05	-0.15
Departure Headway (s)	5.8	6.6	6.3	5.9	5.7
Degree Utilization, x	0.41	0.31	0.33	0.71	0.48
Capacity (veh/h)	591	528	546	602	622
Control Delay (s)	12.6	11.2	11.2	20.8	12.7
Approach Delay (s)	12.6	11.2		17.4	
Approach LOS	B	B		C	

Intersection Summary			
Delay	14.9		
HCM Level of Service	B		
Intersection Capacity Utilization	54.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	32	35	376	18	22	409	76	78	55	68	354	32
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	0.95	
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.92			1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Frt		1.00	1.00	0.85	1.00	1.00	0.85			1.00	0.99	
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	
Satd. Flow (prot)		1612	1731	1530	1710	1731	1412			1710	3251	
Flt Permitted		0.11	1.00	1.00	0.38	1.00	1.00			0.16	1.00	
Satd. Flow (perm)		191	1731	1530	692	1731	1412			295	3251	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	36	39	418	20	24	454	84	87	61	76	393	36
RTOR Reduction (vph)	0	0	0	13	0	0	25	0	0	0	5	0
Lane Group Flow (vph)	0	75	418	7	24	454	146	0	0	137	424	0
Confl. Peds. (#/hr)		25					25					3
Heavy Vehicles (%)	6%	6%	4%	0%	0%	4%	0%	0%	0%	0%	4%	0%
Turn Type	Perm	pm+pt		Perm	Perm		Perm		Perm	Perm		
Protected Phases		7	4			8					2	
Permitted Phases	4	4		4	8		8		2	2		
Actuated Green, G (s)		50.0	50.0	50.0	32.0	32.0	32.0			53.0	53.0	
Effective Green, g (s)		50.0	50.0	50.0	32.0	32.0	32.0			53.0	53.0	
Actuated g/C Ratio		0.33	0.33	0.33	0.21	0.21	0.21			0.35	0.35	
Clearance Time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Grp Cap (vph)		201	577	510	148	369	301			104	1149	
v/s Ratio Prot		0.04	c0.24			c0.26					0.13	
v/s Ratio Perm		0.09		0.00	0.03		0.10			c0.46		
v/c Ratio		0.37	0.72	0.01	0.16	1.23	0.48			1.32	0.37	
Uniform Delay, d1		38.4	43.9	33.5	48.1	59.0	51.8			48.5	36.1	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Incremental Delay, d2		5.2	7.7	0.1	2.3	125.2	5.5			195.3	0.9	
Delay (s)		43.7	51.7	33.5	50.4	184.2	57.3			243.8	37.0	
Level of Service		D	D	C	D	F	E			F	D	
Approach Delay (s)			49.8			145.8					87.0	
Approach LOS			D			F					F	

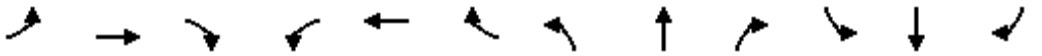
Intersection Summary			
HCM Average Control Delay	123.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.27		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	103.9%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations								
Volume (vph)	108	571	82	103	4	114	607	197
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5				4.5	4.5	
Lane Util. Factor	1.00	0.95				1.00	0.88	
Frpb, ped/bikes	1.00	1.00				1.00	1.00	
Flpb, ped/bikes	1.00	1.00				1.00	1.00	
Frt	1.00	0.96				1.00	0.85	
Flt Protected	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1706	3246				1710	2633	
Flt Permitted	0.41	1.00				0.95	1.00	
Satd. Flow (perm)	732	3246				1710	2633	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	120	634	91	114	4	127	674	219
RTOR Reduction (vph)	0	8	0	0	0	0	18	0
Lane Group Flow (vph)	120	831	0	0	0	131	875	0
Confl. Peds. (#/hr)	3							
Heavy Vehicles (%)	0%	2%	0%	0%	0%	0%	3%	0%
Turn Type	Perm				Split		Perm	
Protected Phases		6			9	9		
Permitted Phases	6						9	
Actuated Green, G (s)	52.5	52.5				34.5	34.5	
Effective Green, g (s)	52.5	52.5				34.5	34.5	
Actuated g/C Ratio	0.35	0.35				0.23	0.23	
Clearance Time (s)	4.5	4.5				4.5	4.5	
Lane Grp Cap (vph)	256	1136				393	606	
v/s Ratio Prot		0.26				0.08		
v/s Ratio Perm	0.16						c0.33	
v/c Ratio	0.47	0.73				0.33	1.44	
Uniform Delay, d1	37.9	42.6				48.2	57.8	
Progression Factor	1.00	1.00				1.00	1.00	
Incremental Delay, d2	6.1	4.2				2.3	208.6	
Delay (s)	44.0	46.7				50.4	266.4	
Level of Service	D	D				D	F	
Approach Delay (s)		46.4				238.8		
Approach LOS		D				F		

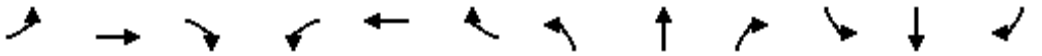
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	65	601	0	0	493	60	85	52	20	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	11	11	16	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.99			0.98				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		1681			1951			1840				
Flt Permitted		0.90			1.00			0.97				
Satd. Flow (perm)		1524			1951			1840				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	72	668	0	0	548	67	94	58	22	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	740	0	0	615	0	0	174	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		40.0			40.0			17.0				
Effective Green, g (s)		40.0			40.0			17.0				
Actuated g/C Ratio		0.62			0.62			0.26				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		938			1201			481				
v/s Ratio Prot					0.32							
v/s Ratio Perm		c0.49						0.09				
v/c Ratio		0.79			0.51			0.36				
Uniform Delay, d1		9.3			7.0			19.6				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		6.7			1.6			2.1				
Delay (s)		16.0			8.6			21.7				
Level of Service		B			A			C				
Approach Delay (s)		16.0			8.6			21.7			0.0	
Approach LOS		B			A			C			A	

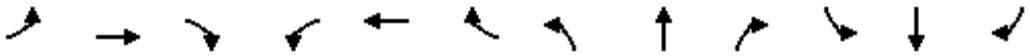
Intersection Summary			
HCM Average Control Delay	13.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	87.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	71	340	152	129	358	157	105	639	85	144	759	94
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	9	9	10	9
Total Lost time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.97	1.00	1.00	0.94	1.00	1.00	0.92
Flpb, ped/bikes		1.00	1.00		0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1982	1441		1949	1453	1546	3040	1280	1506	3069	1232
Flt Permitted		0.61	1.00		0.78	1.00	0.20	1.00	1.00	0.22	1.00	1.00
Satd. Flow (perm)		1210	1441		1537	1453	326	3040	1280	351	3069	1232
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	75	358	160	136	377	165	111	673	89	152	799	99
RTOR Reduction (vph)	0	0	82	0	0	104	0	0	64	0	0	69
Lane Group Flow (vph)	0	433	78	0	513	61	111	673	25	152	799	30
Confl. Peds. (#/hr)	24		45	45		24	36		24	24		36
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	2%	2%	2%	2%	3%	2%	3%	5%	1%	2%	4%	3%
Turn Type	pm+pt		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		34.0	34.0		26.0	26.0	24.0	20.0	20.0	26.0	21.0	21.0
Effective Green, g (s)		34.0	34.0		26.0	26.0	24.0	20.0	20.0	26.0	21.0	21.0
Actuated g/C Ratio		0.49	0.49		0.37	0.37	0.34	0.29	0.29	0.37	0.30	0.30
Clearance Time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		643	700		571	540	181	869	366	213	921	370
v/s Ratio Prot		c0.05					0.03	0.22		c0.05	c0.26	
v/s Ratio Perm		0.28	0.05		c0.33	0.04	0.18		0.02	0.21		0.02
v/c Ratio		0.67	0.11		0.90	0.11	0.61	0.77	0.07	0.71	0.87	0.08
Uniform Delay, d1		13.8	9.8		20.8	14.4	17.1	22.9	18.2	16.2	23.2	17.6
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		5.6	0.3		19.5	0.4	6.0	6.7	0.4	10.8	10.8	0.4
Delay (s)		19.3	10.1		40.3	14.9	23.2	29.6	18.6	27.0	34.0	18.0
Level of Service		B	B		D	B	C	C	B	C	C	B
Approach Delay (s)		16.8			34.1			27.7			31.5	
Approach LOS		B			C			C			C	

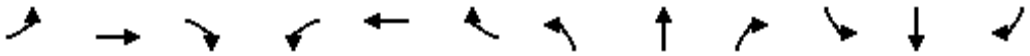
Intersection Summary			
HCM Average Control Delay	28.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	92.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	85	421	85	98	539	94	51	61	71	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		0.98			0.98			0.95				
Flt Protected		0.99			0.99			0.99				
Satd. Flow (prot)		1645			1649			1797				
Flt Permitted		0.83			0.85			0.99				
Satd. Flow (perm)		1367			1417			1797				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	94	468	94	109	599	104	57	68	79	0	0	0
RTOR Reduction (vph)	0	9	0	0	8	0	0	35	0	0	0	0
Lane Group Flow (vph)	0	647	0	0	804	0	0	169	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		40.0			40.0			17.0				
Effective Green, g (s)		40.0			40.0			17.0				
Actuated g/C Ratio		0.62			0.62			0.26				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		841			872			470				
v/s Ratio Prot												
v/s Ratio Perm		0.47			c0.57			0.09				
v/c Ratio		0.77			0.92			0.36				
Uniform Delay, d1		9.1			11.1			19.6				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		6.7			16.6			2.1				
Delay (s)		15.8			27.7			21.7				
Level of Service		B			C			C				
Approach Delay (s)		15.8			27.7			21.7			0.0	
Approach LOS		B			C			C			A	

Intersection Summary			
HCM Average Control Delay	22.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	72.2%	ICU Level of Service	C
Analysis Period (min)	15		

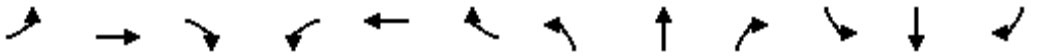
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	53	496	83	76	527	37	38	76	72	54	238	56
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	11	12	12	15	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.96		1.00	0.96		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		0.99	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.98	
Flt Protected		1.00	1.00		0.99	1.00		0.98	1.00		0.99	
Satd. Flow (prot)		1685	1382		1713	1417		1686	1455		1878	
Flt Permitted		0.89	1.00		0.84	1.00		0.82	1.00		0.94	
Satd. Flow (perm)		1504	1382		1442	1417		1412	1455		1774	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	56	522	87	80	555	39	40	80	76	57	251	59
RTOR Reduction (vph)	0	0	37	0	0	12	0	0	52	0	10	0
Lane Group Flow (vph)	0	578	50	0	635	27	0	120	24	0	357	0
Confl. Peds. (#/hr)	25		19	19		25	36		30	30		36
Confl. Bikes (#/hr)	1		2	2		1	3					3
Heavy Vehicles (%)	0%	3%	3%	0%	1%	0%	0%	1%	1%	0%	1%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Effective Green, g (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.32	0.32		0.32	
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Grp Cap (vph)		862	792		827	812		452	466		568	
v/s Ratio Prot												
v/s Ratio Perm		0.38	0.04		c0.44	0.02		0.08	0.02		c0.20	
v/c Ratio		0.67	0.06		0.77	0.03		0.27	0.05		0.63	
Uniform Delay, d1		11.1	7.1		12.2	7.0		18.9	17.6		21.7	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		4.1	0.2		6.8	0.1		1.4	0.2		5.2	
Delay (s)		15.2	7.2		19.0	7.0		20.4	17.8		26.9	
Level of Service		B	A		B	A		C	B		C	
Approach Delay (s)		14.2			18.3			19.4			26.9	
Approach LOS		B			B			B			C	

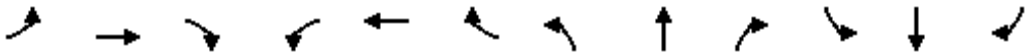
Intersection Summary			
HCM Average Control Delay	18.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	101.5%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	494	34	45	539	54	45	165	55	123	210	33
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	11	16	8	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	0.98	1.00		1.00	1.00		0.99	1.00	1.00	0.99	1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1533	3066		1652	3730		1585	1663	1370	1568	1680	1397
Flt Permitted	0.35	1.00		0.39	1.00		0.57	1.00	1.00	0.63	1.00	1.00
Satd. Flow (perm)	562	3066		675	3730		953	1663	1370	1043	1680	1397
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	66	549	38	50	599	60	50	183	61	137	233	37
RTOR Reduction (vph)	0	8	0	0	12	0	0	0	37	0	0	22
Lane Group Flow (vph)	66	579	0	50	647	0	50	183	24	137	233	15
Confl. Peds. (#/hr)	51		3	3		51	13		13	13		13
Heavy Vehicles (%)	2%	3%	3%	0%	2%	0%	0%	1%	2%	1%	0%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Effective Green, g (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	268	1462		322	1779		381	665	548	417	672	559
v/s Ratio Prot		c0.19			0.17			0.11			c0.14	
v/s Ratio Perm	0.12			0.07			0.05		0.02	0.13		0.01
v/c Ratio	0.25	0.40		0.16	0.36		0.13	0.28	0.04	0.33	0.35	0.03
Uniform Delay, d1	10.1	11.0		9.6	10.8		12.3	13.1	11.9	13.5	13.6	11.8
Progression Factor	1.00	1.00		1.00	1.00		0.85	0.90	0.75	0.59	0.59	0.26
Incremental Delay, d2	2.2	0.8		1.0	0.6		0.7	1.0	0.2	2.0	1.4	0.1
Delay (s)	12.3	11.8		10.6	11.3		11.1	12.9	9.1	9.9	9.4	3.1
Level of Service	B	B		B	B		B	B	A	A	A	A
Approach Delay (s)		11.8			11.3			11.8			9.0	
Approach LOS		B			B			B			A	

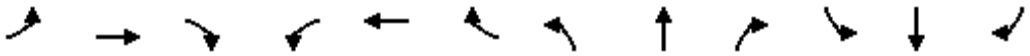
Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	421	81	73	396	67	57	180	64	89	245	80
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	11	10	11	11	10	11	11	10	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	0.97	1.00		0.95	1.00		0.99	1.00		0.96	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.96		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1329	3137		1520	3128		1580	2919		1452	2997	
Flt Permitted	0.44	1.00		0.42	1.00		0.53	1.00		0.59	1.00	
Satd. Flow (perm)	617	3137		667	3128		882	2919		907	2997	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	63	443	85	77	417	71	60	189	67	94	258	84
RTOR Reduction (vph)	0	0	0	0	0	0	0	39	0	0	42	0
Lane Group Flow (vph)	63	528	0	77	488	0	60	217	0	94	300	0
Confl. Peds. (#/hr)	112		99	99		112	23		53	53		23
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	16%	1%	0%	0%	1%	9%	0%	8%	2%	5%	5%	7%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.41	0.41		0.41	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	296	1506		320	1501		365	1207		375	1239	
v/s Ratio Prot		c0.17			0.16			0.07			0.10	
v/s Ratio Perm	0.10			0.12			0.07			c0.10		
v/c Ratio	0.21	0.35		0.24	0.33		0.16	0.18		0.25	0.24	
Uniform Delay, d1	11.3	12.2		11.5	12.0		13.8	13.9		14.4	14.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.6	0.6		1.8	0.6		1.0	0.3		1.6	0.5	
Delay (s)	12.9	12.8		13.2	12.6		14.8	14.3		16.0	14.8	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		12.8			12.7			14.4			15.1	
Approach LOS		B			B			B			B	

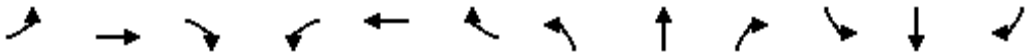
Intersection Summary			
HCM Average Control Delay	13.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	100	447	62	32	523	48	86	203	60	76	473	110
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	8	16	12	9	10	10	9	10	10
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1595	1653		1371	1973		1534	2998		1535	3012	
Flt Permitted	0.24	1.00		0.30	1.00		0.28	1.00		0.58	1.00	
Satd. Flow (perm)	402	1653		435	1973		451	2998		939	3012	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	105	471	65	34	551	51	91	214	63	80	498	116
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	105	536	0	34	602	0	91	277	0	80	614	0
Confl. Peds. (#/hr)	21		95	95		21	36		8	8		36
Confl. Bikes (#/hr)	2		3	3		2	2					2
Heavy Vehicles (%)	0%	2%	0%	7%	2%	0%	0%	3%	0%	0%	2%	1%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	43.9	39.3		40.7	37.7		26.7	21.8		26.7	21.8	
Effective Green, g (s)	43.9	37.3		40.7	35.7		26.7	19.8		26.7	19.8	
Actuated g/C Ratio	0.52	0.44		0.48	0.42		0.31	0.23		0.31	0.23	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	272	725		241	829		204	698		329	702	
v/s Ratio Prot	c0.02	c0.32		0.00	0.31		c0.03	0.09		0.01	c0.20	
v/s Ratio Perm	0.18			0.06			0.11			0.06		
v/c Ratio	0.39	0.74		0.14	0.73		0.45	0.40		0.24	0.87	
Uniform Delay, d1	23.8	19.8		20.5	20.6		29.2	27.6		21.9	31.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.9	6.7		0.3	5.5		1.6	1.7		0.4	14.3	
Delay (s)	24.7	26.5		20.8	26.1		30.8	29.2		22.2	45.7	
Level of Service	C	C		C	C		C	C		C	D	
Approach Delay (s)		26.2			25.8			29.6			43.0	
Approach LOS		C			C			C			D	

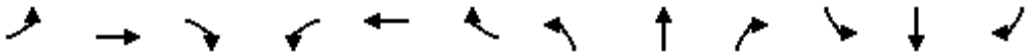
Intersection Summary			
HCM Average Control Delay	31.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	79.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	77	399	65	117	510	118	67	158	58	127	367	82
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	11	11	11	11	12	12	10	10	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		0.99	1.00	
Frt		0.98			0.98		1.00	0.96		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3681			3131		1652	3237		1549	3027	
Flt Permitted		0.71			0.72		0.42	1.00		0.60	1.00	
Satd. Flow (perm)		2616			2271		737	3237		983	3027	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	86	443	72	130	567	131	74	176	64	141	408	91
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	601	0	0	828	0	74	240	0	141	499	0
Confl. Peds. (#/hr)	23		30	30		23	1		20	20		1
Confl. Bikes (#/hr)	3					3						
Heavy Vehicles (%)	0%	3%	0%	2%	2%	0%	0%	1%	0%	2%	2%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.0			33.0		32.0	32.0		32.0	32.0	
Effective Green, g (s)		34.0			34.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio		0.45			0.45		0.44	0.44		0.44	0.44	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		1186			1030		324	1424		433	1332	
v/s Ratio Prot								0.07			c0.16	
v/s Ratio Perm		0.23			c0.36		0.10			0.14		
v/c Ratio		0.51			0.80		0.23	0.17		0.33	0.37	
Uniform Delay, d1		14.5			17.6		13.1	12.7		13.7	14.1	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.5			6.7		1.6	0.3		2.0	0.8	
Delay (s)		16.1			24.3		14.7	13.0		15.7	14.9	
Level of Service		B			C		B	B		B	B	
Approach Delay (s)		16.1			24.3			13.4			15.1	
Approach LOS		B			C			B			B	

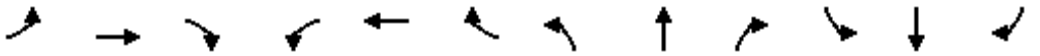
Intersection Summary			
HCM Average Control Delay	18.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	98	877	6	20	585	249	1	1	9	213	1	80
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	12	12	12	12	12	13	13	13
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	1.00		1.00	1.00	0.85		0.89			0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00		1.00			0.97	
Satd. Flow (prot)	1605	3206		1660	3320	1485		1545			3176	
Flt Permitted	0.38	1.00		0.25	1.00	1.00		0.98			0.77	
Satd. Flow (perm)	647	3206		432	3320	1485		1519			2533	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	109	974	7	22	650	277	1	1	10	237	1	89
RTOR Reduction (vph)	0	0	0	0	0	103	0	7	0	0	52	0
Lane Group Flow (vph)	109	981	0	22	650	174	0	5	0	0	275	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	46.1	46.1		46.1	46.1	46.1		19.5			19.5	
Effective Green, g (s)	46.1	46.1		46.1	46.1	46.1		19.5			19.5	
Actuated g/C Ratio	0.63	0.63		0.63	0.63	0.63		0.26			0.26	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		8.0			8.0	
Lane Grp Cap (vph)	405	2008		271	2080	930		402			671	
v/s Ratio Prot		c0.31			0.20							
v/s Ratio Perm	0.17			0.05		0.12		0.00			c0.11	
v/c Ratio	0.27	0.49		0.08	0.31	0.19		0.01			0.41	
Uniform Delay, d1	6.2	7.4		5.4	6.4	5.8		19.9			22.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	1.6	0.9		0.6	0.4	0.4		0.0			1.7	
Delay (s)	7.8	8.3		6.0	6.8	6.3		20.0			24.0	
Level of Service	A	A		A	A	A		B			C	
Approach Delay (s)		8.2			6.6			20.0			24.0	
Approach LOS		A			A			B			C	

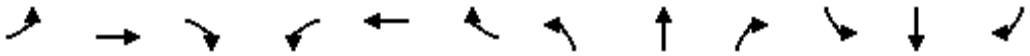
Intersection Summary			
HCM Average Control Delay	9.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	73.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	131	228	124	94	163	56	144	907	90	125	825	104
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	9	12	10	10	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.95		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1560	1505		1563	1585		1493	3069	1337	1523	3099	1318
Flt Permitted	0.45	1.00		0.21	1.00		0.20	1.00	1.00	0.16	1.00	1.00
Satd. Flow (perm)	743	1505		340	1585		317	3069	1337	263	3099	1318
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	138	240	131	99	172	59	152	955	95	132	868	109
RTOR Reduction (vph)	0	23	0	0	15	0	0	0	40	0	0	51
Lane Group Flow (vph)	138	348	0	99	216	0	152	955	55	132	868	58
Confl. Peds. (#/hr)	10		13	13		10	18		7	7		18
Confl. Bikes (#/hr)	2					2	2		1	1		2
Heavy Vehicles (%)	2%	1%	1%	2%	1%	2%	3%	4%	0%	1%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	28.0	21.0		28.0	21.0		42.0	35.0	35.0	42.0	35.0	35.0
Effective Green, g (s)	26.0	22.0		26.0	22.0		40.0	35.0	35.0	40.0	35.0	35.0
Actuated g/C Ratio	0.31	0.26		0.31	0.26		0.47	0.41	0.41	0.47	0.41	0.41
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	285	390		190	410		232	1264	551	213	1276	543
v/s Ratio Prot	0.03	c0.23		c0.04	0.14		c0.05	c0.31		0.04	0.28	
v/s Ratio Perm	0.11			0.12			0.26		0.04	0.25		0.04
v/c Ratio	0.48	0.89		0.52	0.53		0.66	0.76	0.10	0.62	0.68	0.11
Uniform Delay, d1	22.7	30.4		22.9	27.0		14.7	21.3	15.3	15.0	20.4	15.4
Progression Factor	1.00	1.00		1.00	1.00		0.67	0.82	0.53	1.00	1.00	1.00
Incremental Delay, d2	5.8	25.2		9.9	4.8		12.2	3.8	0.3	12.8	2.9	0.4
Delay (s)	28.4	55.5		32.7	31.8		22.0	21.3	8.5	27.8	23.4	15.8
Level of Service	C	E		C	C		C	C	A	C	C	B
Approach Delay (s)		48.2			32.1			20.4			23.1	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM Average Control Delay	27.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	73.7%	ICU Level of Service	D
Analysis Period (min)	15		

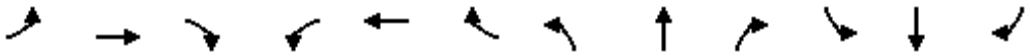
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	22	181	35	20	173	21	25	149	40	47	255	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	14	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.99			1.00			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.99			0.97			0.98	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1839			1849			1939			1974	
Flt Permitted		0.97			0.96			0.94			0.94	
Satd. Flow (perm)		1783			1791			1837			1868	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	23	187	36	21	178	22	26	154	41	48	263	52
RTOR Reduction (vph)	0	9	0	0	6	0	0	12	0	0	9	0
Lane Group Flow (vph)	0	237	0	0	215	0	0	209	0	0	354	0
Confl. Peds. (#/hr)	18		34	34		18	16		19	19		16
Confl. Bikes (#/hr)			6	6			1		4	4		1
Heavy Vehicles (%)	0%	1%	0%	5%	1%	0%	0%	2%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.42			0.42			0.46			0.46	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		741			744			848			862	
v/s Ratio Prot												
v/s Ratio Perm		c0.13			0.12			0.11			c0.19	
v/c Ratio		0.32			0.29			0.25			0.41	
Uniform Delay, d1		12.8			12.6			10.6			11.6	
Progression Factor		1.00			0.69			1.17			1.00	
Incremental Delay, d2		1.1			1.0			0.7			1.4	
Delay (s)		13.9			9.7			13.1			13.1	
Level of Service		B			A			B			B	
Approach Delay (s)		13.9			9.7			13.1			13.1	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	12.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.1%	ICU Level of Service	A
Analysis Period (min)	15		

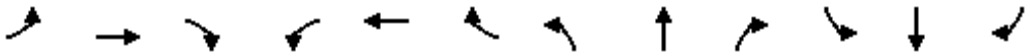
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	193	38	25	180	19	49	200	31	43	214	39
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.97	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1496	3059		1576	3119		1518	3119		1550	3076	
Flt Permitted	0.61	1.00		0.59	1.00		0.58	1.00		0.59	1.00	
Satd. Flow (perm)	966	3059		985	3119		926	3119		968	3076	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	214	42	28	200	21	54	222	34	48	238	43
RTOR Reduction (vph)	0	25	0	0	12	0	0	14	0	0	18	0
Lane Group Flow (vph)	27	231	0	28	209	0	54	242	0	48	263	0
Confl. Peds. (#/hr)	20		17	17		20	2					2
Confl. Bikes (#/hr)	32		36	36		32	22		25	25		22
Heavy Vehicles (%)	4%	1%	0%	0%	0%	0%	5%	0%	0%	3%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0		39.0	39.0		39.0	39.0	
Effective Green, g (s)	19.0	19.0		19.0	19.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.58	0.58		0.58	0.58	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	282	894		288	912		541	1823		566	1798	
v/s Ratio Prot		c0.08			0.07			0.08			c0.09	
v/s Ratio Perm	0.03			0.03			0.06			0.05		
v/c Ratio	0.10	0.26		0.10	0.23		0.10	0.13		0.08	0.15	
Uniform Delay, d1	16.7	17.6		16.8	17.4		6.0	6.1		5.9	6.1	
Progression Factor	0.94	0.97		0.73	0.73		1.36	1.37		0.38	0.34	
Incremental Delay, d2	0.6	0.7		0.7	0.6		0.4	0.1		0.3	0.2	
Delay (s)	16.4	17.7		12.9	13.3		8.4	8.5		2.5	2.3	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		17.6			13.3			8.4			2.3	
Approach LOS		B			B			A			A	

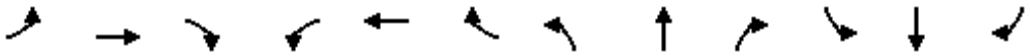
Intersection Summary			
HCM Average Control Delay	10.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.18		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



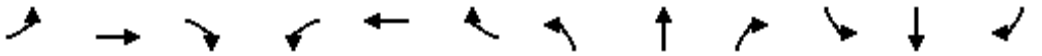
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	67	168	41	25	159	38	27	247	16	40	322	33
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	9	9	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.97		1.00	0.97			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1555	3058		1525	2937			1922			1938	
Flt Permitted	0.61	1.00		0.61	1.00			0.94			0.94	
Satd. Flow (perm)	1007	3058		974	2937			1823			1840	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	74	187	46	28	177	42	30	274	18	44	358	37
RTOR Reduction (vph)	0	28	0	0	25	0	0	3	0	0	5	0
Lane Group Flow (vph)	74	205	0	28	194	0	0	319	0	0	434	0
Confl. Peds. (#/hr)	11		17	17		11	26		7	7		26
Heavy Vehicles (%)	2%	1%	0%	0%	1%	3%	4%	5%	0%	0%	4%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Effective Green, g (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40			0.48			0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	403	1223		390	1175			869			878	
v/s Ratio Prot		0.07			0.07							
v/s Ratio Perm	c0.07			0.03				0.17			c0.24	
v/c Ratio	0.18	0.17		0.07	0.16			0.37			0.49	
Uniform Delay, d1	12.6	12.5		12.0	12.5			10.8			11.6	
Progression Factor	1.05	1.00		0.79	0.79			1.23			1.00	
Incremental Delay, d2	1.0	0.3		0.3	0.3			1.2			2.0	
Delay (s)	14.2	12.8		9.9	10.2			14.4			13.6	
Level of Service	B	B		A	B			B			B	
Approach Delay (s)		13.2			10.1			14.4			13.6	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



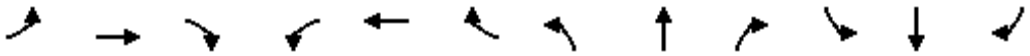
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	47	111	28	20	161	27	41	235	11	33	364	57
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	16	12	10	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.97		1.00	0.98			0.99			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			1.00	
Satd. Flow (prot)	1652	1970		1584	1975			1981			1979	
Flt Permitted	0.57	1.00		0.65	1.00			0.90			0.96	
Satd. Flow (perm)	986	1970		1087	1975			1792			1912	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	52	123	31	22	179	30	46	261	12	37	404	63
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	52	154	0	22	209	0	0	319	0	0	504	0
Confl. Peds. (#/hr)	1		10	10		1	2		5	5		2
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	2%	0%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Effective Green, g (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Actuated g/C Ratio	0.31	0.31		0.31	0.31			0.57			0.57	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	303	606		334	608			1020			1088	
v/s Ratio Prot		0.08			c0.11							
v/s Ratio Perm	0.05			0.02				0.18			c0.26	
v/c Ratio	0.17	0.25		0.07	0.34			0.31			0.46	
Uniform Delay, d1	16.4	16.9		15.9	17.4			7.3			8.2	
Progression Factor	0.83	0.81		0.96	0.99			0.84			1.00	
Incremental Delay, d2	1.2	1.0		0.4	1.5			0.8			1.4	
Delay (s)	14.8	14.6		15.6	18.7			6.9			9.6	
Level of Service	B	B		B	B			A			A	
Approach Delay (s)		14.7			18.4			6.9			9.6	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



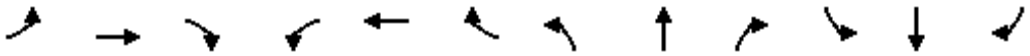
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	54	13	97	2	5	10	62	235	5	5	466	76
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	10	11	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98		1.00	0.98		1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.87		1.00	0.90		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1695	1727		1702	1808		1594	1647	1428	1653	2000	1496
Flt Permitted	0.75	1.00		0.68	1.00		0.39	1.00	1.00	0.59	1.00	1.00
Satd. Flow (perm)	1332	1727		1216	1808		660	1647	1428	1030	2000	1496
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	60	14	108	2	6	11	69	261	6	6	518	84
RTOR Reduction (vph)	0	78	0	0	8	0	0	0	2	0	0	28
Lane Group Flow (vph)	60	44	0	2	9	0	69	261	4	6	518	56
Confl. Peds. (#/hr)	5		5	5		5	3					3
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	0%	2%	0%	0%	2%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	17.0	17.0		17.0	17.0		39.0	39.0	39.0	39.0	39.0	39.0
Effective Green, g (s)	18.0	18.0		18.0	18.0		39.0	39.0	39.0	39.0	39.0	39.0
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.60	0.60	0.60	0.60	0.60	0.60
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	369	478		337	501		396	988	857	618	1200	898
v/s Ratio Prot		0.03			0.01			0.16			c0.26	
v/s Ratio Perm	c0.05			0.00			0.10		0.00	0.01		0.04
v/c Ratio	0.16	0.09		0.01	0.02		0.17	0.26	0.00	0.01	0.43	0.06
Uniform Delay, d1	17.8	17.4		17.0	17.1		5.8	6.2	5.2	5.2	7.0	5.4
Progression Factor	1.39	2.73		1.00	1.00		1.20	1.12	1.49	1.00	1.00	1.00
Incremental Delay, d2	0.9	0.4		0.0	0.1		0.7	0.5	0.0	0.0	1.1	0.1
Delay (s)	25.7	48.0		17.1	17.1		7.7	7.4	7.8	5.3	8.2	5.5
Level of Service	C	D		B	B		A	A	A	A	A	A
Approach Delay (s)		40.7			17.1			7.4			7.8	
Approach LOS		D			B			A			A	

Intersection Summary			
HCM Average Control Delay	13.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	253	163	178	204	0	0	0	0	110	470	377
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)		4.0		3.0	3.0					5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	
Frpb, ped/bikes		0.99		1.00	1.00					1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Frt		0.94		1.00	1.00					1.00	0.93	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		2905		1693	3288					1503	3021	
Flt Permitted		1.00		0.41	1.00					0.95	1.00	
Satd. Flow (perm)		2905		722	3288					1503	3021	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	266	172	187	215	0	0	0	0	116	495	397
RTOR Reduction (vph)	0	103	0	0	0	0	0	0	0	0	141	0
Lane Group Flow (vph)	0	335	0	187	215	0	0	0	0	116	751	0
Confl. Peds. (#/hr)	18		3	3		18	1					1
Heavy Vehicles (%)	0%	4%	1%	1%	4%	0%	0%	0%	0%	10%	2%	1%
Turn Type				D.P+P						Split		
Protected Phases		8		7	7 8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		33.0		53.0	56.0					37.0	37.0	
Effective Green, g (s)		33.0		53.0	56.0					37.0	37.0	
Actuated g/C Ratio		0.32		0.52	0.55					0.36	0.36	
Clearance Time (s)		4.0		3.0						5.0	5.0	
Lane Grp Cap (vph)		940		566	1805					545	1096	
v/s Ratio Prot		c0.12		c0.06	0.07					0.08	c0.25	
v/s Ratio Perm				0.11								
v/c Ratio		0.36		0.33	0.12					0.21	0.68	
Uniform Delay, d1		26.4		13.5	11.1					22.4	27.6	
Progression Factor		1.00		2.20	2.13					1.00	1.00	
Incremental Delay, d2		1.1		1.4	0.1					0.9	3.5	
Delay (s)		27.4		31.0	23.8					23.3	31.0	
Level of Service		C		C	C					C	C	
Approach Delay (s)		27.4			27.1			0.0			30.2	
Approach LOS		C			C			A			C	

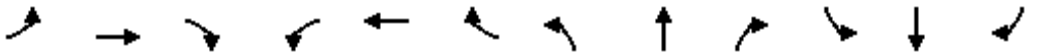
Intersection Summary			
HCM Average Control Delay	28.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	102.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	141	222	0	0	305	113	77	539	233	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	9	12	13	12	13	12	12	12
Total Lost time (s)	4.0	4.0			4.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.96		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1674	3196			2850		1767	1782	1560			
Flt Permitted	0.36	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	632	3196			2850		1767	1782	1560			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	148	234	0	0	321	119	81	567	245	0	0	0
RTOR Reduction (vph)	0	0	0	0	37	0	0	0	168	0	0	0
Lane Group Flow (vph)	148	234	0	0	403	0	81	567	77	0	0	0
Confl. Peds. (#/hr)	9		13	13		9			1	1		
Confl. Bikes (#/hr)	3					3						
Heavy Vehicles (%)	2%	7%	0%	0%	3%	1%	0%	1%	0%	0%	0%	0%
Turn Type	pm+pt						custom		Perm			
Protected Phases	4	1 4			1		2	2				
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	59.0	63.0			26.0		30.0	30.0	30.0			
Effective Green, g (s)	59.0	63.0			26.0		30.0	30.0	30.0			
Actuated g/C Ratio	0.58	0.62			0.25		0.29	0.29	0.29			
Clearance Time (s)	4.0				4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	703	1974			726		520	524	459			
v/s Ratio Prot	c0.07	0.07			c0.14		0.05	c0.32				
v/s Ratio Perm	0.05								0.05			
v/c Ratio	0.21	0.12			0.55		0.16	1.08	0.17			
Uniform Delay, d1	10.3	8.0			33.0		26.6	36.0	26.7			
Progression Factor	0.42	0.43			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.6	0.1			3.0		0.6	63.3	0.8			
Delay (s)	4.9	3.6			36.0		27.3	99.3	27.5			
Level of Service	A	A			D		C	F	C			
Approach Delay (s)		4.1			36.0			73.1			0.0	
Approach LOS		A			D			E			A	

Intersection Summary			
HCM Average Control Delay	48.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	102.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	62.4%	ICU Level of Service	B
Analysis Period (min)	15		

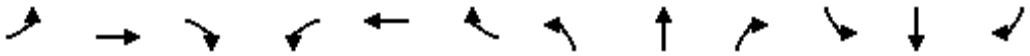
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	514	479	81	534	0	0	0	0	11	434	285
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	11	12	12	12	12	10	10	12
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	1.00
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.93		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3098		1710	3306					1596	3192	1530
Flt Permitted		1.00		0.11	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3098		200	3306					1596	3192	1530
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	535	499	84	556	0	0	0	0	11	452	297
RTOR Reduction (vph)	0	168	0	0	0	0	0	0	0	0	0	196
Lane Group Flow (vph)	0	866	0	84	556	0	0	0	0	11	452	101
Confl. Peds. (#/hr)	8		8	8		8	3					3
Confl. Bikes (#/hr)	9					9			61	61		
Heavy Vehicles (%)	0%	1%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type				pm+pt						Split		Prot
Protected Phases		8		7	7 8					6	6	6
Permitted Phases				7 8								
Actuated Green, G (s)		36.0		54.0	58.0					34.0	34.0	34.0
Effective Green, g (s)		36.0		54.0	58.0					34.0	34.0	34.0
Actuated g/C Ratio		0.36		0.54	0.58					0.34	0.34	0.34
Clearance Time (s)		4.0		4.0						4.0	4.0	4.0
Lane Grp Cap (vph)		1115		380	1917					543	1085	520
v/s Ratio Prot		c0.28		0.04	c0.17					0.01	c0.14	0.07
v/s Ratio Perm				0.08								
v/c Ratio		0.78		0.22	0.29					0.02	0.42	0.19
Uniform Delay, d1		28.4		14.4	10.6					21.9	25.4	23.3
Progression Factor		1.00		1.01	1.19					1.00	1.00	1.00
Incremental Delay, d2		5.3		0.9	0.3					0.1	1.2	0.8
Delay (s)		33.8		15.5	12.9					22.0	26.6	24.2
Level of Service		C		B	B					C	C	C
Approach Delay (s)		33.8			13.2			0.0			25.5	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM Average Control Delay	25.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.5%	ICU Level of Service	F
Analysis Period (min)	15		

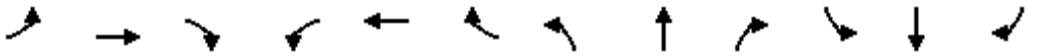
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	419	106	0	0	150	6	465	480	58	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	10	12	11	11	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	0.91	0.91			0.95		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.99		1.00	1.00	0.85			
Flt Protected	0.95	0.97			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1469	3110			3170		1555	1653	1530			
Flt Permitted	0.64	0.71			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	992	2290			3170		1555	1653	1530			
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	432	109	0	0	155	6	479	495	60	0	0	0
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	38	0	0	0
Lane Group Flow (vph)	216	325	0	0	158	0	479	495	22	0	0	0
Confl. Peds. (#/hr)	13		6	6		13			8	8		
Confl. Bikes (#/hr)	1					1			2	2		
Heavy Vehicles (%)	2%	1%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%
Turn Type	pm+pt						custom		custom			
Protected Phases	4	1 4			1		2	2	2			
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Effective Green, g (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Actuated g/C Ratio	0.51	0.51			0.15		0.37	0.37	0.37			
Clearance Time (s)	4.0				4.0		4.0	4.0	4.0			
Lane Grp Cap (vph)	678	1463			476		575	612	566			
v/s Ratio Prot	c0.11	0.08			c0.05		c0.31	0.30	0.01			
v/s Ratio Perm	0.05	0.03										
v/c Ratio	0.32	0.22			0.33		0.83	0.81	0.04			
Uniform Delay, d1	14.1	13.5			38.0		28.7	28.3	20.1			
Progression Factor	0.24	0.25			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.7	0.2			1.9		13.3	11.0	0.1			
Delay (s)	4.1	3.6			39.9		42.0	39.3	20.3			
Level of Service	A	A			D		D	D	C			
Approach Delay (s)		3.8			39.9			39.5			0.0	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM Average Control Delay	28.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.5%	ICU Level of Service	F
Analysis Period (min)	15		

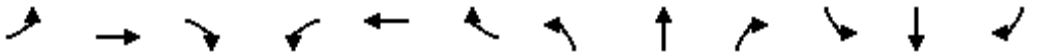
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	78	220	103	153	273	121	84	699	87	102	884	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	9	10	9	9	10	9
Total Lost time (s)		4.0			4.0		4.0	3.5	4.0	4.0	3.5	4.0
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		0.99			0.99		1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.96			0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		2940			2929		1508	3069	1309	1508	3099	1298
Flt Permitted		0.72			0.72		0.16	1.00	1.00	0.25	1.00	1.00
Satd. Flow (perm)		2137			2152		254	3069	1309	401	3099	1298
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	81	229	107	159	284	126	88	728	91	106	921	68
RTOR Reduction (vph)	0	40	0	0	31	0	0	0	56	0	0	33
Lane Group Flow (vph)	0	377	0	0	538	0	88	728	35	106	921	35
Confl. Peds. (#/hr)	35		30	30		35	34		8	8		34
Confl. Bikes (#/hr)	1					1	1					1
Heavy Vehicles (%)	1%	4%	0%	1%	3%	3%	2%	4%	2%	2%	3%	2%
Turn Type	pm+pt			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		35.0			27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)		36.0			28.0		36.0	33.5	33.0	36.0	33.5	33.0
Actuated g/C Ratio		0.42			0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)		5.0			5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)		962			709		167	1210	508	222	1221	504
v/s Ratio Prot		c0.03					c0.02	0.24		0.02	c0.30	
v/s Ratio Perm		0.14			c0.25		0.20		0.03	0.18		0.03
v/c Ratio		0.39			0.76		0.53	0.60	0.07	0.48	0.75	0.07
Uniform Delay, d1		16.9			25.5		16.7	20.5	16.3	16.0	22.2	16.3
Progression Factor		1.00			1.00		1.36	0.69	0.62	1.11	1.16	1.74
Incremental Delay, d2		1.2			7.5		10.7	2.1	0.2	5.2	3.1	0.2
Delay (s)		18.1			33.0		33.5	16.2	10.4	22.9	29.0	28.6
Level of Service		B			C		C	B	B	C	C	C
Approach Delay (s)		18.1			33.0			17.3			28.4	
Approach LOS		B			C			B			C	

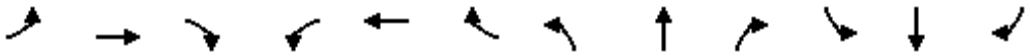
Intersection Summary			
HCM Average Control Delay	24.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	74.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	76	327	0	0	424	88	53	44	34	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.98			0.96				
Flt Protected		0.99			1.00			0.98				
Satd. Flow (prot)		1731			1707			1653				
Flt Permitted		0.83			1.00			0.98				
Satd. Flow (perm)		1453			1707			1653				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	84	363	0	0	471	98	59	49	38	0	0	0
RTOR Reduction (vph)	0	0	0	0	12	0	0	20	0	0	0	0
Lane Group Flow (vph)	0	447	0	0	557	0	0	126	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		38.0			38.0			19.0				
Effective Green, g (s)		38.0			38.0			19.0				
Actuated g/C Ratio		0.58			0.58			0.29				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		849			998			483				
v/s Ratio Prot					c0.33							
v/s Ratio Perm		0.31						0.08				
v/c Ratio		0.53			0.56			0.26				
Uniform Delay, d1		8.1			8.3			17.6				
Progression Factor		1.00			0.76			1.00				
Incremental Delay, d2		2.3			2.0			1.3				
Delay (s)		10.4			8.3			18.9				
Level of Service		B			A			B				
Approach Delay (s)		10.4			8.3			18.9			0.0	
Approach LOS		B			A			B			A	

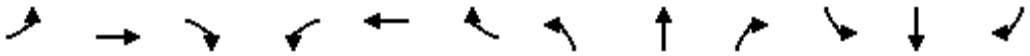
Intersection Summary			
HCM Average Control Delay	10.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	21	384	39	39	370	50	31	118	39	53	150	43
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	10	12	12	10	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			0.98	
Flpb, ped/bikes		1.00			1.00			0.99			1.00	
Frt		0.99			0.99			0.97			0.97	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1955			1941			2969			2985	
Flt Permitted		0.97			0.94			0.88			0.86	
Satd. Flow (perm)		1900			1825			2647			2591	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	23	427	43	43	411	56	34	131	43	59	167	48
RTOR Reduction (vph)	0	5	0	0	7	0	0	25	0	0	27	0
Lane Group Flow (vph)	0	488	0	0	503	0	0	183	0	0	247	0
Confl. Peds. (#/hr)	32		25	25		32	59		24	24		59
Confl. Bikes (#/hr)	3		2	2		3	4		2	2		4
Heavy Vehicles (%)	0%	3%	0%	3%	3%	0%	0%	0%	7%	4%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0			27.0			27.0	
Effective Green, g (s)		30.0			30.0			27.0			27.0	
Actuated g/C Ratio		0.46			0.46			0.42			0.42	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		877			842			1100			1076	
v/s Ratio Prot												
v/s Ratio Perm		0.26			c0.28			0.07			c0.10	
v/c Ratio		0.56			0.60			0.17			0.23	
Uniform Delay, d1		12.7			13.0			11.9			12.3	
Progression Factor		0.61			0.40			1.07			0.43	
Incremental Delay, d2		2.4			2.8			0.3			0.5	
Delay (s)		10.1			8.0			13.1			5.8	
Level of Service		B			A			B			A	
Approach Delay (s)		10.1			8.0			13.1			5.8	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM Average Control Delay	9.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	75.8%	ICU Level of Service	D
Analysis Period (min)	15		

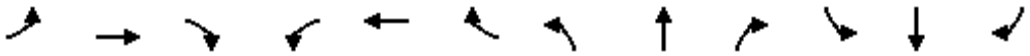
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	51	330	49	81	467	86	45	219	98	83	227	64
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	9	10	10	9	10	10	12	10	10	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		0.99	1.00		0.99	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.95		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1510	3036		1573	3077		1587	2962		1585	3072	
Flt Permitted	0.32	1.00		0.46	1.00		0.56	1.00		0.54	1.00	
Satd. Flow (perm)	502	3036		760	3077		929	2962		903	3072	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	57	367	54	90	519	96	50	243	109	92	252	71
RTOR Reduction (vph)	0	18	0	0	23	0	0	50	0	0	33	0
Lane Group Flow (vph)	57	403	0	90	592	0	50	302	0	92	290	0
Confl. Peds. (#/hr)	20		31	31		20	16		20	20		16
Confl. Bikes (#/hr)							1		3	3		1
Heavy Vehicles (%)	5%	3%	0%	0%	1%	0%	0%	2%	2%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	170	1028		257	1041		500	1595		486	1654	
v/s Ratio Prot		0.13			c0.19			0.10			0.09	
v/s Ratio Perm	0.11			0.12			0.05			c0.10		
v/c Ratio	0.34	0.39		0.35	0.57		0.10	0.19		0.19	0.18	
Uniform Delay, d1	16.0	16.4		16.1	17.6		7.3	7.7		7.7	7.6	
Progression Factor	0.71	0.67		0.97	0.97		0.95	0.98		1.08	1.08	
Incremental Delay, d2	4.6	1.0		3.7	2.2		0.4	0.3		0.9	0.2	
Delay (s)	16.0	12.0		19.3	19.2		7.3	7.8		9.2	8.5	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		12.5			19.2			7.7			8.6	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	13.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.7%	ICU Level of Service	A
Analysis Period (min)	15		

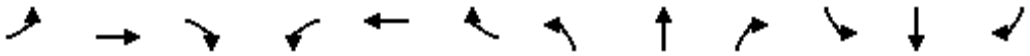
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	348	78	87	418	50	46	231	58	46	279	64
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	9	10	9	9	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			0.98	
Flpb, ped/bikes	0.98	1.00		0.99	1.00			0.99			1.00	
Frt	1.00	0.97		1.00	0.98			0.97			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1509	3018		1430	3723			3485			3521	
Flt Permitted	0.45	1.00		0.48	1.00			0.86			0.88	
Satd. Flow (perm)	708	3018		715	3723			3028			3119	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	62	366	82	92	440	53	48	243	61	48	294	67
RTOR Reduction (vph)	0	29	0	0	14	0	0	27	0	0	25	0
Lane Group Flow (vph)	62	419	0	92	479	0	0	325	0	0	384	0
Confl. Peds. (#/hr)	38		17	17		38	125		53	53		125
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	3%	0%	7%	2%	0%	0%	6%	10%	2%	5%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Effective Green, g (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48			0.40			0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	338	1439		341	1776			1211			1248	
v/s Ratio Prot		c0.14			0.13							
v/s Ratio Perm	0.09			0.13				0.11			c0.12	
v/c Ratio	0.18	0.29		0.27	0.27			0.27			0.31	
Uniform Delay, d1	9.7	10.3		10.2	10.2			13.1			13.3	
Progression Factor	1.61	1.76		1.11	1.10			1.00			0.74	
Incremental Delay, d2	1.1	0.5		1.7	0.3			0.5			0.6	
Delay (s)	16.8	18.6		13.0	11.5			13.7			10.4	
Level of Service	B	B		B	B			B			B	
Approach Delay (s)		18.4			11.8			13.7			10.4	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.4%	ICU Level of Service	B
Analysis Period (min)	15		

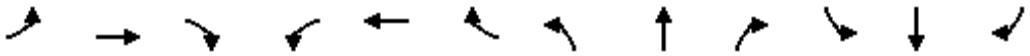
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	86	294	92	92	293	92	120	82	47	47	82	119
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	16	12	12	16	12
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		0.95			1.00			1.00	
Frt		1.00	0.85		0.97			0.97			0.94	
Flt Protected		0.99	1.00		0.99			0.98			0.99	
Satd. Flow (prot)		1670	1436		3087			1885			1835	
Flt Permitted		0.79	1.00		0.79			0.68			0.90	
Satd. Flow (perm)		1336	1436		2454			1303			1674	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	96	327	102	102	326	102	133	91	52	52	91	132
RTOR Reduction (vph)	0	0	49	0	32	0	0	13	0	0	51	0
Lane Group Flow (vph)	0	423	53	0	498	0	0	263	0	0	224	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		34.0	34.0		34.0			21.0			21.0	
Effective Green, g (s)		34.0	34.0		34.0			21.0			21.0	
Actuated g/C Ratio		0.52	0.52		0.52			0.32			0.32	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Grp Cap (vph)		699	751		1284			421			541	
v/s Ratio Prot												
v/s Ratio Perm		c0.32	0.04		0.20			c0.20			0.13	
v/c Ratio		0.61	0.07		0.39			0.63			0.41	
Uniform Delay, d1		10.8	7.7		9.3			18.7			17.2	
Progression Factor		1.87	4.74		0.53			1.00			1.00	
Incremental Delay, d2		3.8	0.2		0.9			6.8			2.3	
Delay (s)		24.0	36.6		5.8			25.5			19.5	
Level of Service		C	D		A			C			B	
Approach Delay (s)		26.5			5.8			25.5			19.5	
Approach LOS		C			A			C			B	

Intersection Summary			
HCM Average Control Delay	18.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	79.9%	ICU Level of Service	D
Analysis Period (min)	15		

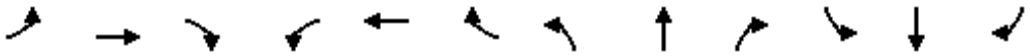
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	55	281	28	26	327	60	26	133	47	62	146	63
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	15	8	16	8	8	16	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.98			0.97			0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1444	3026		1566	3019			3582			3599	
Flt Permitted	0.48	1.00		0.55	1.00			0.90			0.84	
Satd. Flow (perm)	736	3026		899	3019			3238			3069	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	61	312	31	29	363	67	29	148	52	69	162	70
RTOR Reduction (vph)	0	11	0	0	23	0	0	30	0	0	41	0
Lane Group Flow (vph)	61	332	0	29	407	0	0	199	0	0	260	0
Confl. Peds. (#/hr)	24		47	47		24	9		36	36		9
Confl. Bikes (#/hr)			4	4			1					1
Heavy Vehicles (%)	9%	4%	0%	0%	3%	0%	0%	1%	10%	0%	0%	8%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	30.0	30.0		30.0	30.0			27.0			27.0	
Effective Green, g (s)	30.0	30.0		30.0	30.0			27.0			27.0	
Actuated g/C Ratio	0.46	0.46		0.46	0.46			0.42			0.42	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	340	1397		415	1393			1345			1275	
v/s Ratio Prot		0.11			c0.13							
v/s Ratio Perm	0.08			0.03				0.06			c0.08	
v/c Ratio	0.18	0.24		0.07	0.29			0.15			0.20	
Uniform Delay, d1	10.3	10.6		9.7	10.9			11.8			12.1	
Progression Factor	0.67	0.68		1.31	1.20			0.93			0.41	
Incremental Delay, d2	0.9	0.3		0.1	0.2			0.2			0.3	
Delay (s)	7.8	7.5		12.9	13.3			11.2			5.4	
Level of Service	A	A		B	B			B			A	
Approach Delay (s)		7.5			13.3			11.2			5.4	
Approach LOS		A			B			B			A	

Intersection Summary			
HCM Average Control Delay	9.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

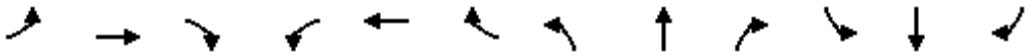


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	47	450	26	86	507	222	24	124	115	340	261	82
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.99			0.96			0.93			0.98	
Flt Protected		1.00			0.99			1.00			0.98	
Satd. Flow (prot)		3281			3168			3089			3181	
Flt Permitted		0.75			0.78			0.88			0.70	
Satd. Flow (perm)		2462			2487			2739			2269	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	52	500	29	96	563	247	27	138	128	378	290	91
RTOR Reduction (vph)	0	6	0	0	59	0	0	67	0	0	16	0
Lane Group Flow (vph)	0	575	0	0	847	0	0	226	0	0	743	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		24.0			24.0			31.0			23.0	
Effective Green, g (s)		24.0			24.0			31.0			23.0	
Actuated g/C Ratio		0.37			0.37			0.48			0.35	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		909			918			1333			803	
v/s Ratio Prot								c0.01				
v/s Ratio Perm		0.23			c0.34			0.07			c0.33	
v/c Ratio		0.63			0.92			0.17			1.02dl	
Uniform Delay, d1		16.9			19.6			9.7			20.2	
Progression Factor		1.65			1.00			1.00			0.77	
Incremental Delay, d2		3.3			16.0			0.3			17.5	
Delay (s)		31.1			35.6			10.0			33.1	
Level of Service		C			D			A			C	
Approach Delay (s)		31.1			35.6			10.0			33.1	
Approach LOS		C			D			A			C	

Intersection Summary			
HCM Average Control Delay	30.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	86.1%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

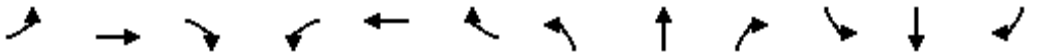
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	899	132	48	794	0	82	0	36	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	10	10	12	12	12	12	12	12	12
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			1.00				
Frt		0.98			1.00			0.96				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		3039			3090			1619				
Flt Permitted		1.00			0.80			0.79				
Satd. Flow (perm)		3039			2485			1328				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	999	147	53	882	0	91	0	40	0	0	0
RTOR Reduction (vph)	0	16	0	0	0	0	0	17	0	0	0	0
Lane Group Flow (vph)	0	1130	0	0	935	0	0	114	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	custom			Perm			Perm			Perm		
Protected Phases		4 5 6 11			8			2			2	
Permitted Phases	4 6 11			8			2			2		
Actuated Green, G (s)		65.0			33.0			16.0				
Effective Green, g (s)		58.0			33.0			16.0				
Actuated g/C Ratio		0.64			0.37			0.18				
Clearance Time (s)					5.0			5.0				
Lane Grp Cap (vph)		1958			911			236				
v/s Ratio Prot		c0.37										
v/s Ratio Perm					c0.38			c0.09				
v/c Ratio		0.58			1.03			0.48				
Uniform Delay, d1		9.1			28.5			33.3				
Progression Factor		0.16			1.43			1.00				
Incremental Delay, d2		0.3			35.5			6.9				
Delay (s)		1.7			76.4			40.2				
Level of Service		A			E			D				
Approach Delay (s)		1.7			76.4			40.2			0.0	
Approach LOS		A			E			D			A	

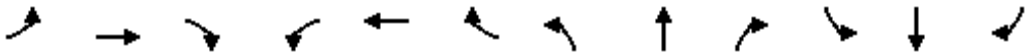
Intersection Summary			
HCM Average Control Delay	35.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	74.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	224	642	24	112	614	185	61	4	107	212	10	213
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	10	12	12	12	12	16	12	12	12	12
Total Lost time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85		0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (prot)	1550	3192		1660	3320	1485		1782		1660	1748	1485
Flt Permitted	0.29	1.00		0.33	1.00	1.00		0.88		0.44	1.00	1.00
Satd. Flow (perm)	471	3192		583	3320	1485		1592		763	1748	1485
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	249	713	27	124	682	206	68	4	119	236	11	237
RTOR Reduction (vph)	0	2	0	0	0	96	0	90	0	0	0	135
Lane Group Flow (vph)	249	738	0	124	682	110	0	101	0	236	11	102
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	54.9	42.5		47.6	38.2	48.2		12.1		25.1	25.1	38.8
Effective Green, g (s)	54.9	42.5		47.6	38.2	48.2		12.1		25.1	25.1	38.8
Actuated g/C Ratio	0.61	0.47		0.53	0.42	0.54		0.13		0.28	0.28	0.43
Clearance Time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Vehicle Extension (s)	4.0	3.0		4.0	3.0	3.0		4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	452	1507		421	1409	795		214		312	487	640
v/s Ratio Prot	c0.08	0.23		0.03	0.21	0.02				c0.08	0.01	0.02
v/s Ratio Perm	c0.25			0.13		0.06		0.06		c0.13		0.04
v/c Ratio	0.55	0.49		0.29	0.48	0.14		0.47		0.76	0.02	0.16
Uniform Delay, d1	9.2	16.3		10.9	18.8	10.5		36.0		28.6	23.5	15.6
Progression Factor	2.63	1.86		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	1.5	1.0		0.5	1.2	0.1		2.2		10.0	0.0	0.2
Delay (s)	25.9	31.3		11.4	20.0	10.6		38.2		38.6	23.6	15.8
Level of Service	C	C		B	B	B		D		D	C	B
Approach Delay (s)		30.0			17.0			38.2			27.1	
Approach LOS		C			B			D			C	

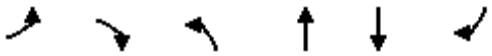
Intersection Summary					
HCM Average Control Delay	25.1	HCM Level of Service		C	
HCM Volume to Capacity ratio	0.58				
Actuated Cycle Length (s)	90.0	Sum of lost time (s)		6.0	
Intersection Capacity Utilization	61.7%	ICU Level of Service		B	
Analysis Period (min)	15				
c Critical Lane Group					



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	518	443	2	333	0	0	0	0	19	0	578
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	576	492	2	370	0	0	0	0	21	0	642
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		498										
pX, platoon unblocked												
vC, conflicting volume	370			576			765	950	288	662	950	185
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	370			576			765	950	288	662	950	185
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	94	100	22
cM capacity (veh/h)	1178			987			64	256	706	345	256	823

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	288	288	492	126	247	21	642
Volume Left	0	0	0	2	0	21	0
Volume Right	0	0	492	0	0	0	642
cSH	1700	1700	1700	987	1700	345	823
Volume to Capacity	0.17	0.17	0.29	0.00	0.15	0.06	0.78
Queue Length 95th (ft)	0	0	0	0	0	5	198
Control Delay (s)	0.0	0.0	0.0	0.2	0.0	16.1	23.1
Lane LOS				A		C	C
Approach Delay (s)	0.0			0.1		22.8	
Approach LOS						C	

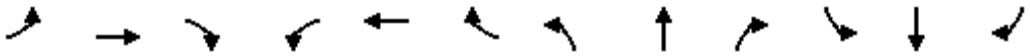
Intersection Summary				
Average Delay	7.2			
Intersection Capacity Utilization	54.2%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	537	0	335	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	597	0	372	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	298	298	372
Volume Left (vph)	298	298	372
Volume Right (vph)	0	0	0
Hadj (s)	0.55	0.55	0.25
Departure Headway (s)	6.2	6.2	5.6
Degree Utilization, x	0.51	0.51	0.58
Capacity (veh/h)	568	570	619
Control Delay (s)	14.3	14.3	16.0
Approach Delay (s)	14.3		16.0
Approach LOS	B		C

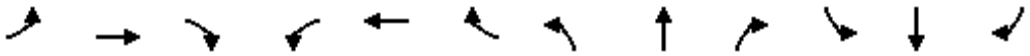
Intersection Summary			
Delay	14.9		
HCM Level of Service	B		
Intersection Capacity Utilization	42.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	475	64	196	511	0	0	0	0	101	21	58
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)		3.0		4.0	4.0						5.0	
Lane Util. Factor		0.95		1.00	0.95						0.95	
Frt		0.98		1.00	1.00						0.95	
Flt Protected		1.00		0.95	1.00						0.97	
Satd. Flow (prot)		3153		1605	3210						3074	
Flt Permitted		1.00		0.34	1.00						0.97	
Satd. Flow (perm)		3153		582	3210						3074	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	528	71	218	568	0	0	0	0	112	23	64
RTOR Reduction (vph)	0	12	0	0	0	0	0	0	0	0	44	0
Lane Group Flow (vph)	0	587	0	218	568	0	0	0	0	0	155	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type				pm+pt						Split		
Protected Phases		4		3	8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		36.0		49.0	49.0						27.0	
Effective Green, g (s)		36.0		49.0	49.0						27.0	
Actuated g/C Ratio		0.42		0.58	0.58						0.32	
Clearance Time (s)		3.0		4.0	4.0						5.0	
Lane Grp Cap (vph)		1335		456	1850						976	
v/s Ratio Prot		0.19		c0.06	0.18						c0.05	
v/s Ratio Perm				c0.22								
v/c Ratio		0.44		0.48	0.31						0.16	
Uniform Delay, d1		17.4		15.9	9.3						20.8	
Progression Factor		1.00		0.35	0.18						1.00	
Incremental Delay, d2		1.1		2.8	0.3						0.3	
Delay (s)		18.4		8.4	2.0						21.2	
Level of Service		B		A	A						C	
Approach Delay (s)		18.4			3.8			0.0			21.2	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	44.9%	ICU Level of Service	A
Analysis Period (min)	15		

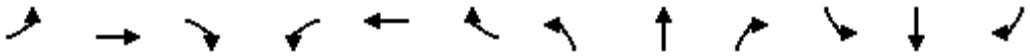
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	95	481	0	0	644	129	63	90	59	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	11	11	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0			3.0			5.0				
Lane Util. Factor	1.00	0.95			0.95			0.91				
Frt	1.00	1.00			0.98			0.96				
Flt Protected	0.95	1.00			1.00			0.99				
Satd. Flow (prot)	1660	3320			3130			4504				
Flt Permitted	0.21	1.00			1.00			0.99				
Satd. Flow (perm)	367	3320			3130			4504				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	106	534	0	0	716	143	70	100	66	0	0	0
RTOR Reduction (vph)	0	0	0	0	19	0	0	45	0	0	0	0
Lane Group Flow (vph)	106	534	0	0	840	0	0	191	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt						Split					
Protected Phases	7	4			8		2	2				
Permitted Phases	4											
Actuated Green, G (s)	48.0	48.0			35.0			27.0				
Effective Green, g (s)	48.0	48.0			35.0			27.0				
Actuated g/C Ratio	0.56	0.56			0.41			0.32				
Clearance Time (s)	5.0	5.0			3.0			5.0				
Lane Grp Cap (vph)	359	1875			1289			1431				
v/s Ratio Prot	0.03	c0.16			c0.27			c0.04				
v/s Ratio Perm	0.13											
v/c Ratio	0.30	0.28			0.65			0.13				
Uniform Delay, d1	18.6	9.6			20.1			20.7				
Progression Factor	0.43	0.31			1.00			1.00				
Incremental Delay, d2	1.9	0.4			2.6			0.2				
Delay (s)	9.9	3.4			22.7			20.9				
Level of Service	A	A			C			C				
Approach Delay (s)		4.4			22.7			20.9			0.0	
Approach LOS		A			C			C			A	

Intersection Summary			
HCM Average Control Delay	15.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	44.9%	ICU Level of Service	A
Analysis Period (min)	15		

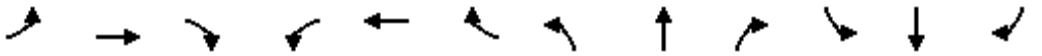
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	114	346	114	91	386	81	129	78	30	31	87	144
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	12	15	12	12	15	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		0.97			0.98			0.98			0.93	
Flt Protected		0.99			0.99			0.97			0.99	
Satd. Flow (prot)		2977			3007			1840			1769	
Flt Permitted		0.66			0.69			0.72			0.95	
Satd. Flow (perm)		1975			2105			1358			1683	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	127	384	127	101	429	90	143	87	33	34	97	160
RTOR Reduction (vph)	0	34	0	0	21	0	0	8	0	0	68	0
Lane Group Flow (vph)	0	604	0	0	599	0	0	255	0	0	223	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		23.0			23.0			32.0			32.0	
Effective Green, g (s)		23.0			23.0			32.0			32.0	
Actuated g/C Ratio		0.35			0.35			0.49			0.49	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		699			745			669			829	
v/s Ratio Prot												
v/s Ratio Perm		c0.31			0.28			c0.19			0.13	
v/c Ratio		0.86			0.80			0.38			0.27	
Uniform Delay, d1		19.6			19.0			10.3			9.7	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		13.5			9.0			1.6			0.8	
Delay (s)		33.0			27.9			12.0			10.5	
Level of Service		C			C			B			B	
Approach Delay (s)		33.0			27.9			12.0			10.5	
Approach LOS		C			C			B			B	

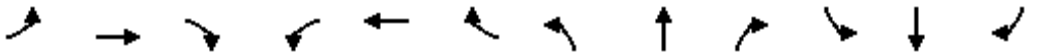
Intersection Summary			
HCM Average Control Delay	24.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	80.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	114	201	88	159	311	65	124	542	67	95	950	180
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	12	10	16	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.95		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1559	2980		1573	3683		1508	3069	1333	1520	3099	1336
Flt Permitted	0.45	1.00		0.53	1.00		0.13	1.00	1.00	0.34	1.00	1.00
Satd. Flow (perm)	739	2980		880	3683		212	3069	1333	541	3099	1336
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	120	212	93	167	327	68	131	571	71	100	1000	189
RTOR Reduction (vph)	0	58	0	0	21	0	0	0	45	0	0	120
Lane Group Flow (vph)	120	247	0	167	374	0	131	571	26	100	1000	69
Confl. Peds. (#/hr)	19		16	16		19	22		25	25		22
Heavy Vehicles (%)	2%	2%	0%	1%	2%	2%	2%	4%	0%	1%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	32.0	27.0		32.0	27.0		38.0	31.0	31.0	38.0	31.0	31.0
Effective Green, g (s)	30.0	28.0		30.0	28.0		36.0	31.0	31.0	36.0	31.0	31.0
Actuated g/C Ratio	0.35	0.33		0.35	0.33		0.42	0.36	0.36	0.42	0.36	0.36
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	299	982		343	1213		181	1119	486	298	1130	487
v/s Ratio Prot	0.02	0.08		c0.02	0.10		c0.05	0.19		0.02	c0.32	
v/s Ratio Perm	0.12			c0.15			0.26		0.02	0.12		0.05
v/c Ratio	0.40	0.25		0.49	0.31		0.72	0.51	0.05	0.34	0.88	0.14
Uniform Delay, d1	19.7	20.8		20.7	21.3		18.1	21.1	17.5	15.4	25.3	18.1
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.39	1.04	2.36
Incremental Delay, d2	4.0	0.6		4.9	0.7		22.1	1.7	0.2	2.2	7.8	0.4
Delay (s)	23.7	21.5		25.5	21.9		40.2	22.7	17.7	23.7	34.2	43.2
Level of Service	C	C		C	C		D	C	B	C	C	D
Approach Delay (s)		22.1			23.0			25.2			34.7	
Approach LOS		C			C			C			C	

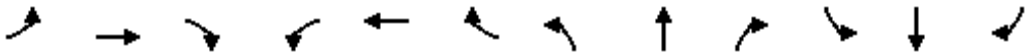
Intersection Summary			
HCM Average Control Delay	28.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	70.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	49	295	30	33	393	24	33	102	41	36	134	66
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	16	12	12	16	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00	0.98		1.00	0.99
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		0.99	1.00
Satd. Flow (prot)		1962	1466		1993	1480		2015	1506		2002	1511
Flt Permitted		0.90	1.00		0.96	1.00		0.91	1.00		0.93	1.00
Satd. Flow (perm)		1777	1466		1913	1480		1861	1506		1877	1511
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	52	311	32	35	414	25	35	107	43	38	141	69
RTOR Reduction (vph)	0	0	17	0	0	13	0	0	25	0	0	40
Lane Group Flow (vph)	0	363	15	0	449	12	0	142	18	0	179	29
Confl. Peds. (#/hr)	11		20	20		11	1		4	4		1
Confl. Bikes (#/hr)	1		1	1		1			1	1		
Heavy Vehicles (%)	4%	3%	0%	0%	2%	0%	0%	0%	0%	0%	1%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Effective Green, g (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Actuated g/C Ratio		0.46	0.46		0.46	0.46		0.42	0.42		0.42	0.42
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		820	677		883	683		773	626		780	628
v/s Ratio Prot												
v/s Ratio Perm		0.20	0.01		c0.23	0.01		0.08	0.01		c0.10	0.02
v/c Ratio		0.44	0.02		0.51	0.02		0.18	0.03		0.23	0.05
Uniform Delay, d1		11.8	9.5		12.3	9.5		12.0	11.2		12.3	11.3
Progression Factor		1.00	1.00		0.55	0.41		1.13	1.31		1.04	0.94
Incremental Delay, d2		1.7	0.1		2.0	0.0		0.5	0.1		0.7	0.1
Delay (s)		13.6	9.6		8.7	4.0		14.1	14.9		13.4	10.8
Level of Service		B	A		A	A		B	B		B	B
Approach Delay (s)		13.3			8.5			14.3			12.7	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	11.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	83.0%	ICU Level of Service	E
Analysis Period (min)	15		

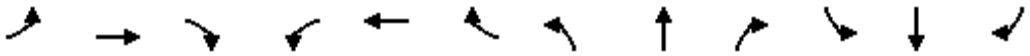
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	75	317	20	51	299	51	10	109	23	115	214	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.98		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1550	3072		1550	3031		1550	3017		1550	2991	
Flt Permitted	0.95	1.00		0.53	1.00		0.55	1.00		0.66	1.00	
Satd. Flow (perm)	1550	3072		864	3031		892	3017		1074	2991	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	83	352	22	57	332	57	11	121	26	128	238	72
RTOR Reduction (vph)	0	7	0	0	21	0	0	15	0	0	42	0
Lane Group Flow (vph)	83	367	0	57	368	0	11	132	0	128	268	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Prot			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Effective Green, g (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.11	0.49		0.34	0.34		0.42	0.42		0.42	0.42	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	167	1512		292	1026		371	1253		446	1242	
v/s Ratio Prot	c0.05	0.12			c0.12			0.04			0.09	
v/s Ratio Perm				0.07			0.01			c0.12		
v/c Ratio	0.50	0.24		0.20	0.36		0.03	0.11		0.29	0.22	
Uniform Delay, d1	27.3	9.5		15.2	16.2		11.2	11.6		12.6	12.2	
Progression Factor	0.93	0.55		1.00	1.00		0.51	0.39		1.12	1.12	
Incremental Delay, d2	9.8	0.4		1.5	1.0		0.1	0.1		1.6	0.4	
Delay (s)	35.2	5.6		16.7	17.2		5.9	4.7		15.8	14.0	
Level of Service	D	A		B	B		A	A		B	B	
Approach Delay (s)		11.0			17.1			4.8			14.5	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM Average Control Delay	13.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	39.9%	ICU Level of Service	A
Analysis Period (min)	15		

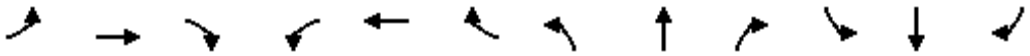
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	64	267	88	245	330	63	104	295	189	55	282	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.96		1.00	0.98			0.95			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1550	2984		1550	3025			3133			3233	
Flt Permitted	0.50	1.00		0.95	1.00			0.74			0.74	
Satd. Flow (perm)	813	2984		1550	3025			2347			2400	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	71	297	98	272	367	70	116	328	210	61	313	56
RTOR Reduction (vph)	0	53	0	0	26	0	0	94	0	0	20	0
Lane Group Flow (vph)	71	342	0	272	411	0	0	560	0	0	410	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Prot			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4						2			6		
Actuated Green, G (s)	15.0	15.0		14.0	32.0			17.0			17.0	
Effective Green, g (s)	15.0	15.0		14.0	32.0			17.0			17.0	
Actuated g/C Ratio	0.25	0.25		0.23	0.53			0.28			0.28	
Clearance Time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	203	746		362	1613			665			680	
v/s Ratio Prot		c0.11		c0.18	0.14							
v/s Ratio Perm	0.09							c0.24			0.17	
v/c Ratio	0.35	0.46		0.75	0.25			0.84			0.60	
Uniform Delay, d1	18.5	19.1		21.4	7.6			20.2			18.6	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	4.7	2.0		13.4	0.4			12.3			3.9	
Delay (s)	23.2	21.1		34.8	7.9			32.6			22.5	
Level of Service	C	C		C	A			C			C	
Approach Delay (s)		21.4			18.2			32.6			22.5	
Approach LOS		C			B			C			C	

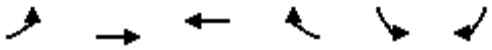
Intersection Summary			
HCM Average Control Delay	23.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	26	454	16	75	645	75	55	110	165	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	14	12	10	15	10
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			0.95				
Frt		1.00			0.99			0.93				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		1620			1603			3249				
Flt Permitted		0.94			0.91			0.99				
Satd. Flow (perm)		1529			1465			3249				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	29	504	18	83	717	83	61	122	183	0	0	0
RTOR Reduction (vph)	0	1	0	0	5	0	0	139	0	0	0	0
Lane Group Flow (vph)	0	550	0	0	878	0	0	227	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		41.5			41.5			15.5				
Effective Green, g (s)		41.5			41.5			15.5				
Actuated g/C Ratio		0.64			0.64			0.24				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		3.0			3.0			8.0				
Lane Grp Cap (vph)		976			935			775				
v/s Ratio Prot												
v/s Ratio Perm		0.36			c0.60			0.07				
v/c Ratio		0.56			0.94			0.29				
Uniform Delay, d1		6.6			10.6			20.3				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		2.3			18.0			0.9				
Delay (s)		9.0			28.6			21.2				
Level of Service		A			C			C				
Approach Delay (s)		9.0			28.6			21.2			0.0	
Approach LOS		A			C			C			A	

Intersection Summary			
HCM Average Control Delay	21.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	85.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	142	464	611	39	119	176
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	149	488	643	41	125	185
Pedestrians		5	6		17	
Lane Width (ft)		16.0	16.0		10.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		1	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1319	491			
pX, platoon unblocked	0.95				0.95	0.95
vC, conflicting volume	701				1230	364
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	586				1141	232
tC, single (s)	4.2				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	84				19	75
cM capacity (veh/h)	908				154	727

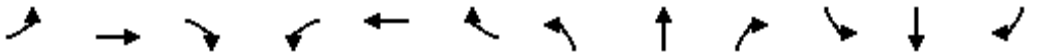
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	SB 2
Volume Total	312	326	429	255	125	185
Volume Left	149	0	0	0	125	0
Volume Right	0	0	0	41	0	185
cSH	908	1700	1700	1700	154	727
Volume to Capacity	0.16	0.19	0.25	0.15	0.81	0.25
Queue Length 95th (ft)	15	0	0	0	132	25
Control Delay (s)	5.6	0.0	0.0	0.0	87.9	11.6
Lane LOS	A				F	B
Approach Delay (s)	2.7		0.0		42.4	
Approach LOS					E	

Intersection Summary			
Average Delay	9.1		
Intersection Capacity Utilization	55.1%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	690	0	1	620	3	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frt	1.00			1.00	0.88	
Flt Protected	1.00			1.00	1.00	
Satd. Flow (prot)	1748			1747	1525	
Flt Permitted	1.00			1.00	1.00	
Satd. Flow (perm)	1748			1747	1525	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	767	0	1	689	3	32
RTOR Reduction (vph)	0	0	0	0	28	0
Lane Group Flow (vph)	767	0	0	690	7	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type			Perm			
Protected Phases	1 2 4			4	3	
Permitted Phases			4			
Actuated Green, G (s)	78.0			48.0	14.0	
Effective Green, g (s)	74.0			48.0	14.0	
Actuated g/C Ratio	0.74			0.48	0.14	
Clearance Time (s)				4.0	4.0	
Lane Grp Cap (vph)	1294			839	214	
v/s Ratio Prot	c0.44				c0.00	
v/s Ratio Perm				0.40		
v/c Ratio	0.59			0.82	0.03	
Uniform Delay, d1	6.0			22.3	37.2	
Progression Factor	0.05			1.00	1.00	
Incremental Delay, d2	0.9			8.9	0.3	
Delay (s)	1.2			31.3	37.5	
Level of Service	A			C	D	
Approach Delay (s)	1.2			31.3	37.5	
Approach LOS	A			C	D	

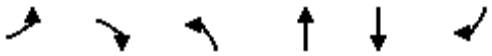
Intersection Summary			
HCM Average Control Delay	16.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	48.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	243	606	32	407	0	0	0	0	17	6	249
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	270	673	36	452	0	0	0	0	19	7	277
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	452			270			1133	1130	472	658	793	452
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	452			270			1133	1130	472	658	793	452
tC, single (s)	4.1			4.2			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			100	100	100	95	98	50
cM capacity (veh/h)	1119			1276			77	200	544	346	314	555

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	180	763	488	26	277
Volume Left	0	0	36	19	0
Volume Right	0	673	0	0	277
cSH	1700	1700	1276	337	555
Volume to Capacity	0.11	0.45	0.03	0.08	0.50
Queue Length 95th (ft)	0	0	2	6	69
Control Delay (s)	0.0	0.0	0.9	16.6	17.8
Lane LOS			A	C	C
Approach Delay (s)	0.0		0.9	17.7	
Approach LOS				C	

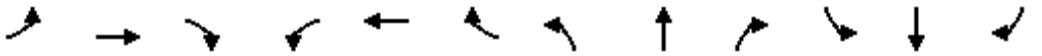
Intersection Summary				
Average Delay	3.3			
Intersection Capacity Utilization	60.5%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	260	0	439	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	289	0	488	0	0	0

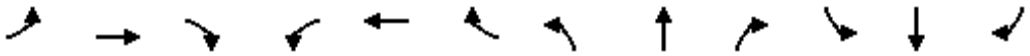
Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	144	144	488
Volume Left (vph)	144	144	488
Volume Right (vph)	0	0	0
Hadj (s)	0.55	0.55	0.25
Departure Headway (s)	6.4	6.4	5.0
Degree Utilization, x	0.26	0.26	0.68
Capacity (veh/h)	536	537	701
Control Delay (s)	10.3	10.3	17.7
Approach Delay (s)	10.3		17.7
Approach LOS	B		C

Intersection Summary			
Delay	15.0		
HCM Level of Service	B		
Intersection Capacity Utilization	40.2%	ICU Level of Service	A
Analysis Period (min)	15		



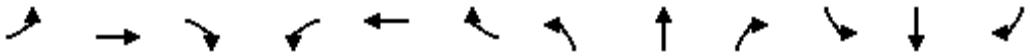
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	530	345	313	770	0	0	0	0	279	269	372
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	13	12	12	12	12	10	10	11
Total Lost time (s)		6.0	6.0		6.0					6.0	6.0	6.0
Lane Util. Factor		0.95	1.00		0.95					0.86	0.81	0.86
Frpb, ped/bikes		1.00	0.98		1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	0.95	0.85
Flt Protected		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (prot)		3179	1228		3425					1359	3806	1133
Flt Permitted		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (perm)		3179	1228		3425					1359	3806	1133
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	558	363	329	811	0	0	0	0	294	283	392
RTOR Reduction (vph)	0	0	217	0	0	0	0	0	0	0	53	112
Lane Group Flow (vph)	0	558	146	0	1140	0	0	0	0	162	558	84
Confl. Peds. (#/hr)	4		6	6		4						
Heavy Vehicles (%)	0%	4%	6%	1%	2%	0%	0%	0%	0%	1%	1%	1%
Parking (#/hr)			0									0
Turn Type			Perm	Split						Split		custom
Protected Phases		2		10 12 14	10 12 14					4	4	
Permitted Phases			2									4 2
Actuated Green, G (s)		27.0	27.0		75.1					31.4	31.4	64.4
Effective Green, g (s)		27.0	27.0		75.1					31.4	31.4	64.4
Actuated g/C Ratio		0.17	0.17		0.47					0.20	0.20	0.40
Clearance Time (s)		6.0	6.0							6.0	6.0	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		536	207		1608					267	747	456
v/s Ratio Prot		c0.18			c0.33					0.12	c0.15	
v/s Ratio Perm			0.12									0.07
v/c Ratio		1.04	0.71		0.71					0.61	0.75	0.18
Uniform Delay, d1		66.5	62.7		33.8					58.7	60.6	30.9
Progression Factor		1.00	1.00		0.04					1.00	1.00	1.00
Incremental Delay, d2		50.0	18.3		0.1					3.9	4.1	0.2
Delay (s)		116.5	81.1		1.6					62.5	64.6	31.1
Level of Service		F	F		A					E	E	C
Approach Delay (s)		102.5			1.6			0.0			57.5	
Approach LOS		F			A			A			E	

Intersection Summary			
HCM Average Control Delay	50.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	28.5
Intersection Capacity Utilization	81.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



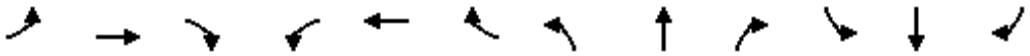
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	292	517	0	0	750	144	332	214	206	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	13	12	12	11	12	13	13	14	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0				
Lane Util. Factor	1.00	0.95			0.95	1.00	0.91	0.91				
Frt	1.00	1.00			1.00	0.85	1.00	0.94				
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (prot)	1605	3431			3210	1485	1561	3059				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (perm)	1605	3431			3210	1485	1561	3059				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	324	574	0	0	833	160	369	238	229	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	67	0	70	0	0	0	0
Lane Group Flow (vph)	324	574	0	0	833	93	284	482	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Split					Perm	Split					
Protected Phases	2 4 8	2 4 8			10		12	12				
Permitted Phases						10						
Actuated Green, G (s)	76.9	76.9			35.1	35.1	22.0	22.0				
Effective Green, g (s)	76.9	76.9			35.1	35.1	22.0	22.0				
Actuated g/C Ratio	0.48	0.48			0.22	0.22	0.14	0.14				
Clearance Time (s)					6.0	6.0	6.0	6.0				
Vehicle Extension (s)					3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	771	1649			704	326	215	421				
v/s Ratio Prot	c0.20	0.17			c0.26		c0.18	0.16				
v/s Ratio Perm						0.06						
v/c Ratio	0.42	0.35			1.18	0.28	1.32	1.15				
Uniform Delay, d1	27.0	25.9			62.5	52.0	69.0	69.0				
Progression Factor	0.05	0.06			1.00	1.00	1.00	1.00				
Incremental Delay, d2	0.2	0.1			96.6	0.5	173.2	89.9				
Delay (s)	1.7	1.5			159.0	52.5	242.2	158.9				
Level of Service	A	A			F	D	F	F				
Approach Delay (s)		1.6			141.8			187.2			0.0	
Approach LOS		A			F			F			A	

Intersection Summary			
HCM Average Control Delay	109.5	HCM Level of Service	F
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	28.0
Intersection Capacity Utilization	69.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	140	312	136	188	418	107	108	522	95	106	803	120
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	14	12	10	10	12	9	10	12
Total Lost time (s)	4.0	4.0	5.0	4.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1579	1600	1372	1594	1788		1578	3000		1537	3001	
Flt Permitted	0.15	1.00	1.00	0.35	1.00		0.13	1.00		0.32	1.00	
Satd. Flow (perm)	256	1600	1372	583	1788		216	3000		511	3001	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	147	328	143	198	440	113	114	549	100	112	845	126
RTOR Reduction (vph)	0	0	100	0	11	0	0	16	0	0	13	0
Lane Group Flow (vph)	147	328	43	198	542	0	114	633	0	112	958	0
Confl. Peds. (#/hr)	28		8	8		28	59		11	11		59
Confl. Bikes (#/hr)	3					3	1		2	2		1
Heavy Vehicles (%)	1%	5%	2%	0%	4%	0%	1%	4%	0%	0%	3%	3%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	34.0	27.0	27.0	34.0	27.0		43.0	36.0		40.2	34.6	
Effective Green, g (s)	32.0	28.0	27.0	32.0	27.0		41.0	36.0		38.2	34.6	
Actuated g/C Ratio	0.35	0.31	0.30	0.35	0.30		0.45	0.40		0.42	0.38	
Clearance Time (s)	3.0	5.0	5.0	3.0	5.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	178	494	409	273	533		188	1192		268	1146	
v/s Ratio Prot	c0.05	0.20		0.05	c0.30		c0.04	0.21		0.02	c0.32	
v/s Ratio Perm	0.24		0.03	0.21			0.23			0.16		
v/c Ratio	0.83	0.66	0.10	0.73	1.02		0.61	0.53		0.42	0.84	
Uniform Delay, d1	23.9	27.2	23.0	24.8	31.8		17.4	20.8		16.7	25.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	25.7	6.9	0.5	9.2	43.5		5.4	1.7		1.1	7.3	
Delay (s)	49.6	34.1	23.5	34.0	75.3		22.8	22.5		17.8	32.7	
Level of Service	D	C	C	C	E		C	C		B	C	
Approach Delay (s)		35.3			64.4			22.6			31.2	
Approach LOS		D			E			C			C	

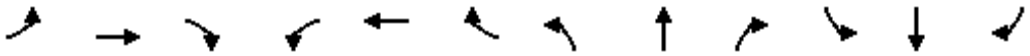
Intersection Summary					
HCM Average Control Delay	37.7	HCM Level of Service		D	
HCM Volume to Capacity ratio	0.88				
Actuated Cycle Length (s)	90.6	Sum of lost time (s)		17.0	
Intersection Capacity Utilization	87.3%	ICU Level of Service		E	
Analysis Period (min)	15				
c Critical Lane Group					



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	402	61	112	645	62	37	59	44	31	91	70
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	10	10	10	12	15	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.97		0.99			0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.96			0.95	
Flt Protected		1.00	1.00		0.99	1.00		0.99			0.99	
Satd. Flow (prot)		1971	1476		1624	1387		1851			1867	
Flt Permitted		0.91	1.00		0.88	1.00		0.90			0.95	
Satd. Flow (perm)		1804	1476		1432	1387		1679			1783	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	41	423	64	118	679	65	39	62	46	33	96	74
RTOR Reduction (vph)	0	0	20	0	0	18	0	25	0	0	31	0
Lane Group Flow (vph)	0	464	44	0	797	47	0	122	0	0	172	0
Confl. Peds. (#/hr)	12		20	20		12	8		2	2		8
Confl. Bikes (#/hr)	1		2	2		1			1	1		
Heavy Vehicles (%)	3%	3%	0%	0%	3%	0%	0%	0%	0%	0%	1%	3%
Turn Type	Perm		Perm	Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)		45.0	45.0		45.0	45.0		14.0			14.0	
Effective Green, g (s)		45.0	45.0		45.0	45.0		14.0			14.0	
Actuated g/C Ratio		0.69	0.69		0.69	0.69		0.22			0.22	
Clearance Time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		1249	1022		991	960		362			384	
v/s Ratio Prot												
v/s Ratio Perm		0.26	0.03		c0.56	0.03		0.07			c0.10	
v/c Ratio		0.37	0.04		0.80	0.05		0.34			0.45	
Uniform Delay, d1		4.1	3.2		6.9	3.2		21.6			22.1	
Progression Factor		1.00	1.00		0.65	1.36		1.00			1.49	
Incremental Delay, d2		0.8	0.1		3.8	0.1		2.5			3.7	
Delay (s)		5.0	3.3		8.4	4.4		24.1			36.7	
Level of Service		A	A		A	A		C			D	
Approach Delay (s)		4.8			8.1			24.1			36.7	
Approach LOS		A			A			C			D	

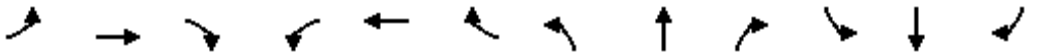
Intersection Summary			
HCM Average Control Delay	11.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	90.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	318	41	110	700	20	36	114	44	17	184	70
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.98		1.00	0.96		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.97	
Flt Protected		0.99	1.00		0.99	1.00		0.99	1.00		1.00	
Satd. Flow (prot)		1756	1469		1726	1498		1712	1474		1709	
Flt Permitted		0.74	1.00		0.89	1.00		0.75	1.00		0.97	
Satd. Flow (perm)		1312	1469		1546	1498		1304	1474		1667	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	62	335	43	116	737	21	38	120	46	18	194	74
RTOR Reduction (vph)	0	0	15	0	0	5	0	0	37	0	19	0
Lane Group Flow (vph)	0	397	28	0	853	16	0	158	9	0	267	0
Confl. Peds. (#/hr)	19		25	25		19	3		6	6		3
Confl. Bikes (#/hr)	1		2	2		1			1	1		
Heavy Vehicles (%)	0%	2%	0%	0%	4%	0%	0%	5%	0%	0%	0%	2%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		42.0	42.0		42.0	42.0		13.0	13.0		13.0	
Effective Green, g (s)		42.0	42.0		42.0	42.0		13.0	13.0		13.0	
Actuated g/C Ratio		0.65	0.65		0.65	0.65		0.20	0.20		0.20	
Clearance Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Grp Cap (vph)		848	949		999	968		261	295		333	
v/s Ratio Prot												
v/s Ratio Perm		0.30	0.02		c0.55	0.01		0.12	0.01		c0.16	
v/c Ratio		0.47	0.03		0.85	0.02		0.61	0.03		0.80	
Uniform Delay, d1		5.8	4.1		9.1	4.1		23.7	20.9		24.8	
Progression Factor		1.91	3.08		0.98	0.40		1.00	1.00		0.68	
Incremental Delay, d2		1.7	0.1		4.5	0.0		10.0	0.2		17.9	
Delay (s)		12.9	12.8		13.4	1.7		33.7	21.1		34.8	
Level of Service		B	B		B	A		C	C		C	
Approach Delay (s)		12.9			13.1			30.8			34.8	
Approach LOS		B			B			C			C	

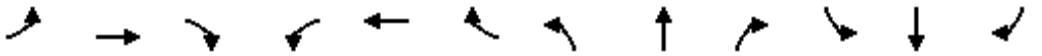
Intersection Summary			
HCM Average Control Delay	18.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	101.4%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	298	35	76	8	14	11	38	247	8	31	570	799
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.95		0.98			1.00			1.00	0.94
Flpb, ped/bikes		0.98	1.00		0.99			1.00			1.00	1.00
Frt		1.00	0.85		0.96			1.00			1.00	0.85
Flt Protected		0.96	1.00		0.99			0.99			1.00	1.00
Satd. Flow (prot)		1855	1440		1767			1995			1975	1382
Flt Permitted		0.75	1.00		0.92			0.79			0.97	1.00
Satd. Flow (perm)		1455	1440		1640			1587			1930	1382
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	331	39	84	9	16	12	42	274	9	34	633	888
RTOR Reduction (vph)	0	0	49	0	9	0	0	2	0	0	0	295
Lane Group Flow (vph)	0	370	35	0	28	0	0	323	0	0	667	593
Confl. Peds. (#/hr)	37		53	53		37	39		54	54		39
Confl. Bikes (#/hr)							2					2
Heavy Vehicles (%)	4%	0%	1%	0%	0%	0%	0%	1%	0%	0%	3%	4%
Turn Type	pm+pt		Perm	Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		27.0	27.0		17.0			32.0			32.0	32.0
Effective Green, g (s)		27.0	27.0		17.0			32.0			32.0	32.0
Actuated g/C Ratio		0.42	0.42		0.26			0.49			0.49	0.49
Clearance Time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		654	598		429			781			950	680
v/s Ratio Prot		c0.07										
v/s Ratio Perm		0.17	0.02		0.02			0.20			0.35	c0.43
v/c Ratio		0.57	0.06		0.07			0.41			0.70	0.87
Uniform Delay, d1		14.5	11.4		18.0			10.5			12.8	14.7
Progression Factor		0.51	0.15		1.00			0.74			1.00	1.00
Incremental Delay, d2		3.3	0.2		0.3			1.0			4.3	14.4
Delay (s)		10.6	1.9		18.3			8.9			17.1	29.1
Level of Service		B	A		B			A			B	C
Approach Delay (s)		9.0			18.3			8.9			24.0	
Approach LOS		A			B			A			C	

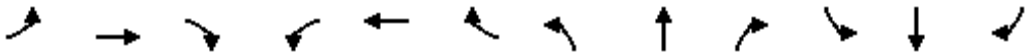
Intersection Summary			
HCM Average Control Delay	19.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	95.4%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



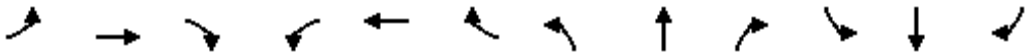
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	923	289	447	1189	0	0	0	0	513	284	334
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	11	8	8	8	11	12	14
Total Lost time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Lane Util. Factor		0.91		1.00	0.95					0.91	0.86	0.91
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.96		1.00	1.00					1.00	0.98	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.98	1.00
Satd. Flow (prot)		4576		1621	3320					1489	2913	1442
Flt Permitted		1.00		0.12	1.00					0.95	0.98	1.00
Satd. Flow (perm)		4576		198	3320					1489	2913	1442
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	972	304	471	1252	0	0	0	0	540	299	352
RTOR Reduction (vph)	0	62	0	0	0	0	0	0	0	0	12	44
Lane Group Flow (vph)	0	1215	0	471	1252	0	0	0	0	308	600	227
Confl. Peds. (#/hr)	15		11	11		15						
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	0%	3%	3%	2%	3%	0%	0%	0%	0%	1%	3%	3%
Turn Type				pm+pt						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Actuated Green, G (s)		28.5		56.0	54.5					23.5	23.5	23.5
Effective Green, g (s)		28.5		56.0	54.5					23.5	23.5	23.5
Actuated g/C Ratio		0.32		0.62	0.61					0.26	0.26	0.26
Clearance Time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Vehicle Extension (s)		7.0		3.5	7.0					3.5	3.5	3.5
Lane Grp Cap (vph)		1449		463	2010					389	761	377
v/s Ratio Prot		0.27		c0.24	0.38							
v/s Ratio Perm				c0.39						c0.21	0.21	0.16
v/c Ratio		0.84		1.02	0.62					0.79	0.79	0.60
Uniform Delay, d1		28.6		25.4	11.2					31.0	30.9	29.2
Progression Factor		1.00		0.64	0.53					1.00	1.00	1.00
Incremental Delay, d2		5.9		32.3	0.7					10.8	5.6	2.9
Delay (s)		34.6		48.5	6.6					41.8	36.5	32.0
Level of Service		C		D	A					D	D	C
Approach Delay (s)		34.6			18.1			0.0			36.9	
Approach LOS		C			B			A			D	

Intersection Summary			
HCM Average Control Delay	28.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	111.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	341	1095	0	0	1206	271	430	351	337	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	11	12	12	12	12	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0		6.0				
Lane Util. Factor	0.97	0.95			0.95	1.00		0.91				
Frpb, ped/bikes	1.00	1.00			1.00	0.98		1.00				
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00				
Frt	1.00	1.00			1.00	0.85		0.95				
Flt Protected	0.95	1.00			1.00	1.00		0.98				
Satd. Flow (prot)	3144	3353			3241	1489		4513				
Flt Permitted	0.09	1.00			1.00	1.00		0.98				
Satd. Flow (perm)	290	3353			3241	1489		4513				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	359	1153	0	0	1269	285	453	369	355	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	86	0	57	0	0	0	0
Lane Group Flow (vph)	359	1153	0	0	1269	199	0	1120	0	0	0	0
Confl. Peds. (#/hr)	7		5	5		7						
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	2%	2%	0%	0%	2%	1%	2%	1%	3%	0%	0%	0%
Turn Type	pm+pt					Perm	Perm					
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8					
Actuated Green, G (s)	52.7	52.7			39.7	39.7		25.3				
Effective Green, g (s)	52.7	52.7			39.7	39.7		25.3				
Actuated g/C Ratio	0.59	0.59			0.44	0.44		0.28				
Clearance Time (s)	6.0	6.0			6.0	6.0		6.0				
Vehicle Extension (s)	3.5	7.0			7.0	7.0		5.0				
Lane Grp Cap (vph)	392	1963			1430	657		1269				
v/s Ratio Prot	c0.07	0.34			0.39							
v/s Ratio Perm	c0.47					0.13		0.25				
v/c Ratio	0.92	0.59			0.89	0.30		0.88				
Uniform Delay, d1	21.2	11.8			23.1	16.2		30.9				
Progression Factor	1.60	0.50			0.53	0.38		1.00				
Incremental Delay, d2	16.9	0.7			6.2	0.8		8.1				
Delay (s)	50.9	6.6			18.4	7.0		39.0				
Level of Service	D	A			B	A		D				
Approach Delay (s)		17.2			16.3			39.0			0.0	
Approach LOS		B			B			D			A	

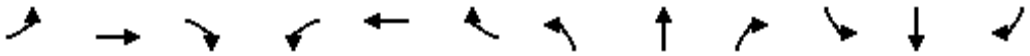
Intersection Summary			
HCM Average Control Delay	22.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	111.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	135	719	408	104	968	76	227	179	66	80	162	121
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	11	12	12	10	10	13	10	10	10
Total Lost time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		0.99	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.96		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1565	3273	1310	1603	3286		1577	3003		1540	2944	
Flt Permitted	0.11	1.00	1.00	0.31	1.00		0.45	1.00		0.59	1.00	
Satd. Flow (perm)	174	3273	1310	524	3286		741	3003		961	2944	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	142	757	429	109	1019	80	239	188	69	84	171	127
RTOR Reduction (vph)	0	0	197	0	7	0	0	43	0	0	103	0
Lane Group Flow (vph)	142	757	232	109	1092	0	239	214	0	84	195	0
Confl. Peds. (#/hr)	11		23	23		11	8		12	12		8
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	2%	1%	3%	3%	3%	0%	1%	1%	2%	3%	0%	1%
Parking (#/hr)			0									
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	47.9	38.0	47.5	40.7	34.3		30.1	22.2		21.5	17.1	
Effective Green, g (s)	47.9	38.0	47.5	40.7	34.3		30.1	22.2		21.5	17.1	
Actuated g/C Ratio	0.53	0.42	0.53	0.45	0.38		0.33	0.25		0.24	0.19	
Clearance Time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0		3.0	7.0		3.0	7.0	
Lane Grp Cap (vph)	249	1382	691	314	1252		336	741		258	559	
v/s Ratio Prot	c0.06	0.23	0.04	0.02	c0.33		c0.08	0.07		0.02	0.07	
v/s Ratio Perm	0.24		0.14	0.13			c0.16			0.06		
v/c Ratio	0.57	0.55	0.34	0.35	0.87		0.71	0.29		0.33	0.35	
Uniform Delay, d1	15.4	19.5	12.2	14.7	25.8		24.1	27.5		27.6	31.6	
Progression Factor	1.66	0.37	0.33	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	6.9	1.2	0.2	0.7	8.6		6.9	0.8		0.7	1.3	
Delay (s)	32.4	8.4	4.2	15.3	34.4		31.1	28.3		28.3	33.0	
Level of Service	C	A	A	B	C		C	C		C	C	
Approach Delay (s)		9.6			32.7			29.6			31.9	
Approach LOS		A			C			C			C	

Intersection Summary			
HCM Average Control Delay	23.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	81.4%	ICU Level of Service	D
Analysis Period (min)	15		

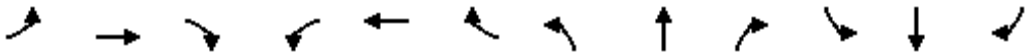
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	46	250	367	95	441	113	362	340	84	206	408	56
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	12	11	12	12	11	13	12	10	11	12
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.91		1.00	0.97		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1708	2925		1653	3267		1620	3402		1580	3183	
Flt Permitted	0.34	1.00		0.22	1.00		0.32	1.00		0.49	1.00	
Satd. Flow (perm)	619	2925		375	3267		544	3402		822	3183	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	48	263	386	100	464	119	381	358	88	217	429	59
RTOR Reduction (vph)	0	215	0	0	19	0	0	19	0	0	9	0
Lane Group Flow (vph)	48	434	0	100	564	0	381	427	0	217	479	0
Confl. Peds. (#/hr)	12		3	3		12	5					5
Heavy Vehicles (%)	0%	2%	2%	0%	1%	1%	2%	1%	0%	1%	2%	0%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	39.2	32.5		46.4	36.1		56.2	44.2		40.1	32.1	
Effective Green, g (s)	39.2	32.5		46.4	36.1		56.2	44.2		40.1	32.1	
Actuated g/C Ratio	0.34	0.28		0.40	0.31		0.49	0.38		0.35	0.28	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.5	7.0		3.5	7.0		3.5	7.0		3.5	7.0	
Lane Grp Cap (vph)	274	827		266	1026		454	1308		339	888	
v/s Ratio Prot	0.01	0.15		c0.03	c0.17		c0.15	0.13		0.04	0.15	
v/s Ratio Perm	0.05			0.12			c0.26			0.18		
v/c Ratio	0.18	0.52		0.38	0.55		0.84	0.33		0.64	0.54	
Uniform Delay, d1	25.9	34.7		23.2	32.7		20.8	24.9		28.8	35.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	2.4		1.1	2.1		13.1	0.7		4.3	2.3	
Delay (s)	26.3	37.1		24.3	34.8		33.9	25.6		33.1	37.5	
Level of Service	C	D		C	C		C	C		C	D	
Approach Delay (s)		36.4			33.3			29.4			36.1	
Approach LOS		D			C			C			D	

Intersection Summary			
HCM Average Control Delay	33.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.2%	ICU Level of Service	D
Analysis Period (min)	15		

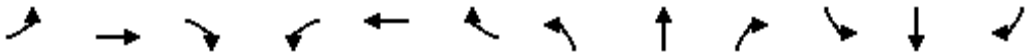
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	105	695	141	10	741	89	104	287	9	204	609	183
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	9	11	12	9	9	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.98		1.00	1.00		1.00	0.97	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3039			3061		1452	3227		1522	2871	
Flt Permitted		0.62			0.94		0.18	1.00		0.50	1.00	
Satd. Flow (perm)		1888			2880		278	3227		802	2871	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	117	772	157	11	823	99	116	319	10	227	677	203
RTOR Reduction (vph)	0	18	0	0	11	0	0	3	0	0	35	0
Lane Group Flow (vph)	0	1028	0	0	922	0	116	326	0	227	845	0
Confl. Peds. (#/hr)	4		2	2		4	8		4	4		8
Confl. Bikes (#/hr)							2					2
Heavy Vehicles (%)	1%	2%	2%	0%	2%	6%	6%	2%	0%	1%	3%	3%
Turn Type	pm+pt			Perm			pm+pt			pm+pt		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		41.0			33.0		26.0	22.0		28.0	23.0	
Effective Green, g (s)		41.0			33.0		26.0	22.0		28.0	23.0	
Actuated g/C Ratio		0.51			0.41		0.32	0.28		0.35	0.29	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		1025			1188		149	887		326	825	
v/s Ratio Prot		c0.05					0.04	0.10		c0.04	c0.29	
v/s Ratio Perm		c0.46			0.32		0.21			0.20		
v/c Ratio		1.00			0.78		0.78	0.37		0.70	1.02	
Uniform Delay, d1		19.5			20.3		33.5	23.4		24.7	28.5	
Progression Factor		1.00			1.00		0.62	0.64		1.00	1.00	
Incremental Delay, d2		28.8			5.0		30.6	1.1		11.7	37.7	
Delay (s)		48.3			25.3		51.4	16.0		36.3	66.2	
Level of Service		D			C		D	B		D	E	
Approach Delay (s)		48.3			25.3			25.2			60.0	
Approach LOS		D			C			C			E	

Intersection Summary			
HCM Average Control Delay	43.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	96.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	67	261	136	132	418	28	72	462	86	35	698	70
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.99		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1708	1912		1602	2019		1676	3219		1436	3274	
Flt Permitted	0.35	1.00		0.40	1.00		0.27	1.00		0.39	1.00	
Satd. Flow (perm)	628	1912		673	2019		469	3219		591	3274	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	69	269	140	136	431	29	74	476	89	36	720	72
RTOR Reduction (vph)	0	24	0	0	3	0	0	19	0	0	10	0
Lane Group Flow (vph)	69	385	0	136	457	0	74	546	0	36	782	0
Confl. Peds. (#/hr)	3		20	20		3	2		3	3		2
Confl. Bikes (#/hr)			1	1			2		2	2		2
Heavy Vehicles (%)	0%	0%	1%	6%	0%	0%	2%	3%	6%	19%	3%	2%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	35.0	35.0		35.0	35.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)	35.0	35.0		35.0	35.0		35.0	35.0		35.0	35.0	
Actuated g/C Ratio	0.44	0.44		0.44	0.44		0.44	0.44		0.44	0.44	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	275	837		294	883		205	1408		259	1432	
v/s Ratio Prot		0.20			c0.23			0.17			c0.24	
v/s Ratio Perm	0.11			0.20			0.16			0.06		
v/c Ratio	0.25	0.46		0.46	0.52		0.36	0.39		0.14	0.55	
Uniform Delay, d1	14.2	15.8		15.9	16.4		15.0	15.2		13.5	16.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.27	0.23	
Incremental Delay, d2	2.2	1.8		5.2	2.2		4.9	0.8		0.1	0.1	
Delay (s)	16.4	17.7		21.0	18.5		19.9	16.0		3.8	4.0	
Level of Service	B	B		C	B		B	B		A	A	
Approach Delay (s)		17.5			19.1			16.5			4.0	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	13.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	75.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	883	501	938	41	3	10	9	47	15	0	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	10	10	10	12	12	16	12	12	16	12
Total Lost time (s)		5.0		5.0				4.0			4.0	
Lane Util. Factor		0.95		0.95				1.00			1.00	
Frpb, ped/bikes		1.00		1.00				0.98			0.97	
Flpb, ped/bikes		1.00		1.00				0.99			1.00	
Frt		1.00		1.00				0.91			0.95	
Flt Protected		1.00		0.98				0.99			0.97	
Satd. Flow (prot)		3160		3078				1785			1819	
Flt Permitted		0.95		0.52				0.93			0.56	
Satd. Flow (perm)		3011		1617				1680			1060	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	2	929	527	987	43	3	11	9	49	16	0	3
RTOR Reduction (vph)	0	0	0	1	0	0	0	46	0	0	5	0
Lane Group Flow (vph)	0	931	0	1556	0	0	0	26	0	0	19	0
Confl. Peds. (#/hr)	7		4		7		7		2	2		7
Confl. Bikes (#/hr)							2		2	2		2
Heavy Vehicles (%)	0%	1%	2%	1%	6%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Perm		Perm			Perm	Perm			Perm		
Protected Phases		8		4				2			6	
Permitted Phases	8		4			2	2			6		
Actuated Green, G (s)		101.2		126.0				8.0			8.0	
Effective Green, g (s)		101.2		126.0				8.0			8.0	
Actuated g/C Ratio		0.71		0.88				0.06			0.06	
Clearance Time (s)		5.0		5.0				4.0			4.0	
Vehicle Extension (s)		3.0		3.0				3.0			3.0	
Lane Grp Cap (vph)		2131		1425				94			59	
v/s Ratio Prot												
v/s Ratio Perm		0.31		c0.96				0.02			c0.02	
v/c Ratio		0.44		1.64dl				0.27			0.33	
Uniform Delay, d1		8.8		8.5				64.7			64.9	
Progression Factor		1.00		1.00				1.00			1.00	
Incremental Delay, d2		0.1		53.1				1.6			3.2	
Delay (s)		9.0		61.6				66.3			68.1	
Level of Service		A		E				E			E	
Approach Delay (s)		9.0		61.6				66.3			68.1	
Approach LOS		A		E				E			E	

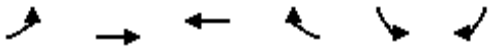
Intersection Summary			
HCM Average Control Delay	45.7	HCM Level of Service	D
HCM Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	143.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	87.6%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group



Movement	SBR2	NER
Lane Configurations		
Volume (vph)	5	311
Ideal Flow (vphpl)	1800	1800
Lane Width	12	12
Total Lost time (s)		3.0
Lane Util. Factor		0.88
Frpb, ped/bikes		1.00
Flpb, ped/bikes		1.00
Frt		0.85
Flt Protected		1.00
Satd. Flow (prot)		2693
Flt Permitted		1.00
Satd. Flow (perm)		2693
Peak-hour factor, PHF	0.95	0.95
Adj. Flow (vph)	5	327
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	0	327
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Heavy Vehicles (%)	0%	0%
Turn Type		custom
Protected Phases		7
Permitted Phases		
Actuated Green, G (s)		21.8
Effective Green, g (s)		21.8
Actuated g/C Ratio		0.15
Clearance Time (s)		3.0
Vehicle Extension (s)		3.0
Lane Grp Cap (vph)		411
v/s Ratio Prot		0.12
v/s Ratio Perm		
v/c Ratio		0.80
Uniform Delay, d1		58.5
Progression Factor		1.00
Incremental Delay, d2		10.2
Delay (s)		68.7
Level of Service		E
Approach Delay (s)		
Approach LOS		

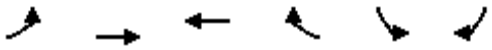
Intersection Summary



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	264	965	1254	177	125	234
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frt		1.00	0.98		1.00	0.85
Flt Protected		0.99	1.00		0.95	1.00
Satd. Flow (prot)		3285	3259		1660	1485
Flt Permitted		0.49	1.00		0.95	1.00
Satd. Flow (perm)		1618	3259		1660	1485
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	293	1072	1393	197	139	260
RTOR Reduction (vph)	0	0	10	0	0	113
Lane Group Flow (vph)	0	1365	1580	0	139	147
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt					Perm
Protected Phases	7	4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		87.0	79.0		15.0	15.0
Effective Green, g (s)		87.0	79.0		15.0	15.0
Actuated g/C Ratio		0.79	0.72		0.14	0.14
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1340	2341		226	203
v/s Ratio Prot		c0.04	0.48		0.08	
v/s Ratio Perm		c0.77				c0.10
v/c Ratio		1.46dl	0.67		0.62	0.72
Uniform Delay, d1		11.5	8.5		44.8	45.5
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		29.4	1.6		11.9	20.0
Delay (s)		40.9	10.1		56.7	65.5
Level of Service		D	B		E	E
Approach Delay (s)		40.9	10.1		62.4	
Approach LOS		D	B		E	

Intersection Summary			
HCM Average Control Delay	28.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	96.1%	ICU Level of Service	F
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group

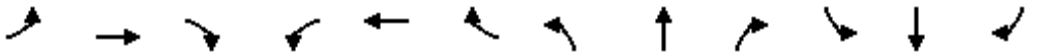


Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	81	1012	1347	198	276	88
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	12	10	11	12	10	10
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frpb, ped/bikes		1.00	1.00		1.00	0.99
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.98		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3120	3139		1506	1342
Flt Permitted		0.66	1.00		0.95	1.00
Satd. Flow (perm)		2075	3139		1506	1342
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	85	1065	1418	208	291	93
RTOR Reduction (vph)	0	0	18	0	0	40
Lane Group Flow (vph)	0	1150	1608	0	291	53
Confl. Peds. (#/hr)	2			2		1
Heavy Vehicles (%)	1%	2%	2%	10%	6%	5%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		41.0	41.0		16.0	16.0
Effective Green, g (s)		41.0	41.0		16.0	16.0
Actuated g/C Ratio		0.63	0.63		0.25	0.25
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1309	1980		371	330
v/s Ratio Prot			0.51		c0.19	
v/s Ratio Perm		c0.55				0.04
v/c Ratio		0.88	0.81		0.78	0.16
Uniform Delay, d1		9.9	9.1		22.9	19.2
Progression Factor		1.00	1.61		1.47	2.02
Incremental Delay, d2		8.6	2.3		12.2	0.8
Delay (s)		18.5	16.9		45.9	39.6
Level of Service		B	B		D	D
Approach Delay (s)		18.5	16.9		44.4	
Approach LOS		B	B		D	

Intersection Summary			
HCM Average Control Delay	20.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	104.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

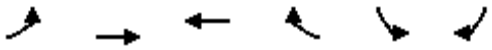
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	887	261	532	1433	205	161
Ideal Flow (vphpl)	2300	1800	1800	2300	1800	1800
Lane Width	15	12	14	16	15	12
Total Lost time (s)	5.0		3.0	5.0	5.0	5.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.97		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	2404		1788	2506	1758	1530
Flt Permitted	1.00		0.06	1.00	0.95	1.00
Satd. Flow (perm)	2404		111	2506	1758	1530
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	905	266	543	1462	209	164
RTOR Reduction (vph)	8	0	0	0	0	56
Lane Group Flow (vph)	1163	0	543	1462	209	108
Confl. Peds. (#/hr)						1
Heavy Vehicles (%)	2%	2%	2%	4%	7%	0%
Turn Type			pm+pt			pt+ov
Protected Phases	4		3	8	2	2 3
Permitted Phases			8			
Actuated Green, G (s)	65.0		96.0	96.0	24.0	57.0
Effective Green, g (s)	65.0		96.0	96.0	24.0	57.0
Actuated g/C Ratio	0.50		0.74	0.74	0.18	0.44
Clearance Time (s)	5.0		3.0	5.0	5.0	
Lane Grp Cap (vph)	1202		443	1851	325	671
v/s Ratio Prot	0.48		c0.26	0.58	c0.12	0.07
v/s Ratio Perm			c0.64			
v/c Ratio	0.97		1.23	0.79	0.64	0.16
Uniform Delay, d1	31.5		44.5	10.7	49.0	22.1
Progression Factor	1.06		1.00	1.00	1.00	1.00
Incremental Delay, d2	11.9		120.2	3.5	9.4	0.5
Delay (s)	45.1		164.7	14.2	58.5	22.6
Level of Service	D		F	B	E	C
Approach Delay (s)	45.1			54.9	42.7	
Approach LOS	D			D	D	

Intersection Summary			
HCM Average Control Delay	50.4	HCM Level of Service	D
HCM Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	107.8%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	2022	38	112	961	1	62	0	157	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	15	13	11	11	12	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0	4.0	3.0	3.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00			
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1881	3431	1479	1589	3320	1530		1938	1500			
Flt Permitted	0.27	1.00	1.00	0.06	1.00	1.00		0.76	1.00			
Satd. Flow (perm)	530	3431	1479	105	3320	1530		1545	1500			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	2247	42	124	1068	1	69	0	174	0	0	0
RTOR Reduction (vph)	0	0	12	0	0	0	0	0	117	0	0	0
Lane Group Flow (vph)	1	2247	30	124	1068	1	0	69	57	0	0	0
Heavy Vehicles (%)	0%	3%	0%	4%	3%	0%	0%	0%	2%	0%	0%	0%
Turn Type	Perm		Perm	custom		custom	Perm		Perm	Perm		
Protected Phases		4		3	3 8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)	61.0	61.0	61.0	71.0	71.0	71.0		6.0	6.0			
Effective Green, g (s)	61.0	61.0	61.0	71.0	71.0	71.0		6.0	6.0			
Actuated g/C Ratio	0.72	0.72	0.72	0.84	0.84	0.84		0.07	0.07			
Clearance Time (s)	4.0	4.0	4.0	3.0		4.0		4.0	4.0			
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0			
Lane Grp Cap (vph)	380	2462	1061	210	2773	1278		109	106			
v/s Ratio Prot		c0.65		c0.05	0.32							
v/s Ratio Perm	0.00		0.02	0.45		0.00		c0.04	0.04			
v/c Ratio	0.00	0.91	0.03	0.59	0.39	0.00		0.63	0.54			
Uniform Delay, d1	3.4	9.8	3.5	21.1	1.7	1.2		38.4	38.2			
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00			
Incremental Delay, d2	0.0	6.5	0.0	4.4	0.1	0.0		11.4	5.1			
Delay (s)	3.4	16.4	3.5	25.5	1.8	1.2		49.8	43.3			
Level of Service	A	B	A	C	A	A		D	D			
Approach Delay (s)		16.1			4.3			45.2			0.0	
Approach LOS		B			A			D			A	

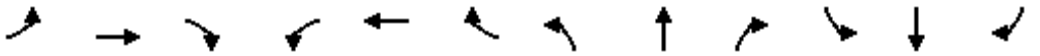
Intersection Summary			
HCM Average Control Delay	14.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	80.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	11	960	846	30	71	14
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10
Total Lost time (s)		5.0	5.0		3.0	
Lane Util. Factor		0.95	0.95		1.00	
Frt		1.00	0.99		0.98	
Flt Protected		1.00	1.00		0.96	
Satd. Flow (prot)		3097	3083		1530	
Flt Permitted		0.94	1.00		0.96	
Satd. Flow (perm)		2912	3083		1530	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	12	1067	940	33	79	16
RTOR Reduction (vph)	0	0	3	0	8	0
Lane Group Flow (vph)	0	1079	970	0	87	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Perm					
Protected Phases		4	8 2 11		5	
Permitted Phases	4					
Actuated Green, G (s)		33.0	64.0		7.0	
Effective Green, g (s)		33.0	64.0		7.0	
Actuated g/C Ratio		0.37	0.71		0.08	
Clearance Time (s)		5.0			3.0	
Lane Grp Cap (vph)		1068	2192		119	
v/s Ratio Prot			c0.31		c0.06	
v/s Ratio Perm		c0.37				
v/c Ratio		1.01	0.44		0.73	
Uniform Delay, d1		28.5	5.5		40.6	
Progression Factor		1.00	0.01		1.00	
Incremental Delay, d2		30.1	0.2		32.1	
Delay (s)		58.6	0.2		72.7	
Level of Service		E	A		E	
Approach Delay (s)		58.6	0.2		72.7	
Approach LOS		E	A		E	

Intersection Summary			
HCM Average Control Delay	32.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	48.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	107	500	0	1	583	39	3	2	28	202	0	150
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12	12	11	12	11
Total Lost time (s)		4.0			4.0			3.0			3.0	3.0
Lane Util. Factor		1.00			0.95			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			0.94			1.00	0.97
Flpb, ped/bikes		1.00			1.00			1.00			0.98	1.00
Frt		1.00			0.99			0.88			1.00	0.85
Flt Protected		0.99			1.00			1.00			0.95	1.00
Satd. Flow (prot)		1765			3342			1456			1665	1344
Flt Permitted		0.77			0.95			0.61			0.83	1.00
Satd. Flow (perm)		1373			3192			895			1461	1344
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	119	556	0	1	648	43	3	2	31	224	0	167
RTOR Reduction (vph)	0	0	0	0	5	0	0	28	0	0	0	124
Lane Group Flow (vph)	0	675	0	0	687	0	0	8	0	0	224	43
Confl. Peds. (#/hr)	60		44	44		60	14		10	10		14
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	0%	1%	0%	0%	1%	3%	20%	0%	0%	1%	0%	7%
Turn Type	Perm			pm+pt			Perm			pm+pt		Perm
Protected Phases		4		3	3 4			1		2	1 2	
Permitted Phases	4			3 4	3		1	1		1 2		1 2
Actuated Green, G (s)		48.0			62.0			9.0			23.0	26.0
Effective Green, g (s)		48.0			62.0			9.0			23.0	26.0
Actuated g/C Ratio		0.48			0.62			0.09			0.23	0.26
Clearance Time (s)		4.0						3.0				
Lane Grp Cap (vph)		659			2000			81			365	349
v/s Ratio Prot					c0.05						c0.09	
v/s Ratio Perm		c0.49			0.16			0.01			c0.06	0.03
v/c Ratio		1.02			0.34			0.10			0.61	0.12
Uniform Delay, d1		26.0			9.2			41.8			34.5	28.3
Progression Factor		1.00			0.13			1.00			1.00	1.00
Incremental Delay, d2		41.4			0.3			2.4			7.5	0.7
Delay (s)		67.4			1.4			44.1			42.0	29.0
Level of Service		E			A			D			D	C
Approach Delay (s)		67.4			1.4			44.1			36.5	
Approach LOS		E			A			D			D	

Intersection Summary			
HCM Average Control Delay	34.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	81.1%	ICU Level of Service	D
Analysis Period (min)	15		

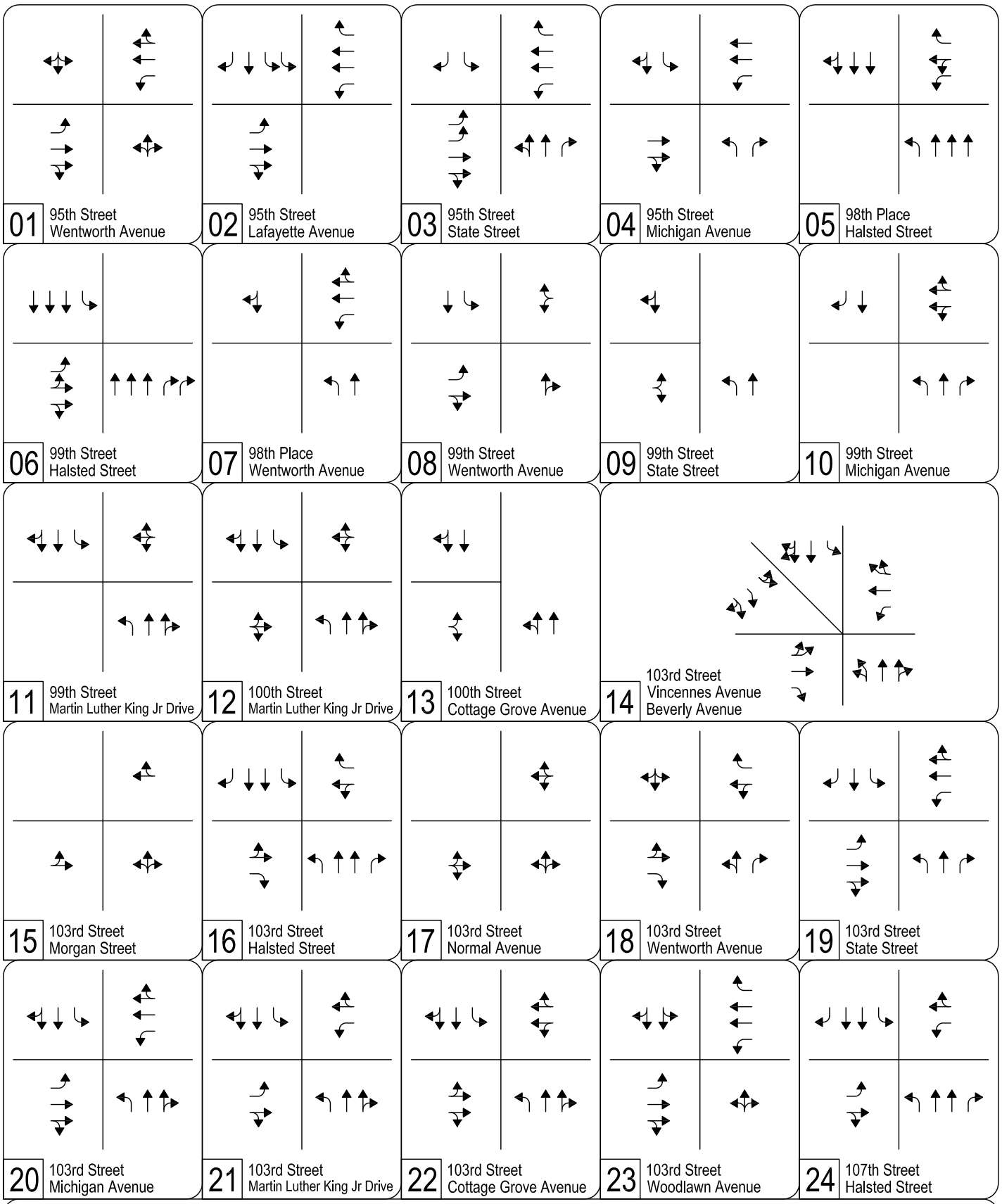
c Critical Lane Group

Appendix E
Halsted Rail Alternative

Halsted Rail Alternative Project Traffic Estimates

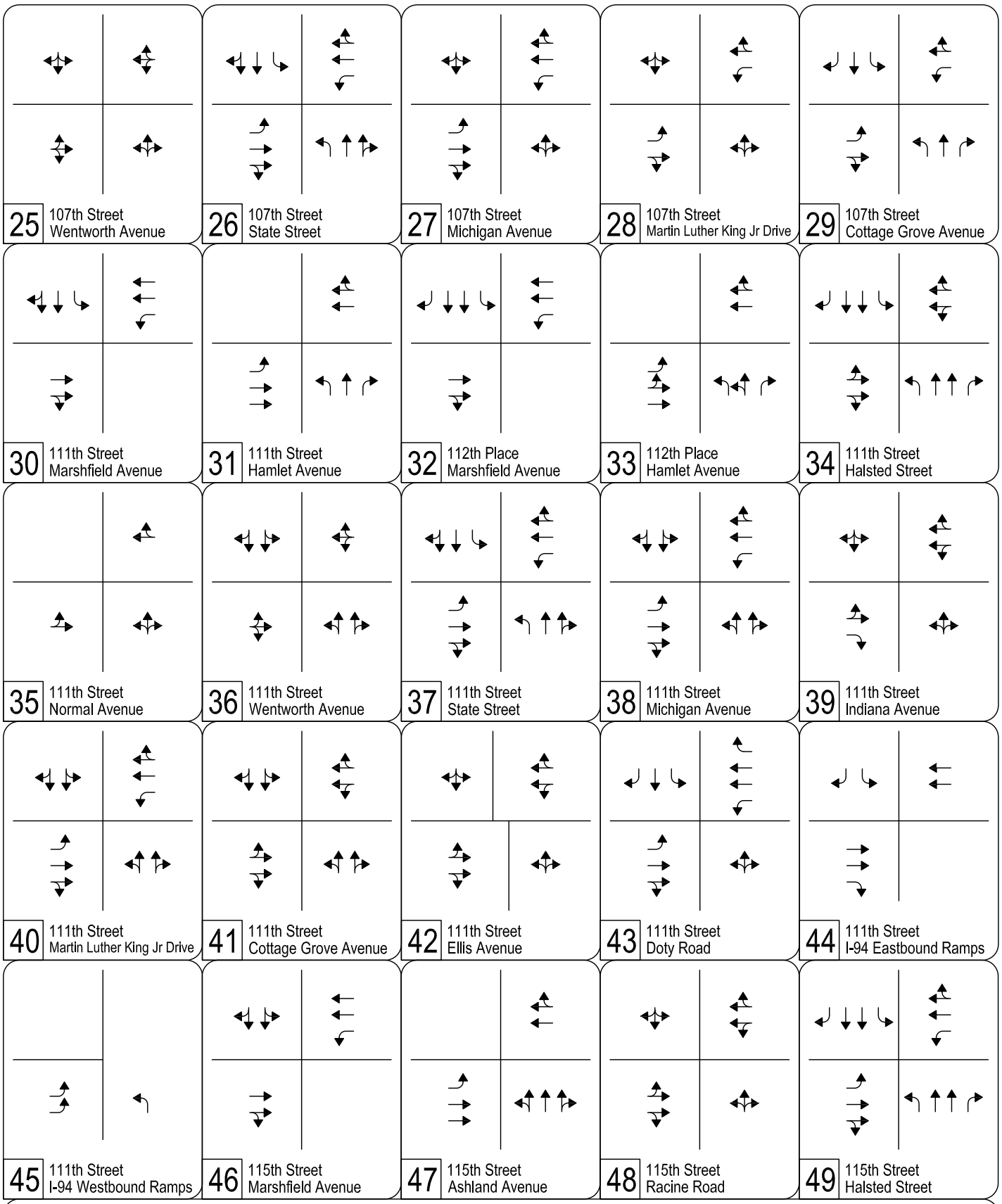
ITE Land Use	Unit	Trip Generation Rate			Peak Hour Direction			
		Daily	AM Peak Hour	PM Peak Hour	AM In	AM Out	PM In	PM Out
Light Rail with Park and Ride	Parking Spaces	2.51	1.07	1.24	80%	20%	20%	80%

Halsted Rail Alternative Park and Ride Facilities		Estimated Project Traffic						
Location	Parking Spaces	Daily	AM In	AM Out	AM Total	PM In	PM Out	PM Total
103rd Street	200	502	171	43	214	50	198	248
111th Street	200	502	171	43	214	50	198	248
119th Street	1,000	2,510	856	214	1,070	248	992	1,240
Vermont Avenue	2,300	5,773	1,969	492	2,461	570	2,282	2,852
Total	**3,700**	**9,287**	**3,167**	**792**	**3,959**	**918**	**3,670**	**4,588**



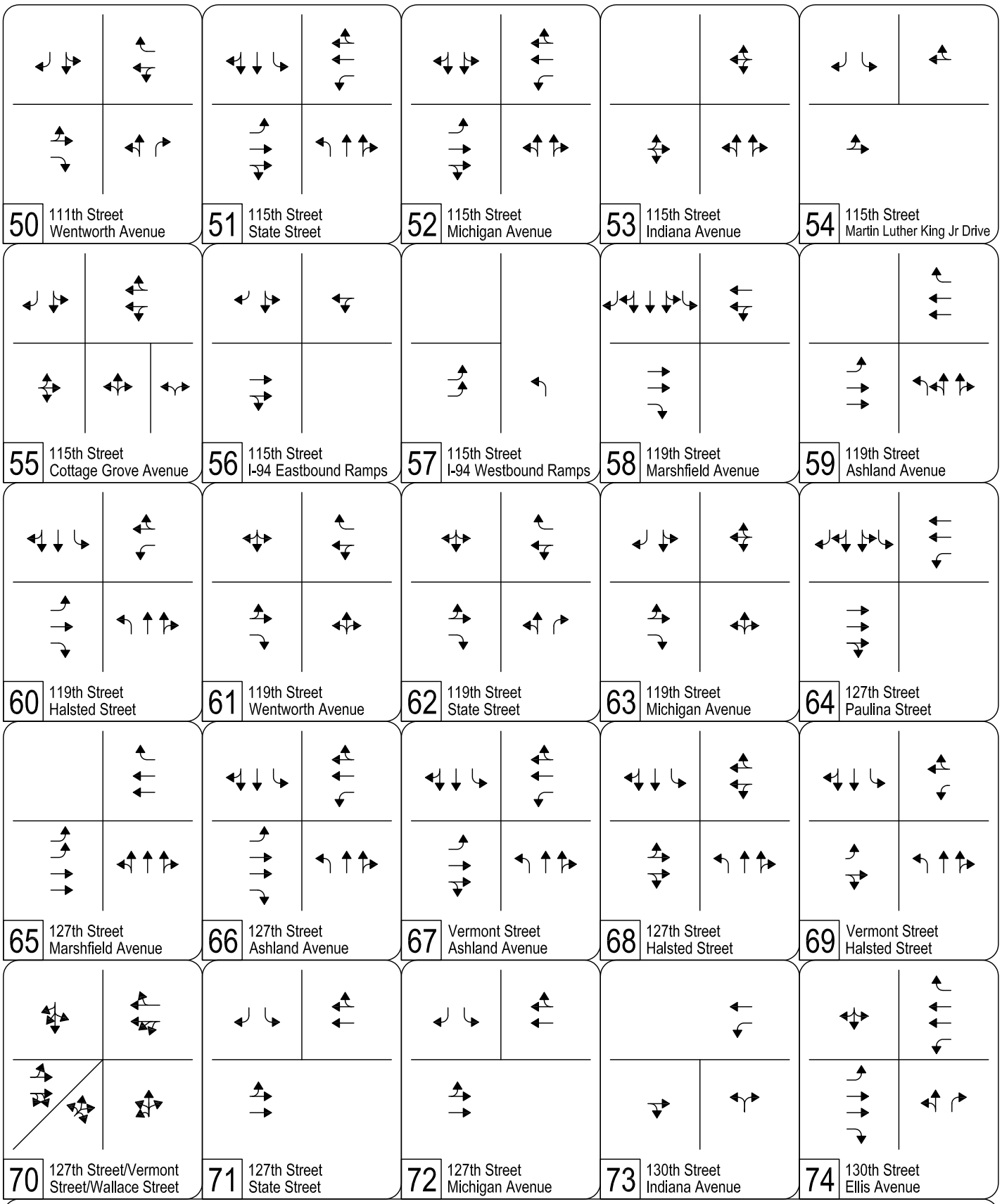
Halsted Rail Alternative (2026) Intersection Lane Geometry

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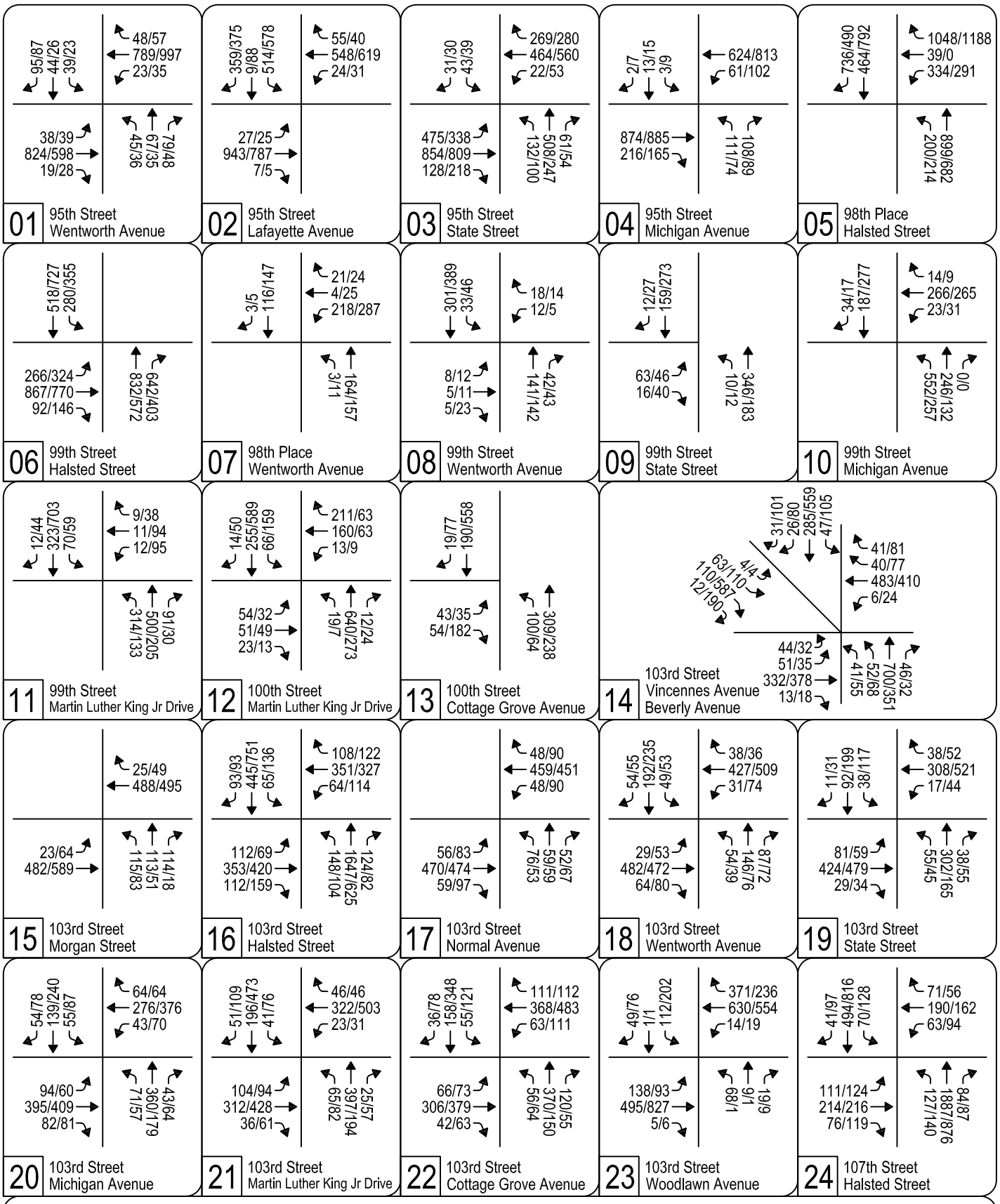
Halsted Rail Alternative (2026) Intersection Lane Geometry

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Halsted Rail Alternative (2026) Intersection Lane Geometry

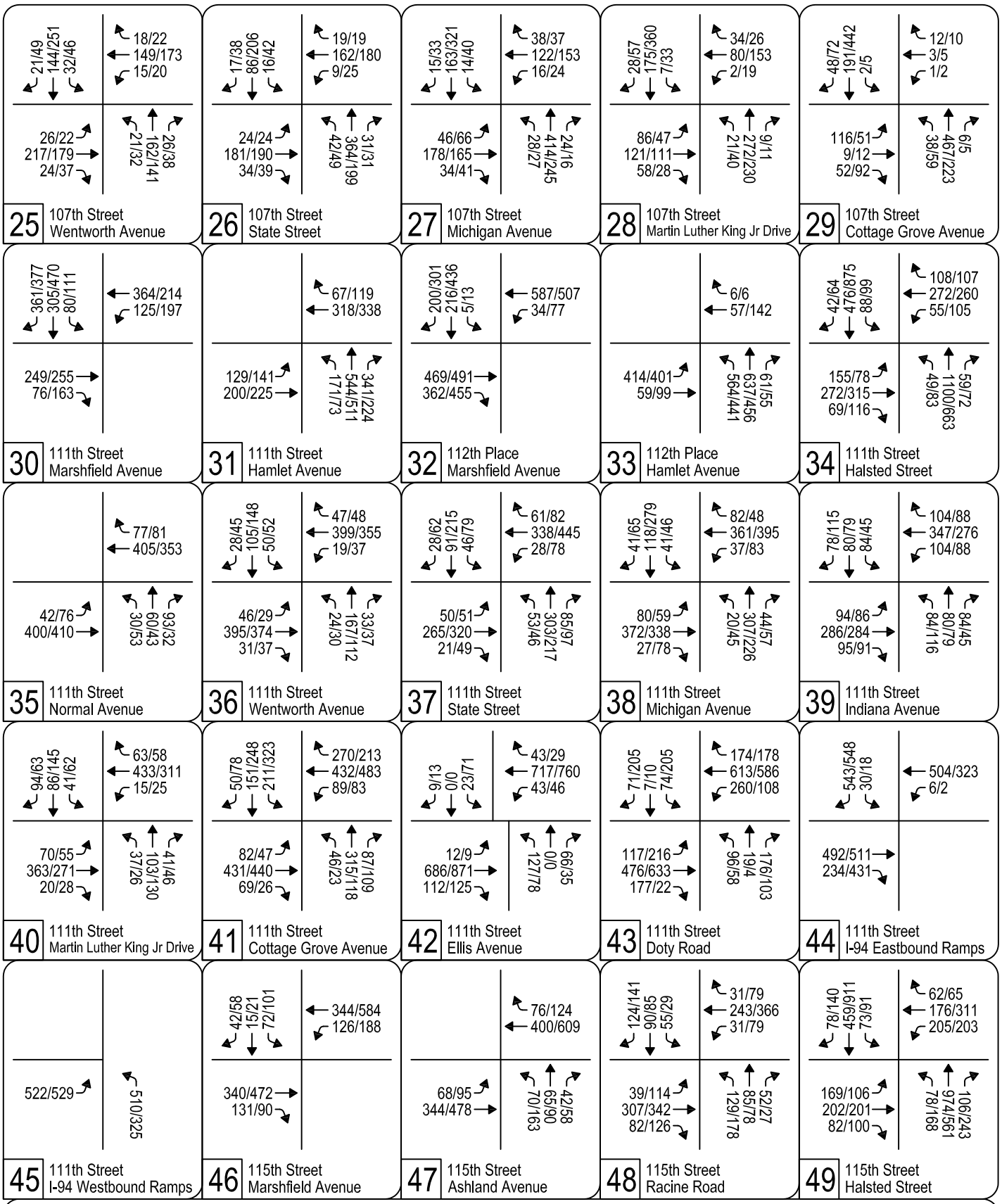
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Halsted Rail Alternative (2026) Intersection Traffic Volumes

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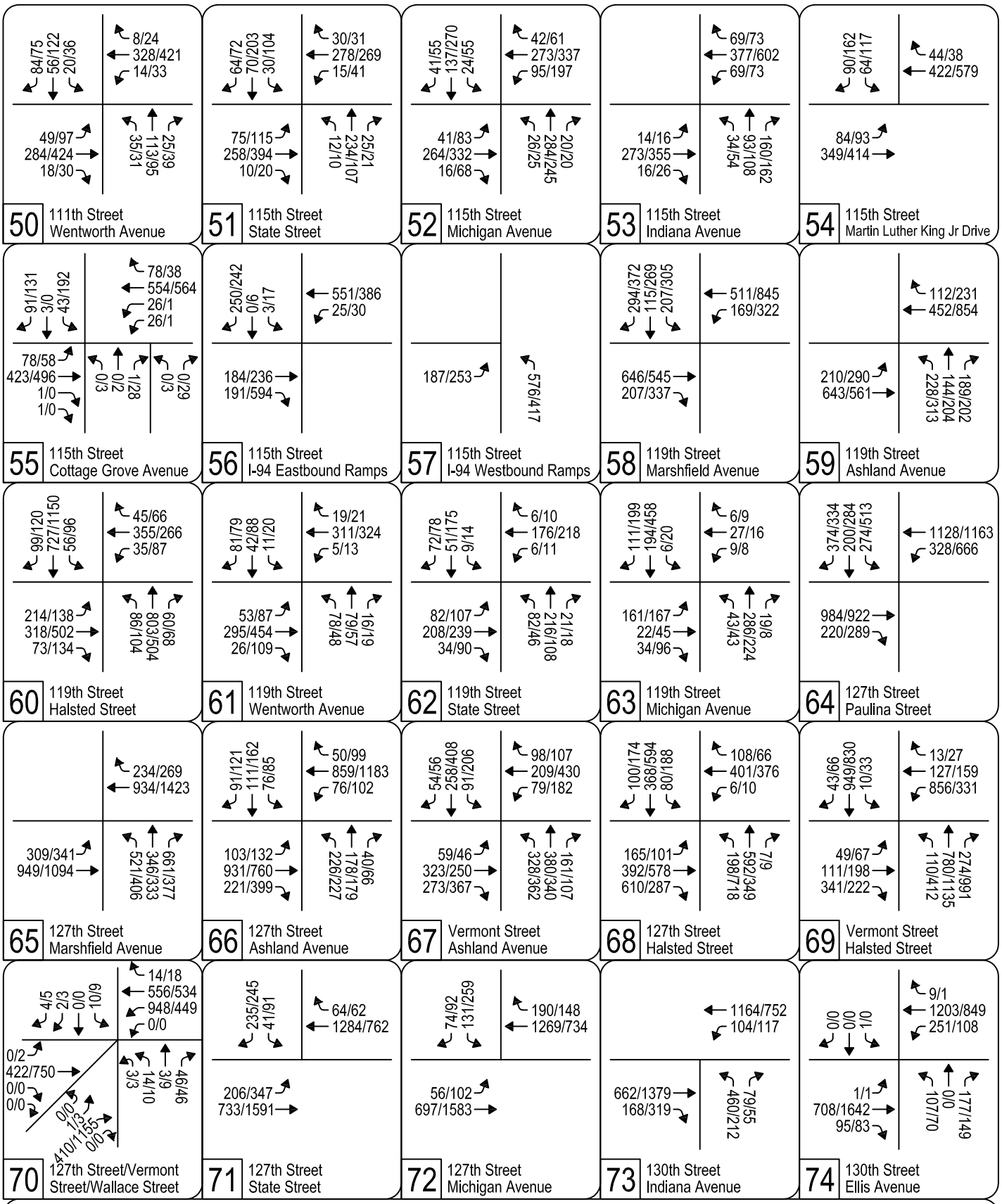
Legend: AM/PM Peak Hour Volumes



Halsted Rail Alternative (2026) Intersection Traffic Volumes

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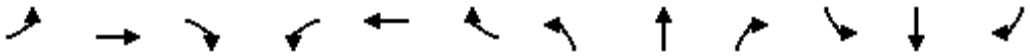
Legend: AM/PM Peak Hour Volumes



Halsted Rail Alternative (2026) Intersection Traffic Volumes

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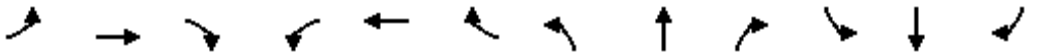
Legend: AM/PM Peak Hour Volumes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	38	824	19	23	789	48	45	67	79	39	44	95
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	16	10	10	16	8	15	8	8	14	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			0.99			0.99	
Flpb, ped/bikes	0.98	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	0.99			0.94			0.93	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1416	2975		1592	2978			1754			1673	
Flt Permitted	0.26	1.00		0.26	1.00			0.90			0.91	
Satd. Flow (perm)	384	2975		429	2978			1597			1533	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	40	867	20	24	831	51	47	71	83	41	46	100
RTOR Reduction (vph)	0	2	0	0	7	0	0	39	0	0	63	0
Lane Group Flow (vph)	40	885	0	24	875	0	0	162	0	0	124	0
Confl. Peds. (#/hr)	61		11	11		61	3		5	5		3
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	11%	7%	0%	0%	6%	2%	2%	7%	4%	5%	7%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			22.0			22.0	
Effective Green, g (s)	34.0	34.0		34.0	34.0			23.0			23.0	
Actuated g/C Ratio	0.52	0.52		0.52	0.52			0.35			0.35	
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0			5.0	
Lane Grp Cap (vph)	201	1556		224	1558			565			542	
v/s Ratio Prot		c0.30			0.29							
v/s Ratio Perm	0.10			0.06				c0.10			0.08	
v/c Ratio	0.20	0.57		0.11	0.56			0.29			0.23	
Uniform Delay, d1	8.3	10.5		7.8	10.5			15.1			14.8	
Progression Factor	1.00	1.00		0.82	1.13			1.00			1.00	
Incremental Delay, d2	2.2	1.5		0.8	1.3			1.3			1.0	
Delay (s)	10.5	12.0		7.2	13.1			16.4			15.8	
Level of Service	B	B		A	B			B			B	
Approach Delay (s)		12.0			12.9			16.4			15.8	
Approach LOS		B			B			B			B	

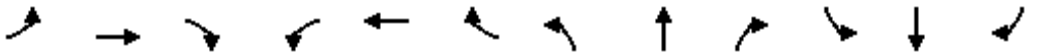
Intersection Summary			
HCM Average Control Delay	13.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	27	943	7	24	548	55	0	0	0	514	9	359
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00				0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.67				1.00	1.00	0.96
Flpb, ped/bikes	0.91	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	776	3285		1710	3138	512				3100	1440	1399
Flt Permitted	0.43	1.00		0.14	1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	355	3285		248	3138	512				3100	1440	1399
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	28	993	7	25	577	58	0	0	0	541	9	378
RTOR Reduction (vph)	0	1	0	0	0	25	0	0	0	0	0	172
Lane Group Flow (vph)	28	999	0	25	577	33	0	0	0	541	9	206
Confl. Peds. (#/hr)	354		13	13		354	22		22	22		22
Confl. Bikes (#/hr)	4					4			1	1		
Heavy Vehicles (%)	100%	4%	0%	0%	9%	100%	0%	0%	0%	7%	25%	5%
Turn Type	pm+pt			pm+pt		Perm				Split		Perm
Protected Phases	7	4		3	8					6	6	
Permitted Phases	4			8		8						6
Actuated Green, G (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Effective Green, g (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Actuated g/C Ratio	0.33	0.33		0.56	0.56	0.56				0.23	0.23	0.23
Clearance Time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Grp Cap (vph)	163	1087		634	1762	288				715	332	323
v/s Ratio Prot	0.02	c0.30		0.01	c0.18					c0.17	0.01	
v/s Ratio Perm	0.04			0.01		0.06						0.15
v/c Ratio	0.17	0.92		0.04	0.33	0.11				0.76	0.03	0.64
Uniform Delay, d1	31.6	41.8		15.1	15.3	13.3				46.6	38.7	45.1
Progression Factor	0.80	0.83		0.30	0.63	1.55				1.00	1.00	1.00
Incremental Delay, d2	2.0	12.2		0.1	0.3	0.5				7.3	0.2	9.2
Delay (s)	27.2	46.8		4.6	10.0	21.2				53.9	38.9	54.3
Level of Service	C	D		A	A	C				D	D	D
Approach Delay (s)		46.2			10.8			0.0			54.0	
Approach LOS		D			B			A			D	

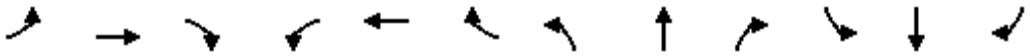
Intersection Summary			
HCM Average Control Delay	40.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	51.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	475	854	128	22	464	269	132	508	61	43	0	31
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.65		1.00	0.94	1.00		0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.98		1.00	1.00	0.85		1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (prot)	3190	3107		1555	2923	944		3300	1417	855		734
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (perm)	3190	3107		1555	2923	944		3300	1417	855		734
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	500	899	135	23	488	283	139	535	64	45	0	33
RTOR Reduction (vph)	0	9	0	0	0	161	0	0	25	0	0	31
Lane Group Flow (vph)	500	1026	0	23	488	122	0	674	39	45	0	2
Confl. Peds. (#/hr)	425		21	21		425	6		34	34		6
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	4%	8%	3%	10%	17%	5%	1%	3%	2%	100%	0%	100%
Turn Type	Prot			Prot		Perm	Split		Perm	Prot		custom
Protected Phases	7	4		3	8		2	2		6		
Permitted Phases						8			2			6
Actuated Green, G (s)	43.0	65.0		9.0	31.0	31.0		30.0	30.0	8.0		8.0
Effective Green, g (s)	43.0	65.0		9.0	31.0	31.0		30.0	30.0	8.0		8.0
Actuated g/C Ratio	0.33	0.50		0.07	0.24	0.24		0.23	0.23	0.06		0.06
Clearance Time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	1055	1554		108	697	225		762	327	53		45
v/s Ratio Prot	0.16	c0.33		0.01	c0.17			c0.20		c0.05		
v/s Ratio Perm						0.13			0.03			0.00
v/c Ratio	0.47	0.66		0.21	0.70	0.54		0.88	0.12	0.85		0.05
Uniform Delay, d1	34.5	24.3		57.2	45.3	43.3		48.3	39.5	60.4		57.4
Progression Factor	0.75	0.19		1.00	1.00	1.00		0.95	0.90	1.00		1.00
Incremental Delay, d2	0.7	1.1		4.5	5.8	9.0		14.1	0.7	70.0		0.4
Delay (s)	26.6	5.7		61.6	51.0	52.3		59.8	36.2	130.4		57.8
Level of Service	C	A		E	D	D		E	D	F		E
Approach Delay (s)		12.5			51.8			57.7			99.7	
Approach LOS		B			D			E			F	

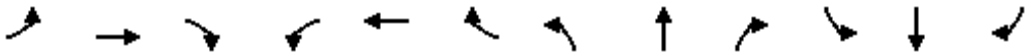
Intersection Summary			
HCM Average Control Delay	35.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	71.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	874	216	61	624	0	111	0	108	3	13	2
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	11	11	8	12	12	12	14	15	12
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes		0.99		1.00	1.00		1.00		0.98	1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00		1.00		1.00	0.99	1.00	
Frt		0.97		1.00	1.00		1.00		0.85	1.00	0.98	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		2860		1650	3005		1390		1465	1803	1943	
Flt Permitted		1.00		0.16	1.00		0.75		1.00	0.95	1.00	
Satd. Flow (perm)		2860		283	3005		1093		1465	1803	1943	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	971	240	68	693	0	123	0	120	3	14	2
RTOR Reduction (vph)	0	22	0	0	0	0	0	0	82	0	1	0
Lane Group Flow (vph)	0	1189	0	68	693	0	123	0	38	3	15	0
Confl. Peds. (#/hr)	49		15	15		49			12	12		
Heavy Vehicles (%)	0%	6%	14%	0%	10%	0%	23%	0%	2%	0%	0%	0%
Turn Type				Perm			custom		custom	Perm		
Protected Phases		4			8						6	
Permitted Phases				8			2		2	6		
Actuated Green, G (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Effective Green, g (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Actuated g/C Ratio		0.60		0.60	0.60		0.32		0.32	0.32	0.32	
Clearance Time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)		1716		170	1803		350		469	577	622	
v/s Ratio Prot		c0.42			0.23						0.01	
v/s Ratio Perm				0.24			c0.11		0.03	0.00		
v/c Ratio		0.69		0.40	0.38		0.35		0.08	0.01	0.02	
Uniform Delay, d1		13.7		10.5	10.4		26.0		23.7	23.2	23.3	
Progression Factor		1.00		1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		2.3		6.9	0.6		2.8		0.3	0.0	0.1	
Delay (s)		16.0		17.4	11.0		28.8		24.1	23.2	23.4	
Level of Service		B		B	B		C		C	C	C	
Approach Delay (s)		16.0			11.6			26.5			23.3	
Approach LOS		B			B			C			C	

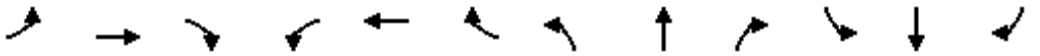
Intersection Summary			
HCM Average Control Delay	15.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	334	39	1048	200	899	0	0	464	736
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	12	10	10	12	12	11	12
Total Lost time (s)				4.0	4.0	5.0	3.0	4.0			4.0	
Lane Util. Factor				0.95	0.95	1.00	1.00	0.91			0.91	
Frpb, ped/bikes				1.00	1.00	0.99	1.00	1.00			0.98	
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00			1.00	
Frt				1.00	1.00	0.85	1.00	1.00			0.91	
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (prot)				1525	1629	1479	1550	4368			3938	
Flt Permitted				0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (perm)				1525	1629	1479	1550	4368			3938	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	341	40	1069	204	917	0	0	473	751
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	341	40	1069	204	917	0	0	1224	0
Confl. Peds. (#/hr)	2					2	12		8	8		12
Heavy Vehicles (%)	0%	0%	0%	3%	5%	2%	3%	5%	0%	0%	5%	8%
Turn Type				Perm		Perm	Prot					
Protected Phases					8		5	2			6	
Permitted Phases				8		8						
Actuated Green, G (s)				30.0	30.0	30.0	32.0	66.0			31.0	
Effective Green, g (s)				31.0	31.0	30.0	32.0	66.0			31.0	
Actuated g/C Ratio				0.30	0.30	0.29	0.30	0.63			0.30	
Clearance Time (s)				5.0	5.0	5.0	3.0	4.0			4.0	
Lane Grp Cap (vph)				450	481	423	472	2746			1163	
v/s Ratio Prot							c0.13	0.21			c0.31	
v/s Ratio Perm				0.22	0.02	c0.72						
v/c Ratio				0.76	0.08	2.53	0.43	0.33			1.87dr	
Uniform Delay, d1				33.6	26.7	37.5	29.2	9.2			37.0	
Progression Factor				1.00	1.00	1.00	0.66	2.37			1.00	
Incremental Delay, d2				11.3	0.3	694.2	2.0	0.2			41.3	
Delay (s)				44.9	27.1	731.7	21.2	22.0			78.3	
Level of Service				D	C	F	C	C			E	
Approach Delay (s)		0.0			550.8			21.8			78.3	
Approach LOS		A			F			C			E	

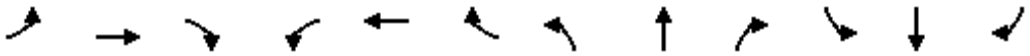
Intersection Summary			
HCM Average Control Delay	242.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.32		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.6%	ICU Level of Service	F
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group



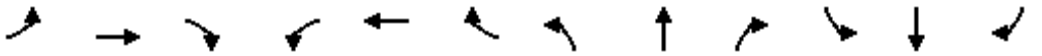
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	266	867	92	0	0	0	0	832	642	280	518	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	13	12	12	12	12	12	10	10	8	12	12	12
Total Lost time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Util. Factor	0.91	0.91						0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00						1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00						1.00	1.00	1.00	1.00	
Frt	1.00	0.99						1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1497	3184						4368	2187	1583	4636	
Flt Permitted	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1497	3184						4368	2187	1583	4636	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	274	894	95	0	0	0	0	858	662	289	534	0
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	247	1009	0	0	0	0	0	858	662	289	534	0
Confl. Peds. (#/hr)	4		14	14		4	4		3	3		4
Heavy Vehicles (%)	7%	1%	0%	0%	0%	0%	0%	5%	4%	8%	6%	0%
Turn Type	Perm								Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Actuated Green, G (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Effective Green, g (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Actuated g/C Ratio	0.32	0.32						0.27	0.27	0.30	0.59	
Clearance Time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Grp Cap (vph)	485	1031						1165	583	467	2737	
v/s Ratio Prot								0.20		c0.18	0.12	
v/s Ratio Perm	0.16	0.32							c0.30			
v/c Ratio	0.51	0.98						0.74	1.14	0.62	0.20	
Uniform Delay, d1	28.7	35.1						35.1	38.5	31.9	10.0	
Progression Factor	1.00	1.00						0.44	0.46	1.06	0.43	
Incremental Delay, d2	3.8	23.4						0.4	63.2	2.4	0.1	
Delay (s)	32.5	58.5						15.7	81.0	36.1	4.3	
Level of Service	C	E						B	F	D	A	
Approach Delay (s)		53.4			0.0			44.1			15.5	
Approach LOS		D			A			D			B	

Intersection Summary			
HCM Average Control Delay	40.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



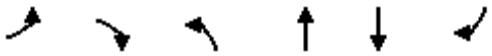
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	218	4	21	3	164	0	0	116	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	14	12	12	16	12
Total Lost time (s)				4.0	4.0		4.0	4.0			-3.0	
Lane Util. Factor				1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes				1.00	0.98		1.00	1.00			1.00	
Flpb, ped/bikes				1.00	1.00		1.00	1.00			1.00	
Frt				1.00	0.87		1.00	1.00			1.00	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1578	2709		1285	1882			1961	
Flt Permitted				0.95	1.00		0.58	1.00			1.00	
Satd. Flow (perm)				1578	2709		781	1882			1961	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	242	4	23	3	182	0	0	129	3
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	242	9	0	3	182	0	0	131	0
Confl. Peds. (#/hr)	2		2	2		2	3					3
Heavy Vehicles (%)	0%	0%	0%	8%	25%	5%	33%	2%	0%	0%	3%	33%
Turn Type				Perm			pm+pt					
Protected Phases					8		7	2			6	
Permitted Phases				8			2					
Actuated Green, G (s)				27.0	27.0		50.0	50.0			40.0	
Effective Green, g (s)				27.0	27.0		50.0	50.0			46.0	
Actuated g/C Ratio				0.32	0.32		0.59	0.59			0.54	
Clearance Time (s)				4.0	4.0		4.0	4.0			3.0	
Lane Grp Cap (vph)				501	861		501	1107			1061	
v/s Ratio Prot					0.00		0.00	c0.10			0.07	
v/s Ratio Perm				c0.15			0.00					
v/c Ratio				0.48	0.01		0.01	0.16			0.12	
Uniform Delay, d1				23.4	19.9		10.0	8.0			9.6	
Progression Factor				1.00	1.00		1.05	1.18			1.00	
Incremental Delay, d2				3.3	0.0		0.0	0.3			0.2	
Delay (s)				26.7	19.9		10.5	9.7			9.8	
Level of Service				C	B		B	A			A	
Approach Delay (s)		0.0			26.0			9.7			9.8	
Approach LOS		A			C			A			A	

Intersection Summary			
HCM Average Control Delay	17.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



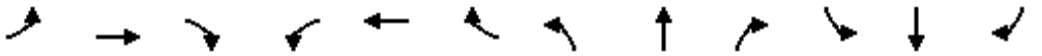
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	8	5	5	12	0	18	0	141	42	33	301	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	16	15	12	8	12	8	12	12	12	10	13	12
Total Lost time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99			1.00			0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00			1.00		1.00	1.00	
Frt	1.00	0.93			0.92			0.97		1.00	1.00	
Flt Protected	0.95	1.00			0.98			1.00		0.95	1.00	
Satd. Flow (prot)	1938	1809			1620			1685		1595	1755	
Flt Permitted	0.74	1.00			0.93			1.00		0.60	1.00	
Satd. Flow (perm)	1502	1809			1543			1685		1010	1755	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	8	5	5	13	0	19	0	148	44	35	317	0
RTOR Reduction (vph)	0	3	0	0	13	0	0	13	0	0	0	0
Lane Group Flow (vph)	8	7	0	0	19	0	0	179	0	35	317	0
Confl. Peds. (#/hr)			3	3			5		2	2		5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	3%	0%	6%	0%
Turn Type	Perm			Perm						pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Effective Green, g (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Actuated g/C Ratio	0.32	0.32			0.32			0.47		0.59	0.59	
Clearance Time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Grp Cap (vph)	477	575			490			793		642	1032	
v/s Ratio Prot		0.00						0.11		0.00	c0.18	
v/s Ratio Perm	0.01				c0.01					0.03		
v/c Ratio	0.02	0.01			0.04			0.23		0.05	0.31	
Uniform Delay, d1	19.9	19.9			20.0			13.3		8.5	8.8	
Progression Factor	1.00	1.00			1.00			1.00		1.01	0.93	
Incremental Delay, d2	0.1	0.0			0.1			0.7		0.2	0.7	
Delay (s)	20.0	19.9			20.2			14.0		8.8	8.9	
Level of Service	B	B			C			B		A	A	
Approach Delay (s)		19.9			20.2			14.0			8.9	
Approach LOS		B			C			B			A	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.21		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	63	16	10	346	159	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	14	12	13	12	10	12
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.97		1.00	1.00	0.99	
Flt Protected	0.96		0.95	1.00	1.00	
Satd. Flow (prot)	1787		1767	1765	1634	
Flt Permitted	0.96		0.64	1.00	1.00	
Satd. Flow (perm)	1787		1187	1765	1634	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	70	18	11	384	177	13
RTOR Reduction (vph)	12	0	0	0	4	0
Lane Group Flow (vph)	76	0	11	384	186	0
Confl. Peds. (#/hr)		2				
Heavy Vehicles (%)	0%	0%	0%	2%	2%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.0		36.0	36.0	36.0	
Effective Green, g (s)	21.0		36.0	36.0	36.0	
Actuated g/C Ratio	0.32		0.55	0.55	0.55	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	577		657	978	905	
v/s Ratio Prot	c0.04			c0.22	0.11	
v/s Ratio Perm			0.01			
v/c Ratio	0.13		0.02	0.39	0.21	
Uniform Delay, d1	15.6		6.5	8.3	7.3	
Progression Factor	1.00		0.32	0.51	1.17	
Incremental Delay, d2	0.5		0.0	1.1	0.5	
Delay (s)	16.0		2.1	5.3	9.0	
Level of Service	B		A	A	A	
Approach Delay (s)	16.0			5.2	9.0	
Approach LOS	B			A	A	

Intersection Summary			
HCM Average Control Delay	7.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	39.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



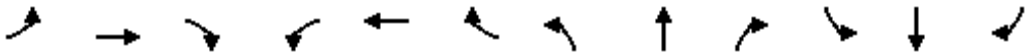
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	23	266	14	552	246	0	0	187	34
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	14	16	12	12	15	12	12	13	10
Total Lost time (s)					4.0		4.0	4.0			3.0	3.0
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Frt					0.99		1.00	1.00			1.00	0.85
Flt Protected					1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3737		1660	1752			1603	1298
Flt Permitted					1.00		0.58	1.00			1.00	1.00
Satd. Flow (perm)					3737		1013	1752			1603	1298
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	26	296	16	613	273	0	0	208	38
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	0	0	0	21
Lane Group Flow (vph)	0	0	0	0	334	0	613	273	0	0	208	17
Confl. Peds. (#/hr)									30	30		
Heavy Vehicles (%)	0%	0%	0%	11%	2%	0%	3%	13%	0%	0%	16%	10%
Turn Type				Split			pm+pt					Perm
Protected Phases				8	8		7	2			6	
Permitted Phases							2					6
Actuated Green, G (s)					26.0		51.0	51.0			38.0	38.0
Effective Green, g (s)					26.0		51.0	51.0			38.0	38.0
Actuated g/C Ratio					0.31		0.60	0.60			0.45	0.45
Clearance Time (s)					4.0		4.0	4.0			3.0	3.0
Lane Grp Cap (vph)					1143		684	1051			717	580
v/s Ratio Prot					c0.09		c0.11	0.16			0.13	
v/s Ratio Perm							c0.43					0.01
v/c Ratio					0.29		0.90	0.26			0.29	0.03
Uniform Delay, d1					22.5		16.8	8.1			14.9	13.2
Progression Factor					1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2					0.6		16.7	0.6			1.0	0.1
Delay (s)					23.1		33.5	8.7			16.0	13.3
Level of Service					C		C	A			B	B
Approach Delay (s)		0.0			23.1			25.9			15.5	
Approach LOS		A			C			C			B	

Intersection Summary			
HCM Average Control Delay	23.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	12	11	9	314	500	91	70	323	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	15	12	12	12	12	12	13	12
Total Lost time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.96		1.00	0.98		1.00	0.99	
Flt Protected					0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1794		1691	3237		1707	3352	
Flt Permitted					0.98		0.51	1.00		0.33	1.00	
Satd. Flow (perm)					1794		917	3237		600	3352	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	13	12	10	349	556	101	78	359	13
RTOR Reduction (vph)	0	0	0	0	7	0	0	20	0	0	3	0
Lane Group Flow (vph)	0	0	0	0	28	0	349	637	0	78	369	0
Confl. Peds. (#/hr)	2					2	6		20	20		6
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	0%	0%	0%	11%	0%	1%	3%	0%	0%	5%	0%
Turn Type				Split			pm+pt			pm+pt		
Protected Phases				8	8		5	2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)					23.0		41.0	34.0		41.0	34.0	
Effective Green, g (s)					23.0		41.0	34.0		41.0	34.0	
Actuated g/C Ratio					0.31		0.55	0.45		0.55	0.45	
Clearance Time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Grp Cap (vph)					550		574	1467		431	1520	
v/s Ratio Prot					c0.02		c0.06	0.20		0.02	0.11	
v/s Ratio Perm							c0.28			0.08		
v/c Ratio					0.05		0.61	0.43		0.18	0.24	
Uniform Delay, d1					18.3		13.0	14.0		11.8	12.6	
Progression Factor					1.00		0.71	0.73		1.00	1.00	
Incremental Delay, d2					0.2		4.4	0.9		0.9	0.4	
Delay (s)					18.5		13.6	11.0		12.7	13.0	
Level of Service					B		B	B		B	B	
Approach Delay (s)		0.0			18.5			11.9			12.9	
Approach LOS		A			B			B			B	

Intersection Summary			
HCM Average Control Delay	12.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	55.0%	ICU Level of Service	B
Analysis Period (min)	15		

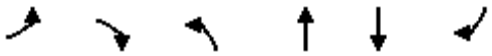
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	54	51	23	13	160	211	19	640	12	66	255	14
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	16	12	12	10	11	12	12	11	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.93		1.00	1.00		1.00	0.99	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1945			1625		1596	3232		1641	3131	
Flt Permitted		0.71			0.99		0.58	1.00		0.35	1.00	
Satd. Flow (perm)		1411			1612		971	3232		605	3131	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	57	54	24	14	168	222	20	674	13	69	268	15
RTOR Reduction (vph)	0	11	0	0	59	0	0	2	0	0	5	0
Lane Group Flow (vph)	0	124	0	0	345	0	20	685	0	69	278	0
Confl. Peds. (#/hr)									6	6		
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	0%	0%	12%	2%	2%	0%	2%	0%	4%	5%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Effective Green, g (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Actuated g/C Ratio		0.33			0.33		0.56	0.56		0.56	0.56	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		470			537		544	1810		339	1753	
v/s Ratio Prot								c0.21			0.09	
v/s Ratio Perm		0.09			c0.21		0.02			0.11		
v/c Ratio		0.26			0.64		0.04	0.38		0.20	0.16	
Uniform Delay, d1		18.3			21.2		7.4	9.2		8.2	8.0	
Progression Factor		1.00			1.00		1.00	1.00		0.15	0.05	
Incremental Delay, d2		1.4			5.8		0.1	0.6		1.3	0.2	
Delay (s)		19.7			27.0		7.5	9.8		2.5	0.6	
Level of Service		B			C		A	A		A	A	
Approach Delay (s)		19.7			27.0			9.8			1.0	
Approach LOS		B			C			A			A	

Intersection Summary			
HCM Average Control Delay	13.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.0%	ICU Level of Service	C
Analysis Period (min)	15		

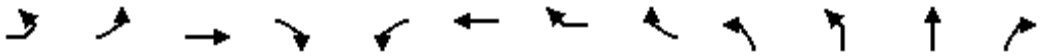
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	43	54	100	309	190	19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	48	60	111	343	211	21

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	108	226	229	141	91
Volume Left (vph)	48	111	0	0	0
Volume Right (vph)	60	0	0	0	21
Hadj (s)	-0.16	0.33	0.09	0.08	-0.08
Departure Headway (s)	5.2	5.4	5.1	5.3	5.2
Degree Utilization, x	0.16	0.34	0.33	0.21	0.13
Capacity (veh/h)	634	657	688	648	667
Control Delay (s)	9.2	9.9	9.4	8.6	7.8
Approach Delay (s)	9.2	9.6		8.2	
Approach LOS	A	A		A	

Intersection Summary			
Delay	9.1		
HCM Level of Service	A		
Intersection Capacity Utilization	34.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	44	51	332	13	6	483	40	41	41	52	700	46
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	0.95	
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.97			1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Frt		1.00	1.00	0.85	1.00	1.00	0.85			1.00	0.99	
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	
Satd. Flow (prot)		1575	1731	1530	1710	1731	1487			1710	3289	
Flt Permitted		0.11	1.00	1.00	0.54	1.00	1.00			0.41	1.00	
Satd. Flow (perm)		187	1731	1530	975	1731	1487			737	3289	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	49	57	369	14	7	537	44	46	46	58	778	51
RTOR Reduction (vph)	0	0	0	7	0	0	32	0	0	0	5	0
Lane Group Flow (vph)	0	106	369	7	7	537	58	0	0	104	824	0
Confl. Peds. (#/hr)		5					5					6
Heavy Vehicles (%)	8%	9%	4%	0%	0%	4%	0%	0%	0%	0%	3%	0%
Turn Type	Perm	pm+pt		Perm	Perm		Perm		Perm	Perm		
Protected Phases		7	4			8					2	
Permitted Phases	4	4		4	8		8		2	2		
Actuated Green, G (s)		50.0	50.0	50.0	32.0	32.0	32.0			25.0	25.0	
Effective Green, g (s)		50.0	50.0	50.0	32.0	32.0	32.0			25.0	25.0	
Actuated g/C Ratio		0.48	0.48	0.48	0.30	0.30	0.30			0.24	0.24	
Clearance Time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Grp Cap (vph)		281	824	729	297	528	453			175	783	
v/s Ratio Prot		0.05	c0.21			c0.31					c0.25	
v/s Ratio Perm		0.13		0.00	0.01		0.04			0.14		
v/c Ratio		0.38	0.45	0.01	0.02	1.02	0.13			0.59	1.05	
Uniform Delay, d1		20.3	18.3	14.5	25.6	36.5	26.4			35.5	40.0	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Incremental Delay, d2		3.8	1.8	0.0	0.1	43.5	0.6			14.0	47.0	
Delay (s)		24.1	20.1	14.5	25.7	80.0	27.0			49.5	87.0	
Level of Service		C	C	B	C	F	C			D	F	
Approach Delay (s)			20.8			71.9					82.8	
Approach LOS			C			E					F	

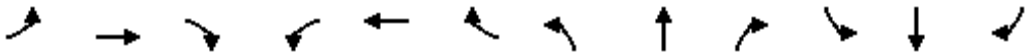
Intersection Summary			
HCM Average Control Delay	59.5	HCM Level of Service	E
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	79.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations								
Volume (vph)	47	285	26	31	4	63	110	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5				4.5	4.5	
Lane Util. Factor	1.00	0.95				1.00	0.88	
Frpb, ped/bikes	1.00	1.00				1.00	1.00	
Flpb, ped/bikes	1.00	1.00				1.00	1.00	
Frt	1.00	0.98				1.00	0.85	
Flt Protected	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1706	3280				1710	2622	
Flt Permitted	0.16	1.00				0.95	1.00	
Satd. Flow (perm)	293	3280				1710	2622	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	52	317	29	34	4	70	122	13
RTOR Reduction (vph)	0	7	0	0	0	0	7	0
Lane Group Flow (vph)	52	373	0	0	0	74	128	0
Confl. Peds. (#/hr)	6							
Heavy Vehicles (%)	0%	2%	0%	0%	0%	0%	3%	0%
Turn Type	Perm				Split		Perm	
Protected Phases		6			9	9		
Permitted Phases	6						9	
Actuated Green, G (s)	24.5	24.5				17.5	17.5	
Effective Green, g (s)	24.5	24.5				17.5	17.5	
Actuated g/C Ratio	0.23	0.23				0.17	0.17	
Clearance Time (s)	4.5	4.5				4.5	4.5	
Lane Grp Cap (vph)	68	765				285	437	
v/s Ratio Prot		0.11				0.04		
v/s Ratio Perm	0.18						c0.05	
v/c Ratio	0.76	0.49				0.26	0.29	
Uniform Delay, d1	37.6	34.8				38.1	38.3	
Progression Factor	1.00	1.00				1.00	1.00	
Incremental Delay, d2	56.2	2.2				2.2	1.7	
Delay (s)	93.8	37.0				40.3	40.0	
Level of Service	F	D				D	D	
Approach Delay (s)		43.9				40.1		
Approach LOS		D				D		

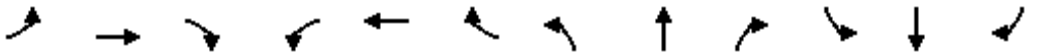
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	482	0	0	488	25	115	113	114	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	11	11	16	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.99			0.95				
Flt Protected		1.00			1.00			0.98				
Satd. Flow (prot)		1653			1930			1771				
Flt Permitted		0.97			1.00			0.98				
Satd. Flow (perm)		1600			1930			1771				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	26	536	0	0	542	28	128	126	127	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	562	0	0	570	0	0	381	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		31.0			31.0			26.0				
Effective Green, g (s)		31.0			31.0			26.0				
Actuated g/C Ratio		0.48			0.48			0.40				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		763			920			708				
v/s Ratio Prot					0.30							
v/s Ratio Perm		c0.35						0.22				
v/c Ratio		0.74			0.62			0.54				
Uniform Delay, d1		13.7			12.6			14.9				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		6.3			3.1			2.9				
Delay (s)		20.0			15.8			17.8				
Level of Service		B			B			B				
Approach Delay (s)		20.0			15.8			17.8			0.0	
Approach LOS		B			B			B			A	

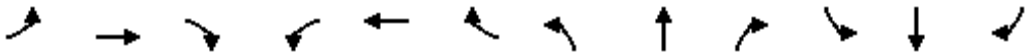
Intersection Summary			
HCM Average Control Delay	17.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	112	353	112	64	351	108	148	1647	124	65	445	93
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	9	9	10	9
Total Lost time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.96	1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1923	1426		1923	1396	1500	3099	1284	1425	2956	1265
Flt Permitted		0.56	1.00		0.64	1.00	0.40	1.00	1.00	0.09	1.00	1.00
Satd. Flow (perm)		1081	1426		1239	1396	625	3099	1284	142	2956	1265
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	118	372	118	67	369	114	156	1734	131	68	468	98
RTOR Reduction (vph)	0	0	70	0	0	67	0	0	29	0	0	59
Lane Group Flow (vph)	0	490	48	0	436	47	156	1734	102	68	468	39
Confl. Peds. (#/hr)	42		39	39		42	20		8	8		20
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	6%	4%	3%	0%	6%	5%	6%	3%	4%	8%	8%	4%
Turn Type	pm+pt		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		43.0	43.0		43.0	43.0	53.1	44.4	44.4	48.9	42.3	42.3
Effective Green, g (s)		43.0	43.0		43.0	43.0	53.1	44.4	44.4	48.9	42.3	42.3
Actuated g/C Ratio		0.41	0.41		0.41	0.41	0.51	0.42	0.42	0.47	0.40	0.40
Clearance Time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		443	584		507	572	389	1310	543	147	1191	510
v/s Ratio Prot							c0.03	c0.56		c0.03	0.16	
v/s Ratio Perm		c0.45	0.03		0.35	0.03	0.17		0.08	0.19		0.03
v/c Ratio		1.11	0.08		0.86	0.08	0.40	1.32	0.19	0.46	0.39	0.08
Uniform Delay, d1		31.0	18.9		28.3	18.9	14.7	30.3	19.0	23.1	22.2	19.3
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.10	0.76	0.40
Incremental Delay, d2		74.8	0.3		17.1	0.3	0.7	151.1	0.8	2.2	0.9	0.3
Delay (s)		105.8	19.2		45.4	19.2	15.4	181.4	19.8	27.7	17.8	8.1
Level of Service		F	B		D	B	B	F	B	C	B	A
Approach Delay (s)		89.0			40.0			158.1			17.3	
Approach LOS		F			D			F			B	

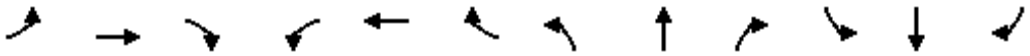
Intersection Summary			
HCM Average Control Delay	106.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	114.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	56	470	59	48	459	48	76	59	52	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		0.99			0.99			0.96				
Flt Protected		1.00			1.00			0.98				
Satd. Flow (prot)		1627			1631			1779				
Flt Permitted		0.91			0.92			0.98				
Satd. Flow (perm)		1483			1500			1779				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	62	522	66	53	510	53	84	66	58	0	0	0
RTOR Reduction (vph)	0	6	0	0	5	0	0	21	0	0	0	0
Lane Group Flow (vph)	0	644	0	0	611	0	0	187	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		38.0			38.0			19.0				
Effective Green, g (s)		38.0			38.0			19.0				
Actuated g/C Ratio		0.58			0.58			0.29				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		867			877			520				
v/s Ratio Prot												
v/s Ratio Perm		c0.43			0.41			0.10				
v/c Ratio		0.74			0.70			0.36				
Uniform Delay, d1		9.9			9.5			18.2				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		5.7			4.6			1.9				
Delay (s)		15.6			14.0			20.1				
Level of Service		B			B			C				
Approach Delay (s)		15.6			14.0			20.1			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM Average Control Delay	15.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



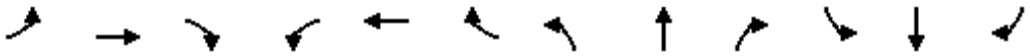
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	29	482	64	31	427	38	54	146	87	49	192	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	11	12	12	15	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.97		1.00	0.95		1.00	0.98		0.98	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		0.99	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.98	
Flt Protected		1.00	1.00		1.00	1.00		0.99	1.00		0.99	
Satd. Flow (prot)		1656	1255		1636	1288		1658	1490		1737	
Flt Permitted		0.96	1.00		0.95	1.00		0.84	1.00		0.92	
Satd. Flow (perm)		1596	1255		1558	1288		1418	1490		1608	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	31	507	67	33	449	40	57	154	92	52	202	57
RTOR Reduction (vph)	0	0	29	0	0	16	0	0	63	0	11	0
Lane Group Flow (vph)	0	538	38	0	482	24	0	211	29	0	300	0
Confl. Peds. (#/hr)	33		15	15		33	68		5	5		68
Confl. Bikes (#/hr)	4					4						
Heavy Vehicles (%)	0%	5%	14%	19%	5%	9%	2%	2%	1%	10%	7%	8%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Effective Green, g (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.32	0.32		0.32	
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Grp Cap (vph)		915	720		893	738		454	477		515	
v/s Ratio Prot												
v/s Ratio Perm		c0.34	0.03		0.31	0.02		0.15	0.02		c0.19	
v/c Ratio		0.59	0.05		0.54	0.03		0.46	0.06		0.58	
Uniform Delay, d1		10.3	7.0		9.9	7.0		20.4	17.7		21.3	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		2.8	0.1		2.3	0.1		3.4	0.2		4.8	
Delay (s)		13.1	7.2		12.2	7.0		23.8	17.9		26.1	
Level of Service		B	A		B	A		C	B		C	
Approach Delay (s)		12.4			11.8			22.0			26.1	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	16.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	93.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	81	424	29	17	308	38	55	302	38	38	92	11
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	11	16	8	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.98	1.00	1.00	0.99
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1463	2990		1459	3534		1534	1647	1301	1517	1541	1156
Flt Permitted	0.52	1.00		0.44	1.00		0.69	1.00	1.00	0.45	1.00	1.00
Satd. Flow (perm)	800	2990		674	3534		1116	1647	1301	722	1541	1156
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	90	471	32	19	342	42	61	336	42	42	102	12
RTOR Reduction (vph)	0	8	0	0	15	0	0	0	22	0	0	7
Lane Group Flow (vph)	90	495	0	19	369	0	61	336	20	42	102	5
Confl. Peds. (#/hr)	16		9	9		16	1		5	5		1
Heavy Vehicles (%)	8%	6%	0%	13%	8%	3%	4%	2%	8%	5%	9%	22%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Effective Green, g (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	382	1426		321	1685		446	659	520	289	616	462
v/s Ratio Prot		c0.17			0.10			c0.20			0.07	
v/s Ratio Perm	0.11			0.03			0.05		0.02	0.06		0.00
v/c Ratio	0.24	0.35		0.06	0.22		0.14	0.51	0.04	0.15	0.17	0.01
Uniform Delay, d1	10.0	10.7		9.2	9.9		12.4	14.7	11.9	12.4	12.5	11.7
Progression Factor	1.00	1.00		1.00	1.00		0.62	0.76	0.34	0.53	0.54	0.28
Incremental Delay, d2	1.4	0.7		0.4	0.3		0.6	2.8	0.1	1.0	0.6	0.0
Delay (s)	11.5	11.3		9.5	10.2		8.3	13.9	4.2	7.7	7.3	3.4
Level of Service	B	B		A	B		A	B	A	A	A	A
Approach Delay (s)		11.3			10.2			12.2			7.1	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	10.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

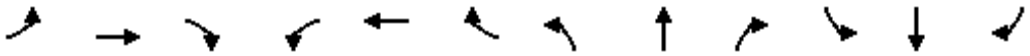


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	94	395	82	43	276	64	71	360	43	55	139	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	11	10	11	11	10	11	11	10	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.96	1.00		1.00	1.00		0.98	1.00		0.97	1.00	
Frt	1.00	0.97		1.00	0.97		1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1464	3057		1588	3008		1541	3021		1402	2764	
Flt Permitted	0.53	1.00		0.43	1.00		0.62	1.00		0.47	1.00	
Satd. Flow (perm)	816	3057		723	3008		1013	3021		691	2764	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	99	416	86	45	291	67	75	379	45	58	146	57
RTOR Reduction (vph)	0	0	0	0	0	0	0	12	0	0	33	0
Lane Group Flow (vph)	99	502	0	45	358	0	75	412	0	58	170	0
Confl. Peds. (#/hr)	98		10	10		98	28		52	52		28
Heavy Vehicles (%)	5%	5%	4%	0%	5%	7%	2%	6%	13%	10%	11%	20%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.41	0.41		0.41	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	392	1467		347	1444		419	1249		286	1142	
v/s Ratio Prot		c0.16			0.12			c0.14			0.06	
v/s Ratio Perm	0.12			0.06			0.07			0.08		
v/c Ratio	0.25	0.34		0.13	0.25		0.18	0.33		0.20	0.15	
Uniform Delay, d1	11.5	12.1		10.8	11.5		13.9	14.9		14.1	13.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.5	0.6		0.8	0.4		0.9	0.7		1.6	0.3	
Delay (s)	13.1	12.8		11.6	11.9		14.9	15.6		15.7	14.0	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		12.8			11.9			15.5			14.4	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	49.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	104	312	36	23	322	46	65	397	25	41	196	51
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	8	16	12	9	10	10	9	10	10
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1533	1575		1473	1841		1533	3073		1372	2880	
Flt Permitted	0.45	1.00		0.48	1.00		0.59	1.00		0.43	1.00	
Satd. Flow (perm)	731	1575		743	1841		954	3073		622	2880	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	109	328	38	24	339	48	68	418	26	43	206	54
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	109	366	0	24	387	0	68	444	0	43	260	0
Confl. Peds. (#/hr)	7		23	23		7	10		8	8		10
Confl. Bikes (#/hr)	1		2	2		1	1		1	1		1
Heavy Vehicles (%)	4%	8%	10%	0%	9%	5%	0%	3%	0%	12%	7%	6%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	47.0	41.8		40.6	38.6		26.8	22.2		23.6	20.6	
Effective Green, g (s)	47.0	39.8		40.6	36.6		26.8	20.2		23.6	18.6	
Actuated g/C Ratio	0.55	0.47		0.48	0.43		0.32	0.24		0.28	0.22	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	453	737		372	793		332	730		199	630	
v/s Ratio Prot	c0.01	c0.23		0.00	0.21		c0.01	c0.14		0.01	0.09	
v/s Ratio Perm	0.12			0.03			0.05			0.05		
v/c Ratio	0.24	0.50		0.06	0.49		0.20	0.61		0.22	0.41	
Uniform Delay, d1	13.2	15.7		14.5	17.4		21.5	28.9		25.7	28.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	2.4		0.1	2.1		0.3	3.7		0.5	2.0	
Delay (s)	13.5	18.0		14.6	19.6		21.8	32.6		26.2	30.5	
Level of Service	B	B		B	B		C	C		C	C	
Approach Delay (s)		17.0			19.3			31.2			29.9	
Approach LOS		B			B			C			C	

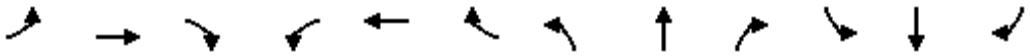
Intersection Summary			
HCM Average Control Delay	24.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	66	306	42	63	368	111	56	370	120	55	158	36
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	11	11	11	11	12	12	10	10	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		0.99	1.00	
Frt		0.98			0.97		1.00	0.96		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3492			2912		1614	3156		1580	2921	
Flt Permitted		0.79			0.85		0.62	1.00		0.40	1.00	
Satd. Flow (perm)		2778			2478		1047	3156		658	2921	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	73	340	47	70	409	123	62	411	133	61	176	40
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	460	0	0	602	0	62	544	0	61	216	0
Confl. Peds. (#/hr)	20		16	16		20	5		33	33		5
Confl. Bikes (#/hr)	2					2			2	2		
Heavy Vehicles (%)	9%	9%	0%	24%	7%	6%	2%	4%	2%	0%	5%	9%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.0			33.0		32.0	32.0		32.0	32.0	
Effective Green, g (s)		34.0			34.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio		0.45			0.45		0.44	0.44		0.44	0.44	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		1259			1123		461	1389		290	1285	
v/s Ratio Prot								c0.17			0.07	
v/s Ratio Perm		0.17			c0.24		0.06			0.09		
v/c Ratio		0.37			0.54		0.13	0.39		0.21	0.17	
Uniform Delay, d1		13.4			14.8		12.5	14.2		13.0	12.7	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.8			1.8		0.6	0.8		1.6	0.3	
Delay (s)		14.3			16.6		13.1	15.0		14.6	13.0	
Level of Service		B			B		B	B		B	B	
Approach Delay (s)		14.3			16.6			14.8			13.3	
Approach LOS		B			B			B			B	

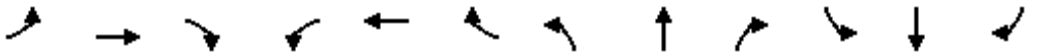
Intersection Summary			
HCM Average Control Delay	15.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	138	495	5	14	630	371	68	9	19	112	1	49
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	12	12	12	12	12	13	13	13
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	1.00		1.00	1.00	0.85		0.97			0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97			0.97	
Satd. Flow (prot)	1574	3143		1629	3257	1457		1612			3106	
Flt Permitted	0.37	1.00		0.44	1.00	1.00		0.70			0.75	
Satd. Flow (perm)	607	3143		749	3257	1457		1174			2411	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	153	550	6	16	700	412	76	10	21	124	1	54
RTOR Reduction (vph)	0	1	0	0	0	143	0	12	0	0	41	0
Lane Group Flow (vph)	153	555	0	16	700	269	0	95	0	0	138	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	46.0	46.0		46.0	46.0	46.0		16.4			16.4	
Effective Green, g (s)	46.0	46.0		46.0	46.0	46.0		16.4			16.4	
Actuated g/C Ratio	0.65	0.65		0.65	0.65	0.65		0.23			0.23	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		8.0			8.0	
Lane Grp Cap (vph)	397	2054		489	2128	952		273			562	
v/s Ratio Prot		0.18			0.21							
v/s Ratio Perm	c0.25			0.02		0.18		c0.08			0.06	
v/c Ratio	0.39	0.27		0.03	0.33	0.28		0.35			0.24	
Uniform Delay, d1	5.7	5.1		4.3	5.4	5.2		22.5			22.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	2.8	0.3		0.1	0.4	0.7		3.3			1.0	
Delay (s)	8.5	5.5		4.4	5.8	5.9		25.8			22.9	
Level of Service	A	A		A	A	A		C			C	
Approach Delay (s)		6.1			5.8			25.8			22.9	
Approach LOS		A			A			C			C	

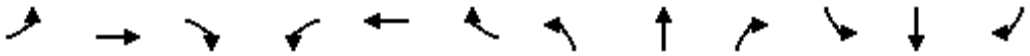
Intersection Summary			
HCM Average Control Delay	8.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	70.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	111	214	76	63	190	71	127	1887	84	70	494	41
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	9	12	10	10	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.96	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.96		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1548	1498		1547	1584		1493	3069	1271	1452	2983	1301
Flt Permitted	0.37	1.00		0.32	1.00		0.39	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	608	1498		521	1584		617	3069	1271	180	2983	1301
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	117	225	80	66	200	75	134	1986	88	74	520	43
RTOR Reduction (vph)	0	15	0	0	16	0	0	0	18	0	0	25
Lane Group Flow (vph)	117	290	0	66	259	0	134	1986	70	74	520	18
Confl. Peds. (#/hr)	4		9	9		4	6		16	16		6
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	3%	3%	4%	3%	1%	2%	3%	4%	4%	6%	7%	3%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	28.0	21.0		28.0	21.0		42.0	35.0	35.0	42.0	35.0	35.0
Effective Green, g (s)	26.0	22.0		26.0	22.0		40.0	35.0	35.0	40.0	35.0	35.0
Actuated g/C Ratio	0.31	0.26		0.31	0.26		0.47	0.41	0.41	0.47	0.41	0.41
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	252	388		232	410		352	1264	523	174	1228	536
v/s Ratio Prot	c0.03	c0.19		0.02	0.16		0.03	c0.65		c0.03	0.17	
v/s Ratio Perm	0.11			0.07			0.15		0.06	0.17		0.01
v/c Ratio	0.46	0.75		0.28	0.63		0.38	1.57	0.13	0.43	0.42	0.03
Uniform Delay, d1	22.5	29.0		21.9	27.9		13.3	25.0	15.6	18.1	17.8	14.9
Progression Factor	1.00	1.00		1.00	1.00		0.62	0.71	0.49	1.00	1.00	1.00
Incremental Delay, d2	6.0	12.4		3.1	7.2		2.6	260.3	0.4	7.4	1.1	0.1
Delay (s)	28.6	41.4		24.9	35.2		10.8	278.0	8.0	25.6	18.9	15.0
Level of Service	C	D		C	D		B	F	A	C	B	B
Approach Delay (s)		37.8			33.2			251.0			19.4	
Approach LOS		D			C			F			B	

Intersection Summary			
HCM Average Control Delay	164.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	94.2%	ICU Level of Service	F
Analysis Period (min)	15		

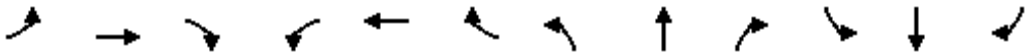
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	26	217	24	15	149	18	21	162	26	32	144	21
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	14	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.99			0.98			0.99	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1843			1836			1900			1930	
Flt Permitted		0.96			0.97			0.97			0.94	
Satd. Flow (perm)		1787			1790			1844			1824	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	27	224	25	15	154	19	22	167	27	33	148	22
RTOR Reduction (vph)	0	5	0	0	6	0	0	8	0	0	7	0
Lane Group Flow (vph)	0	271	0	0	182	0	0	208	0	0	196	0
Confl. Peds. (#/hr)	5		11	11		5	7		34	34		7
Confl. Bikes (#/hr)			3	3								
Heavy Vehicles (%)	4%	2%	0%	20%	1%	0%	12%	3%	8%	0%	3%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.42			0.42			0.46			0.46	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		742			744			851			842	
v/s Ratio Prot												
v/s Ratio Perm		c0.15			0.10			c0.11			0.11	
v/c Ratio		0.36			0.24			0.24			0.23	
Uniform Delay, d1		13.1			12.4			10.6			10.6	
Progression Factor		1.00			0.62			1.09			1.00	
Incremental Delay, d2		1.4			0.8			0.6			0.6	
Delay (s)		14.5			8.5			12.2			11.2	
Level of Service		B			A			B			B	
Approach Delay (s)		14.5			8.5			12.2			11.2	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	11.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.1%	ICU Level of Service	A
Analysis Period (min)	15		

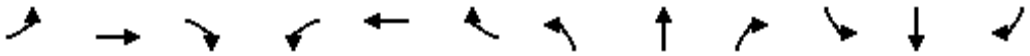
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	181	34	9	162	19	42	364	31	16	86	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.95	1.00		1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1465	2994		1302	3037		1529	3094		1492	2868	
Flt Permitted	0.63	1.00		0.60	1.00		0.68	1.00		0.50	1.00	
Satd. Flow (perm)	965	2994		827	3037		1093	3094		781	2868	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	201	38	10	180	21	47	404	34	18	96	19
RTOR Reduction (vph)	0	24	0	0	13	0	0	10	0	0	8	0
Lane Group Flow (vph)	27	215	0	10	188	0	47	428	0	18	107	0
Confl. Peds. (#/hr)	35		6	6		35	18					18
Confl. Bikes (#/hr)	14		32	32		14	23		7	7		23
Heavy Vehicles (%)	4%	4%	0%	22%	2%	6%	3%	2%	0%	7%	8%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0		39.0	39.0		39.0	39.0	
Effective Green, g (s)	19.0	19.0		19.0	19.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.58	0.58		0.58	0.58	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	282	875		242	888		639	1809		457	1677	
v/s Ratio Prot		c0.07			0.06			c0.14			0.04	
v/s Ratio Perm	0.03			0.01			0.04			0.02		
v/c Ratio	0.10	0.25		0.04	0.21		0.07	0.24		0.04	0.06	
Uniform Delay, d1	16.7	17.5		16.5	17.3		5.9	6.5		5.7	5.8	
Progression Factor	0.72	0.72		0.75	0.74		0.94	0.97		0.49	0.44	
Incremental Delay, d2	0.6	0.6		0.3	0.5		0.2	0.3		0.2	0.1	
Delay (s)	12.8	13.3		12.6	13.4		5.7	6.6		3.0	2.6	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		13.3			13.4			6.5			2.7	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	9.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.7%	ICU Level of Service	A
Analysis Period (min)	15		

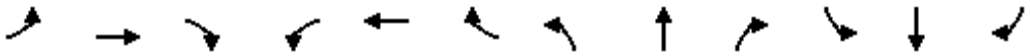
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	46	178	34	16	122	38	28	414	24	14	163	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	9	9	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.98		1.00	0.96			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1556	2952		1515	2868			1878			1808	
Flt Permitted	0.64	1.00		0.60	1.00			0.98			0.96	
Satd. Flow (perm)	1047	2952		965	2868			1838			1739	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	51	198	38	18	136	42	31	460	27	16	181	17
RTOR Reduction (vph)	0	23	0	0	25	0	0	3	0	0	5	0
Lane Group Flow (vph)	51	213	0	18	153	0	0	515	0	0	209	0
Confl. Peds. (#/hr)	10		29	29		10	17		10	10		17
Confl. Bikes (#/hr)									2	2		
Heavy Vehicles (%)	2%	4%	10%	0%	4%	0%	0%	8%	4%	0%	13%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Effective Green, g (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40			0.48			0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	419	1181		386	1147			877			829	
v/s Ratio Prot		c0.07			0.05							
v/s Ratio Perm	0.05			0.02				c0.28			0.12	
v/c Ratio	0.12	0.18		0.05	0.13			0.59			0.25	
Uniform Delay, d1	12.3	12.6		11.9	12.4			12.4			10.1	
Progression Factor	1.01	0.92		0.88	0.88			1.04			1.00	
Incremental Delay, d2	0.6	0.3		0.2	0.2			2.8			0.7	
Delay (s)	13.0	11.9		10.7	11.1			15.6			10.8	
Level of Service	B	B		B	B			B			B	
Approach Delay (s)		12.1			11.1			15.6			10.8	
Approach LOS		B			B			B			B	

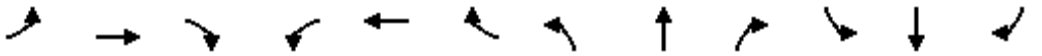
Intersection Summary			
HCM Average Control Delay	13.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



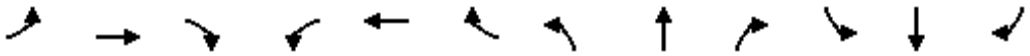
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	86	121	58	2	80	34	21	272	9	7	175	28
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	16	12	10	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.95		1.00	0.96			1.00			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1605	1878		1587	1870			1971			1932	
Flt Permitted	0.68	1.00		0.58	1.00			0.98			0.99	
Satd. Flow (perm)	1141	1878		975	1870			1929			1915	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	96	134	64	2	89	38	23	302	10	8	194	31
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	96	198	0	2	127	0	0	335	0	0	233	0
Confl. Peds. (#/hr)			8	8			1		8	8		1
Heavy Vehicles (%)	3%	3%	2%	0%	6%	0%	0%	3%	0%	0%	4%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Effective Green, g (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Actuated g/C Ratio	0.31	0.31		0.31	0.31			0.57			0.57	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	351	578		300	575			1098			1090	
v/s Ratio Prot		c0.11			0.07							
v/s Ratio Perm	0.08			0.00				c0.17			0.12	
v/c Ratio	0.27	0.34		0.01	0.22			0.31			0.21	
Uniform Delay, d1	17.0	17.4		15.6	16.7			7.3			6.9	
Progression Factor	0.90	0.89		0.89	0.92			0.94			1.00	
Incremental Delay, d2	1.9	1.6		0.0	0.9			0.7			0.4	
Delay (s)	17.1	17.0		13.9	16.3			7.6			7.3	
Level of Service	B	B		B	B			A			A	
Approach Delay (s)		17.1			16.2			7.6			7.3	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	116	9	52	1	3	12	38	467	6	2	191	48
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	10	11	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.97		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	0.98	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.87		1.00	0.88		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1603	1673		1710	1422		1491	1631	1392	1649	1907	1427
Flt Permitted	0.75	1.00		0.71	1.00		0.63	1.00	1.00	0.39	1.00	1.00
Satd. Flow (perm)	1260	1673		1283	1422		981	1631	1392	682	1907	1427
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	129	10	58	1	3	13	42	519	7	2	212	53
RTOR Reduction (vph)	0	42	0	0	9	0	0	0	3	0	0	21
Lane Group Flow (vph)	129	26	0	1	7	0	42	519	4	2	212	32
Confl. Peds. (#/hr)	9					9	1		6	6		1
Heavy Vehicles (%)	5%	14%	5%	0%	67%	12%	7%	3%	0%	0%	7%	5%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	17.0	17.0		17.0	17.0		39.0	39.0	39.0	39.0	39.0	39.0
Effective Green, g (s)	18.0	18.0		18.0	18.0		39.0	39.0	39.0	39.0	39.0	39.0
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.60	0.60	0.60	0.60	0.60	0.60
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	349	463		355	394		589	979	835	409	1144	856
v/s Ratio Prot		0.02			0.00			c0.32			0.11	
v/s Ratio Perm	c0.10			0.00			0.04		0.00	0.00		0.02
v/c Ratio	0.37	0.06		0.00	0.02		0.07	0.53	0.01	0.00	0.19	0.04
Uniform Delay, d1	18.9	17.3		17.0	17.1		5.4	7.6	5.2	5.2	5.9	5.3
Progression Factor	1.47	2.39		1.00	1.00		1.13	1.06	1.30	1.00	1.00	1.00
Incremental Delay, d2	2.9	0.2		0.0	0.1		0.2	1.6	0.0	0.0	0.4	0.1
Delay (s)	30.8	41.5		17.0	17.1		6.3	9.7	6.8	5.2	6.2	5.4
Level of Service	C	D		B	B		A	A	A	A	A	A
Approach Delay (s)		34.5			17.1			9.4			6.0	
Approach LOS		C			B			A			A	

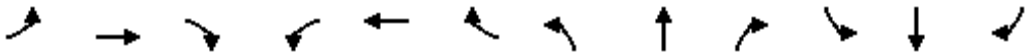
Intersection Summary			
HCM Average Control Delay	13.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	249	76	125	364	0	0	0	0	80	305	361
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)		4.0		3.0	3.0					5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	
Frpb, ped/bikes		0.99		1.00	1.00					1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Frt		0.96		1.00	1.00					1.00	0.92	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		2829		1621	3288					1574	2907	
Flt Permitted		1.00		0.49	1.00					0.95	1.00	
Satd. Flow (perm)		2829		835	3288					1574	2907	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	262	80	132	383	0	0	0	0	84	321	380
RTOR Reduction (vph)	0	29	0	0	0	0	0	0	0	0	214	0
Lane Group Flow (vph)	0	313	0	132	383	0	0	0	0	84	487	0
Confl. Peds. (#/hr)	14		32	32		14	14					14
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	9%	4%	5%	4%	0%	0%	0%	0%	5%	2%	4%
Turn Type				D.P+P						custom		
Protected Phases		8		7	7 8					6	6	
Permitted Phases				8						6		
Actuated Green, G (s)		33.0		56.0	59.0					32.0	32.0	
Effective Green, g (s)		33.0		56.0	59.0					32.0	32.0	
Actuated g/C Ratio		0.33		0.56	0.59					0.32	0.32	
Clearance Time (s)		4.0		3.0						5.0	5.0	
Lane Grp Cap (vph)		934		648	1940					504	930	
v/s Ratio Prot		c0.11		c0.05	0.12					0.05	c0.17	
v/s Ratio Perm				0.07								
v/c Ratio		0.34		0.20	0.20					0.17	0.52	
Uniform Delay, d1		25.2		10.6	9.5					24.4	27.8	
Progression Factor		1.00		1.96	2.05					1.00	1.00	
Incremental Delay, d2		1.0		0.6	0.2					0.7	2.1	
Delay (s)		26.2		21.4	19.7					25.1	29.9	
Level of Service		C		C	B					C	C	
Approach Delay (s)		26.2			20.2			0.0			29.4	
Approach LOS		C			C			A			C	

Intersection Summary			
HCM Average Control Delay	25.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		

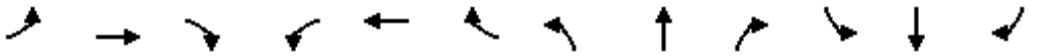
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	129	200	0	0	318	67	171	544	341	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	9	12	13	12	13	12	12	12
Total Lost time (s)	4.0	4.0			4.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.97		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1673	3054			2832		1750	1782	1514			
Flt Permitted	0.35	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	618	3054			2832		1750	1782	1514			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	136	211	0	0	335	71	180	573	359	0	0	0
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	241	0	0	0
Lane Group Flow (vph)	136	211	0	0	388	0	180	573	118	0	0	0
Confl. Peds. (#/hr)	14		16	16		14			1	1		
Confl. Bikes (#/hr)	1					1			1	1		
Heavy Vehicles (%)	2%	12%	0%	0%	5%	4%	1%	1%	3%	0%	0%	0%
Turn Type	pm+pt						custom		Perm			
Protected Phases	4	1 4			1		2	2				
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	54.0	58.0			21.0		33.0	33.0	33.0			
Effective Green, g (s)	54.0	58.0			21.0		33.0	33.0	33.0			
Actuated g/C Ratio	0.54	0.58			0.21		0.33	0.33	0.33			
Clearance Time (s)	4.0				4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	682	1771			595		578	588	500			
v/s Ratio Prot	c0.07	0.07			c0.14		0.10	c0.32				
v/s Ratio Perm	0.04								0.08			
v/c Ratio	0.20	0.12			0.65		0.31	0.97	0.24			
Uniform Delay, d1	11.8	9.5			36.2		25.0	33.1	24.3			
Progression Factor	0.24	0.25			1.00		0.75	0.79	1.90			
Incremental Delay, d2	0.6	0.1			5.5		0.9	24.5	0.7			
Delay (s)	3.5	2.5			41.6		19.8	50.5	47.0			
Level of Service	A	A			D		B	D	D			
Approach Delay (s)		2.9			41.6			44.4			0.0	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM Average Control Delay	36.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		

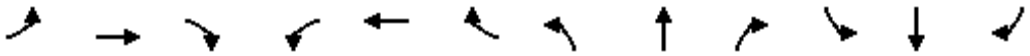
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	469	362	34	587	0	0	0	0	5	216	200
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	11	12	12	12	12	10	10	12
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	1.00
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.93		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3114		1613	3273					1596	3160	1443
Flt Permitted		1.00		0.17	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3114		283	3273					1596	3160	1443
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	489	377	35	611	0	0	0	0	5	225	208
RTOR Reduction (vph)	0	140	0	0	0	0	0	0	0	0	0	137
Lane Group Flow (vph)	0	726	0	35	611	0	0	0	0	5	225	71
Confl. Peds. (#/hr)	22		3	3		22						
Confl. Bikes (#/hr)	4					4			32	32		
Heavy Vehicles (%)	0%	2%	2%	6%	1%	0%	0%	0%	0%	0%	1%	6%
Turn Type				pm+pt						Split		Prot
Protected Phases		8		7	7 8					6	6	6
Permitted Phases				7 8								
Actuated Green, G (s)		36.0		54.0	58.0					34.0	34.0	34.0
Effective Green, g (s)		36.0		54.0	58.0					34.0	34.0	34.0
Actuated g/C Ratio		0.36		0.54	0.58					0.34	0.34	0.34
Clearance Time (s)		4.0		4.0						4.0	4.0	4.0
Lane Grp Cap (vph)		1121		392	1898					543	1074	491
v/s Ratio Prot		c0.23		0.02	c0.19					0.00	c0.07	0.05
v/s Ratio Perm				0.03								
v/c Ratio		0.65		0.09	0.32					0.01	0.21	0.14
Uniform Delay, d1		26.7		12.5	10.8					21.8	23.5	22.9
Progression Factor		1.00		0.55	0.68					0.74	0.79	0.92
Incremental Delay, d2		2.9		0.2	0.2					0.0	0.4	0.6
Delay (s)		29.6		7.0	7.5					16.1	18.8	21.6
Level of Service		C		A	A					B	B	C
Approach Delay (s)		29.6			7.5			0.0			20.1	
Approach LOS		C			A			A			C	

Intersection Summary			
HCM Average Control Delay	20.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.3%	ICU Level of Service	E
Analysis Period (min)	15		

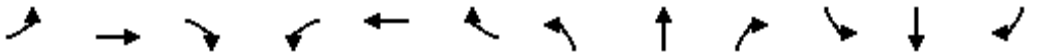
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	414	59	0	0	57	6	564	637	61	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	10	12	11	11	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	0.91	0.91			0.95		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	1.00			
Flpb, ped/bikes	0.99	0.99			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.99		1.00	1.00	0.85			
Flt Protected	0.95	0.96			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1444	3040			3070		1555	1637	1500			
Flt Permitted	0.71	0.74			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	1083	2333			3070		1555	1637	1500			
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	427	61	0	0	59	6	581	657	63	0	0	0
RTOR Reduction (vph)	0	0	0	0	5	0	0	0	38	0	0	0
Lane Group Flow (vph)	213	275	0	0	60	0	581	657	25	0	0	0
Confl. Peds. (#/hr)	30		2	2		30			4	4		
Confl. Bikes (#/hr)	3					3			2	2		
Heavy Vehicles (%)	3%	2%	0%	0%	2%	0%	1%	1%	2%	0%	0%	0%
Turn Type	pm+pt						custom		custom			
Protected Phases	4	1 4			1		2	2	2			
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Effective Green, g (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Actuated g/C Ratio	0.51	0.51			0.15		0.37	0.37	0.37			
Clearance Time (s)	4.0				4.0		4.0	4.0	4.0			
Lane Grp Cap (vph)	682	1444			461		575	606	555			
v/s Ratio Prot	c0.11	0.07			0.02		0.37	c0.40	0.02			
v/s Ratio Perm	c0.05	0.03										
v/c Ratio	0.31	0.19			0.13		1.01	1.08	0.05			
Uniform Delay, d1	14.1	13.3			36.8		31.5	31.5	20.2			
Progression Factor	0.23	0.24			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.9	0.2			0.6		40.1	61.5	0.2			
Delay (s)	4.1	3.4			37.4		71.6	93.0	20.3			
Level of Service	A	A			D		E	F	C			
Approach Delay (s)		3.7			37.4			79.9			0.0	
Approach LOS		A			D			E			A	

Intersection Summary			
HCM Average Control Delay	58.4	HCM Level of Service	E
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.3%	ICU Level of Service	E
Analysis Period (min)	15		

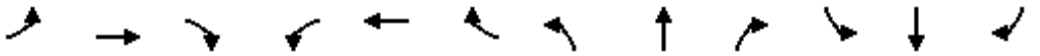
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	155	272	69	55	272	108	49	1100	59	88	476	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	9	10	9	9	10	9
Total Lost time (s)		4.0			4.0		4.0	3.5	4.0	4.0	3.5	4.0
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00			0.99		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.98			0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.98			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		2843			2817		1447	3069	1336	1494	2956	1270
Flt Permitted		0.63			0.83		0.39	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)		1827			2354		600	3069	1336	197	2956	1270
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	161	283	72	57	283	112	51	1146	61	92	496	44
RTOR Reduction (vph)	0	15	0	0	38	0	0	0	24	0	0	27
Lane Group Flow (vph)	0	501	0	0	414	0	51	1146	37	92	496	17
Confl. Peds. (#/hr)	49		20	20		49	26		8	8		26
Confl. Bikes (#/hr)	2					2						
Heavy Vehicles (%)	10%	7%	4%	9%	7%	5%	6%	4%	0%	3%	8%	5%
Turn Type	pm+pt			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		35.0			27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)		36.0			28.0		36.0	33.5	33.0	36.0	33.5	33.0
Actuated g/C Ratio		0.42			0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)		5.0			5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)		846			775		294	1210	519	144	1165	493
v/s Ratio Prot		c0.04					0.01	c0.37		c0.03	0.17	
v/s Ratio Perm		0.21			c0.18		0.07		0.03	0.24		0.01
v/c Ratio		0.59			0.53		0.17	0.95	0.07	0.64	0.43	0.03
Uniform Delay, d1		18.9			23.2		14.8	24.9	16.4	18.5	18.7	16.1
Progression Factor		1.00			1.00		1.31	0.85	1.40	1.82	1.64	3.16
Incremental Delay, d2		3.0			2.6		0.8	11.0	0.2	18.1	1.0	0.1
Delay (s)		21.9			25.8		20.2	32.2	23.1	51.7	31.8	51.0
Level of Service		C			C		C	C	C	D	C	D
Approach Delay (s)		21.9			25.8			31.3			36.0	
Approach LOS		C			C			C			D	

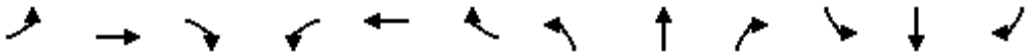
Intersection Summary			
HCM Average Control Delay	29.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	80.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	42	400	0	0	405	77	30	60	93	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.98			0.93				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		1706			1677			1584				
Flt Permitted		0.92			1.00			0.99				
Satd. Flow (perm)		1583			1677			1584				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	47	444	0	0	450	86	33	67	103	0	0	0
RTOR Reduction (vph)	0	0	0	0	10	0	0	57	0	0	0	0
Lane Group Flow (vph)	0	491	0	0	526	0	0	146	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		34.0			34.0			23.0				
Effective Green, g (s)		34.0			34.0			23.0				
Actuated g/C Ratio		0.52			0.52			0.35				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		828			877			560				
v/s Ratio Prot					c0.31							
v/s Ratio Perm		0.31						0.09				
v/c Ratio		0.59			0.60			0.26				
Uniform Delay, d1		10.7			10.8			14.9				
Progression Factor		1.00			0.61			1.00				
Incremental Delay, d2		3.1			2.6			1.1				
Delay (s)		13.8			9.1			16.1				
Level of Service		B			A			B				
Approach Delay (s)		13.8			9.1			16.1			0.0	
Approach LOS		B			A			B			A	

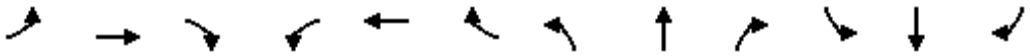
Intersection Summary			
HCM Average Control Delay	12.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	46	395	31	19	399	47	24	167	33	50	105	28
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.99			0.98			0.98	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1887			1842			3185			3125	
Flt Permitted		0.93			0.97			0.92			0.83	
Satd. Flow (perm)		1754			1797			2933			2640	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	51	439	34	21	443	52	27	186	37	56	117	31
RTOR Reduction (vph)	0	4	0	0	6	0	0	22	0	0	18	0
Lane Group Flow (vph)	0	520	0	0	510	0	0	228	0	0	186	0
Confl. Peds. (#/hr)	29		16	16		29	28		14	14		28
Confl. Bikes (#/hr)	1					1	1					1
Heavy Vehicles (%)	3%	7%	4%	12%	8%	13%	0%	4%	4%	4%	4%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0			27.0			27.0	
Effective Green, g (s)		30.0			30.0			27.0			27.0	
Actuated g/C Ratio		0.46			0.46			0.42			0.42	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		810			829			1218			1097	
v/s Ratio Prot												
v/s Ratio Perm		c0.30			0.28			c0.08			0.07	
v/c Ratio		0.64			0.61			0.19			0.17	
Uniform Delay, d1		13.4			13.2			12.0			11.9	
Progression Factor		0.62			0.53			0.97			0.63	
Incremental Delay, d2		3.3			3.3			0.3			0.3	
Delay (s)		11.6			10.2			12.1			7.8	
Level of Service		B			B			B			A	
Approach Delay (s)		11.6			10.2			12.1			7.8	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	10.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	80.1%	ICU Level of Service	D
Analysis Period (min)	15		

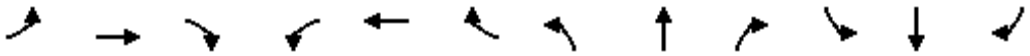
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	265	21	28	338	61	53	303	85	46	91	28
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	9	10	10	9	10	10	12	10	10	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.98		1.00	0.97		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1503	2936		1583	2944		1497	3034		1594	2896	
Flt Permitted	0.44	1.00		0.55	1.00		0.67	1.00		0.50	1.00	
Satd. Flow (perm)	697	2936		916	2944		1053	3034		833	2896	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	56	294	23	31	376	68	59	337	94	51	101	31
RTOR Reduction (vph)	0	9	0	0	22	0	0	39	0	0	14	0
Lane Group Flow (vph)	56	308	0	31	422	0	59	392	0	51	118	0
Confl. Peds. (#/hr)	25		14	14		25	12		4	4		12
Confl. Bikes (#/hr)	1					1			1	1		
Heavy Vehicles (%)	5%	7%	12%	0%	6%	2%	6%	1%	3%	0%	4%	12%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	236	994		310	996		567	1634		449	1559	
v/s Ratio Prot		0.11			c0.14			c0.13			0.04	
v/s Ratio Perm	0.08			0.03			0.06			0.06		
v/c Ratio	0.24	0.31		0.10	0.42		0.10	0.24		0.11	0.08	
Uniform Delay, d1	15.5	15.9		14.7	16.6		7.3	7.9		7.4	7.2	
Progression Factor	0.59	0.56		0.77	0.79		0.64	0.62		1.33	1.37	
Incremental Delay, d2	2.0	0.7		0.6	1.3		0.4	0.3		0.5	0.1	
Delay (s)	11.0	9.6		12.0	14.4		5.0	5.3		10.3	10.0	
Level of Service	B	A		B	B		A	A		B	A	
Approach Delay (s)		9.8			14.3			5.2			10.1	
Approach LOS		A			B			A			B	

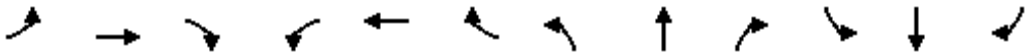
Intersection Summary			
HCM Average Control Delay	9.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	372	27	37	361	82	20	307	44	41	118	41
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	9	10	9	9	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00			0.99	
Flpb, ped/bikes	0.97	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.97			0.98			0.97	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1384	3013		1334	3537			3438			3303	
Flt Permitted	0.46	1.00		0.49	1.00			0.94			0.84	
Satd. Flow (perm)	675	3013		694	3537			3226			2809	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	84	392	28	39	380	86	21	323	46	43	124	43
RTOR Reduction (vph)	0	8	0	0	30	0	0	16	0	0	26	0
Lane Group Flow (vph)	84	412	0	39	436	0	0	374	0	0	184	0
Confl. Peds. (#/hr)	53		34	34		53	67		28	28		67
Heavy Vehicles (%)	8%	5%	0%	14%	6%	1%	0%	9%	20%	5%	15%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Effective Green, g (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48			0.40			0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	322	1437		331	1687			1290			1124	
v/s Ratio Prot		c0.14			0.12							
v/s Ratio Perm	0.12			0.06				c0.12			0.07	
v/c Ratio	0.26	0.29		0.12	0.26			0.29			0.16	
Uniform Delay, d1	10.2	10.3		9.4	10.1			13.2			12.5	
Progression Factor	1.61	1.65		0.79	0.77			0.51			0.64	
Incremental Delay, d2	1.9	0.5		0.6	0.3			0.6			0.3	
Delay (s)	18.3	17.5		8.0	8.1			7.3			8.3	
Level of Service	B	B		A	A			A			A	
Approach Delay (s)		17.6			8.1			7.3			8.3	
Approach LOS		B			A			A			A	

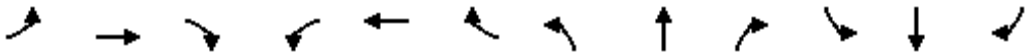
Intersection Summary			
HCM Average Control Delay	10.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	94	286	95	104	347	104	84	80	84	84	80	78
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	16	12	12	16	12
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		0.95			1.00			1.00	
Frt		1.00	0.85		0.97			0.95			0.96	
Flt Protected		0.99	1.00		0.99			0.98			0.98	
Satd. Flow (prot)		1637	1409		3031			1823			1826	
Flt Permitted		0.75	1.00		0.77			0.80			0.79	
Satd. Flow (perm)		1238	1409		2361			1480			1469	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	104	318	106	116	386	116	93	89	93	93	89	87
RTOR Reduction (vph)	0	0	51	0	31	0	0	28	0	0	26	0
Lane Group Flow (vph)	0	422	55	0	587	0	0	247	0	0	243	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		34.0	34.0		34.0			21.0			21.0	
Effective Green, g (s)		34.0	34.0		34.0			21.0			21.0	
Actuated g/C Ratio		0.52	0.52		0.52			0.32			0.32	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Grp Cap (vph)		648	737		1235			478			475	
v/s Ratio Prot												
v/s Ratio Perm		c0.34	0.04		0.25			c0.17			0.17	
v/c Ratio		0.65	0.08		0.48			0.52			0.51	
Uniform Delay, d1		11.2	7.7		9.8			17.9			17.8	
Progression Factor		2.03	5.63		0.41			1.00			1.00	
Incremental Delay, d2		4.9	0.2		1.2			3.9			3.9	
Delay (s)		27.7	43.5		5.3			21.8			21.7	
Level of Service		C	D		A			C			C	
Approach Delay (s)		30.9			5.3			21.8			21.7	
Approach LOS		C			A			C			C	

Intersection Summary			
HCM Average Control Delay	18.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	69.9%	ICU Level of Service	C
Analysis Period (min)	15		

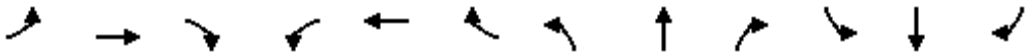
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	70	363	20	15	433	63	37	103	41	41	86	94
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	15	8	16	8	8	16	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00			0.99	
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.98			0.97			0.94	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1475	3018		1572	3001			3454			3404	
Flt Permitted	0.40	1.00		0.48	1.00			0.87			0.88	
Satd. Flow (perm)	616	3018		797	3001			3037			3020	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	78	403	22	17	481	70	41	114	46	46	96	104
RTOR Reduction (vph)	0	6	0	0	18	0	0	25	0	0	58	0
Lane Group Flow (vph)	78	419	0	17	533	0	0	176	0	0	188	0
Confl. Peds. (#/hr)	22		40	40		22	18		3	3		18
Confl. Bikes (#/hr)			2	2			1					1
Heavy Vehicles (%)	7%	5%	0%	0%	4%	2%	0%	3%	22%	0%	3%	8%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	28.0	28.0		28.0	28.0			29.0			29.0	
Effective Green, g (s)	28.0	28.0		28.0	28.0			29.0			29.0	
Actuated g/C Ratio	0.43	0.43		0.43	0.43			0.45			0.45	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	265	1300		343	1293			1355			1347	
v/s Ratio Prot		0.14			c0.18							
v/s Ratio Perm	0.13			0.02				0.06			c0.06	
v/c Ratio	0.29	0.32		0.05	0.41			0.13			0.14	
Uniform Delay, d1	12.1	12.2		10.8	12.8			10.6			10.6	
Progression Factor	0.99	1.02		1.12	0.93			0.99			0.81	
Incremental Delay, d2	2.2	0.5		0.2	0.6			0.2			0.2	
Delay (s)	14.2	12.9		12.2	12.5			10.7			8.8	
Level of Service	B	B		B	B			B			A	
Approach Delay (s)		13.1			12.4			10.7			8.8	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	11.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

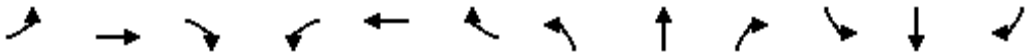


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	82	431	69	89	432	270	46	315	87	211	151	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.98			0.95			0.97			0.98	
Flt Protected		0.99			0.99			0.99			0.98	
Satd. Flow (prot)		3177			3073			3146			3118	
Flt Permitted		0.66			0.76			0.88			0.63	
Satd. Flow (perm)		2109			2348			2784			2030	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	91	479	77	99	480	300	51	350	97	234	168	56
RTOR Reduction (vph)	0	16	0	0	102	0	0	33	0	0	17	0
Lane Group Flow (vph)	0	631	0	0	777	0	0	465	0	0	441	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		26.0			26.0			29.0			20.0	
Effective Green, g (s)		26.0			26.0			29.0			20.0	
Actuated g/C Ratio		0.40			0.40			0.45			0.31	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		844			939			1276			625	
v/s Ratio Prot								c0.03				
v/s Ratio Perm		0.30			c0.33			0.13			c0.22	
v/c Ratio		0.75			0.83			0.36			0.88dl	
Uniform Delay, d1		16.7			17.5			11.9			19.9	
Progression Factor		1.75			1.00			1.00			0.89	
Incremental Delay, d2		5.9			8.3			0.8			6.6	
Delay (s)		35.2			25.8			12.7			24.3	
Level of Service		D			C			B			C	
Approach Delay (s)		35.2			25.8			12.7			24.3	
Approach LOS		D			C			B			C	

Intersection Summary			
HCM Average Control Delay	25.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	84.6%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

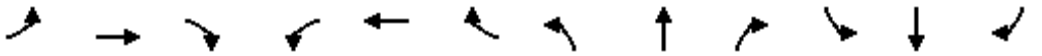
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	686	112	43	717	0	127	0	66	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	10	10	12	12	12	12	10	10	10
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			1.00				
Frt		0.98			1.00			0.95				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		2976			3031			1583				
Flt Permitted		1.00			0.84			0.80				
Satd. Flow (perm)		2976			2567			1310				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	762	124	48	797	0	141	0	73	0	0	0
RTOR Reduction (vph)	0	18	0	0	0	0	0	21	0	0	0	0
Lane Group Flow (vph)	0	868	0	0	845	0	0	193	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	custom			Perm			Perm			Perm		
Protected Phases		4 5 6 11			8			2			2	
Permitted Phases	4 6 11			8			2			2		
Actuated Green, G (s)		65.0			33.0			16.0				
Effective Green, g (s)		58.0			33.0			16.0				
Actuated g/C Ratio		0.64			0.37			0.18				
Clearance Time (s)					5.0			5.0				
Lane Grp Cap (vph)		1918			941			233				
v/s Ratio Prot		c0.29										
v/s Ratio Perm					c0.33			c0.15				
v/c Ratio		0.45			0.90			0.83				
Uniform Delay, d1		8.0			26.9			35.7				
Progression Factor		0.00			1.57			1.00				
Incremental Delay, d2		0.4			11.8			27.7				
Delay (s)		0.5			54.1			63.4				
Level of Service		A			D			E				
Approach Delay (s)		0.5			54.1			63.4			0.0	
Approach LOS		A			D			E			A	

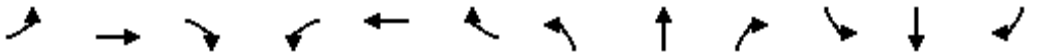
Intersection Summary			
HCM Average Control Delay	30.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	70.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	117	476	177	260	613	174	96	19	176	74	7	71
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	10	12	12	12	12	16	12	12	12	12
Total Lost time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	1.00
Frt	1.00	0.96		1.00	1.00	0.85		0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (prot)	1520	3020		1629	3257	1457		1755		1629	1714	1457
Flt Permitted	0.33	1.00		0.23	1.00	1.00		0.89		0.40	1.00	1.00
Satd. Flow (perm)	532	3020		402	3257	1457		1582		692	1714	1457
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	130	529	197	289	681	193	107	21	196	82	8	79
RTOR Reduction (vph)	0	40	0	0	0	97	0	75	0	0	0	43
Lane Group Flow (vph)	130	686	0	289	681	96	0	249	0	82	8	36
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	42.0	32.7		48.4	36.1	44.7		20.0		31.6	31.6	40.9
Effective Green, g (s)	42.0	32.7		48.4	36.1	44.7		20.0		31.6	31.6	40.9
Actuated g/C Ratio	0.47	0.36		0.54	0.40	0.50		0.22		0.35	0.35	0.45
Clearance Time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Vehicle Extension (s)	4.0	3.0		4.0	3.0	3.0		4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	350	1097		389	1306	724		352		333	602	662
v/s Ratio Prot	0.04	0.23		c0.10	0.21	0.01				c0.02	0.00	0.01
v/s Ratio Perm	0.13			c0.29		0.05		c0.16		0.06		0.02
v/c Ratio	0.37	0.63		0.74	0.52	0.13		0.71		0.25	0.01	0.05
Uniform Delay, d1	14.2	23.6		13.5	20.4	12.2		32.3		21.5	19.0	13.7
Progression Factor	1.92	1.62		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	0.8	2.5		8.0	1.5	0.1		6.8		0.4	0.0	0.0
Delay (s)	28.0	40.7		21.5	21.9	12.3		39.1		21.9	19.0	13.8
Level of Service	C	D		C	C	B		D		C	B	B
Approach Delay (s)		38.8			20.2			39.1			18.0	
Approach LOS		D			C			D			B	

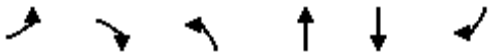
Intersection Summary			
HCM Average Control Delay	28.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	71.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	492	234	6	504	0	0	0	0	30	0	543
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	547	260	7	560	0	0	0	0	33	0	603
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		498										
pX, platoon unblocked												
vC, conflicting volume	560			547			840	1120	273	847	1120	280
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	560			547			840	1120	273	847	1120	280
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	100	100	87	100	15
cM capacity (veh/h)	987			998			37	199	715	249	199	708

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	273	273	260	193	373	33	603
Volume Left	0	0	0	7	0	33	0
Volume Right	0	0	260	0	0	0	603
cSH	1700	1700	1700	998	1700	249	708
Volume to Capacity	0.16	0.16	0.15	0.01	0.22	0.13	0.85
Queue Length 95th (ft)	0	0	0	1	0	11	246
Control Delay (s)	0.0	0.0	0.0	0.4	0.0	21.7	32.1
Lane LOS				A		C	D
Approach Delay (s)	0.0			0.1		31.5	
Approach LOS						D	

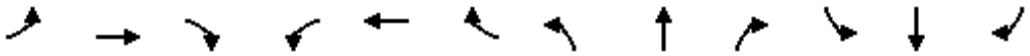
Intersection Summary				
Average Delay	10.0			
Intersection Capacity Utilization	57.0%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	522	0	510	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	580	0	567	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	290	290	567
Volume Left (vph)	290	290	567
Volume Right (vph)	0	0	0
Hadj (s)	0.58	0.58	0.29
Departure Headway (s)	6.8	6.8	5.7
Degree Utilization, x	0.55	0.55	0.90
Capacity (veh/h)	514	505	627
Control Delay (s)	16.7	16.7	38.6
Approach Delay (s)	16.7		38.6
Approach LOS	C		E

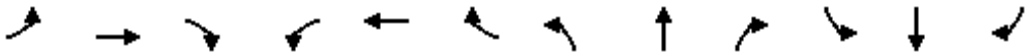
Intersection Summary			
Delay	27.5		
HCM Level of Service	D		
Intersection Capacity Utilization	52.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	340	131	126	344	0	0	0	0	72	15	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)		3.0		4.0	4.0						5.0	
Lane Util. Factor		0.95		1.00	0.95						0.95	
Frt		0.96		1.00	1.00						0.95	
Flt Protected		1.00		0.95	1.00						0.97	
Satd. Flow (prot)		3017		1574	3149						3014	
Flt Permitted		1.00		0.39	1.00						0.97	
Satd. Flow (perm)		3017		645	3149						3014	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	378	146	140	382	0	0	0	0	80	17	47
RTOR Reduction (vph)	0	48	0	0	0	0	0	0	0	0	32	0
Lane Group Flow (vph)	0	476	0	140	382	0	0	0	0	0	112	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type				pm+pt						Split		
Protected Phases		4		3	8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		36.0		49.0	49.0						27.0	
Effective Green, g (s)		36.0		49.0	49.0						27.0	
Actuated g/C Ratio		0.42		0.58	0.58						0.32	
Clearance Time (s)		3.0		4.0	4.0						5.0	
Lane Grp Cap (vph)		1278		481	1815						957	
v/s Ratio Prot		c0.16		c0.03	0.12						c0.04	
v/s Ratio Perm				0.13								
v/c Ratio		0.37		0.29	0.21						0.12	
Uniform Delay, d1		16.8		12.6	8.7						20.6	
Progression Factor		1.00		0.37	0.33						1.00	
Incremental Delay, d2		0.8		1.4	0.2						0.2	
Delay (s)		17.6		6.2	3.1						20.8	
Level of Service		B		A	A						C	
Approach Delay (s)		17.6			3.9			0.0			20.8	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	12.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	36.6%	ICU Level of Service	A
Analysis Period (min)	15		

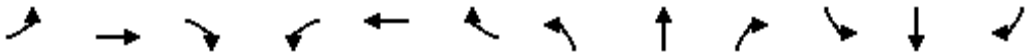
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	68	344	0	0	400	76	70	65	42	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	11	11	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0			3.0			5.0				
Lane Util. Factor	1.00	0.95			0.95			0.91				
Frt	1.00	1.00			0.98			0.96				
Flt Protected	0.95	1.00			1.00			0.98				
Satd. Flow (prot)	1629	3257			3073			4425				
Flt Permitted	0.38	1.00			1.00			0.98				
Satd. Flow (perm)	656	3257			3073			4425				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	76	382	0	0	444	84	78	72	47	0	0	0
RTOR Reduction (vph)	0	0	0	0	18	0	0	32	0	0	0	0
Lane Group Flow (vph)	76	382	0	0	510	0	0	165	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	pm+pt						Split					
Protected Phases	7	4			8		2	2				
Permitted Phases	4											
Actuated Green, G (s)	48.0	48.0			35.0			27.0				
Effective Green, g (s)	48.0	48.0			35.0			27.0				
Actuated g/C Ratio	0.56	0.56			0.41			0.32				
Clearance Time (s)	5.0	5.0			3.0			5.0				
Lane Grp Cap (vph)	485	1839			1265			1406				
v/s Ratio Prot	0.02	c0.12			c0.17			c0.04				
v/s Ratio Perm	0.07											
v/c Ratio	0.16	0.21			0.40			0.12				
Uniform Delay, d1	12.1	9.1			17.6			20.6				
Progression Factor	0.41	0.42			1.00			1.00				
Incremental Delay, d2	0.7	0.2			1.0			0.2				
Delay (s)	5.7	4.1			18.6			20.7				
Level of Service	A	A			B			C				
Approach Delay (s)		4.3			18.6			20.7			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM Average Control Delay	13.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	36.6%	ICU Level of Service	A
Analysis Period (min)	15		

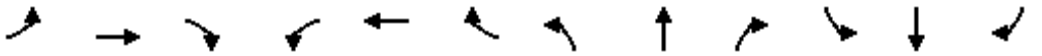
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	307	82	31	243	31	129	85	52	55	90	124
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	12	15	12	12	15	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		0.97			0.98			0.97			0.94	
Flt Protected		1.00			0.99			0.98			0.99	
Satd. Flow (prot)		2939			2979			1792			1750	
Flt Permitted		0.89			0.88			0.74			0.89	
Satd. Flow (perm)		2639			2628			1351			1567	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	43	341	91	34	270	34	143	94	58	61	100	138
RTOR Reduction (vph)	0	32	0	0	13	0	0	14	0	0	48	0
Lane Group Flow (vph)	0	443	0	0	325	0	0	281	0	0	251	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		23.0			23.0			32.0			32.0	
Effective Green, g (s)		23.0			23.0			32.0			32.0	
Actuated g/C Ratio		0.35			0.35			0.49			0.49	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		934			930			665			771	
v/s Ratio Prot												
v/s Ratio Perm		c0.17			0.12			c0.21			0.16	
v/c Ratio		0.47			0.35			0.42			0.33	
Uniform Delay, d1		16.3			15.5			10.6			10.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.7			1.0			2.0			1.1	
Delay (s)		18.0			16.5			12.5			11.1	
Level of Service		B			B			B			B	
Approach Delay (s)		18.0			16.5			12.5			11.1	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	15.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	66.9%	ICU Level of Service	C
Analysis Period (min)	15		

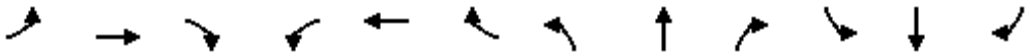
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	169	202	82	205	176	62	78	974	106	73	459	78
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	12	10	16	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.96
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.96		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1548	2954		1593	3512		1487	3040	1347	1494	3011	1271
Flt Permitted	0.59	1.00		0.54	1.00		0.41	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	954	2954		901	3512		640	3040	1347	197	3011	1271
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	178	213	86	216	185	65	82	1025	112	77	483	82
RTOR Reduction (vph)	0	52	0	0	41	0	0	0	69	0	0	50
Lane Group Flow (vph)	178	247	0	216	209	0	82	1025	43	77	483	32
Confl. Peds. (#/hr)	31		7	7		31	37		12	12		37
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	2%	4%	0%	0%	6%	2%	3%	5%	0%	3%	6%	4%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	32.0	27.0		32.0	27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)	30.0	28.0		30.0	28.0		36.0	33.0	33.0	36.0	33.0	33.0
Actuated g/C Ratio	0.35	0.33		0.35	0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	365	973		351	1157		311	1180	523	144	1169	493
v/s Ratio Prot	0.02	0.08		c0.03	0.06		0.01	c0.34		c0.03	0.16	
v/s Ratio Perm	0.15			c0.19			0.10		0.03	0.20		0.03
v/c Ratio	0.49	0.25		0.62	0.18		0.26	0.87	0.08	0.53	0.41	0.06
Uniform Delay, d1	20.6	20.9		22.0	20.3		15.1	24.0	16.4	17.2	18.9	16.3
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.97	0.61	0.80
Incremental Delay, d2	4.6	0.6		7.8	0.3		2.1	8.8	0.3	12.3	1.0	0.2
Delay (s)	25.2	21.5		29.8	20.7		17.1	32.8	16.7	46.3	12.4	13.3
Level of Service	C	C		C	C		B	C	B	D	B	B
Approach Delay (s)		22.9			24.9			30.3			16.6	
Approach LOS		C			C			C			B	

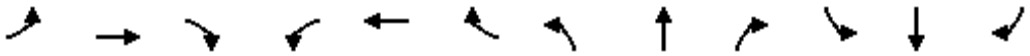
Intersection Summary			
HCM Average Control Delay	25.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	71.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	49	284	18	14	328	8	35	113	25	20	56	84
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	16	12	12	16	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00	0.99		1.00	0.98
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		0.99	1.00
Satd. Flow (prot)		1928	1382		1954	1331		1970	1452		1928	1430
Flt Permitted		0.91	1.00		0.98	1.00		0.93	1.00		0.93	1.00
Satd. Flow (perm)		1768	1382		1924	1331		1860	1452		1810	1430
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	52	299	19	15	345	8	37	119	26	21	59	88
RTOR Reduction (vph)	0	0	10	0	0	4	0	0	15	0	0	51
Lane Group Flow (vph)	0	351	9	0	360	4	0	156	11	0	80	37
Confl. Peds. (#/hr)	5		21	21		5	9		1	1		9
Heavy Vehicles (%)	5%	5%	6%	7%	4%	12%	6%	1%	4%	0%	6%	5%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Effective Green, g (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Actuated g/C Ratio		0.46	0.46		0.46	0.46		0.42	0.42		0.42	0.42
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		816	638		888	614		773	603		752	594
v/s Ratio Prot												
v/s Ratio Perm		c0.20	0.01		0.19	0.00		c0.08	0.01		0.04	0.03
v/c Ratio		0.43	0.01		0.41	0.01		0.20	0.02		0.11	0.06
Uniform Delay, d1		11.8	9.5		11.6	9.4		12.1	11.2		11.6	11.4
Progression Factor		1.00	1.00		0.46	0.44		1.33	1.73		0.95	0.90
Incremental Delay, d2		1.7	0.0		1.3	0.0		0.6	0.1		0.3	0.2
Delay (s)		13.4	9.5		6.7	4.2		16.7	19.4		11.3	10.5
Level of Service		B	A		A	A		B	B		B	B
Approach Delay (s)		13.2			6.7			17.1			10.9	
Approach LOS		B			A			B			B	

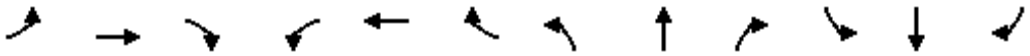
Intersection Summary			
HCM Average Control Delay	11.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	75	258	10	15	278	30	12	234	25	30	70	64
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1520	3023		1520	2996		1520	2996		1520	2823	
Flt Permitted	0.95	1.00		0.57	1.00		0.66	1.00		0.56	1.00	
Satd. Flow (perm)	1520	3023		912	2996		1052	2996		904	2823	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	83	287	11	17	309	33	13	260	28	33	78	71
RTOR Reduction (vph)	0	4	0	0	13	0	0	12	0	0	42	0
Lane Group Flow (vph)	83	294	0	17	329	0	13	276	0	33	107	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Prot			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Effective Green, g (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.11	0.49		0.34	0.34		0.42	0.42		0.42	0.42	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	164	1488		309	1014		437	1244		376	1173	
v/s Ratio Prot	c0.05	0.10			c0.11			c0.09			0.04	
v/s Ratio Perm				0.02			0.01			0.04		
v/c Ratio	0.51	0.20		0.06	0.32		0.03	0.22		0.09	0.09	
Uniform Delay, d1	27.4	9.3		14.5	16.0		11.2	12.2		11.5	11.5	
Progression Factor	0.90	0.37		0.81	0.74		0.63	0.66		1.10	1.22	
Incremental Delay, d2	10.3	0.3		0.3	0.8		0.1	0.4		0.5	0.2	
Delay (s)	34.9	3.7		12.1	12.7		7.2	8.5		13.2	14.2	
Level of Service	C	A		B	B		A	A		B	B	
Approach Delay (s)		10.5			12.6			8.4			14.0	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM Average Control Delay	11.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	37.8%	ICU Level of Service	A
Analysis Period (min)	15		

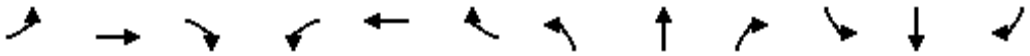
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	41	264	16	95	273	42	26	284	20	24	137	41
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.99		1.00	0.98			0.99			0.97	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1520	3014		1520	2979			3215			3138	
Flt Permitted	0.54	1.00		0.95	1.00			0.92			0.89	
Satd. Flow (perm)	867	3014		1520	2979			2977			2824	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	46	293	18	106	303	47	29	316	22	27	152	46
RTOR Reduction (vph)	0	7	0	0	19	0	0	7	0	0	28	0
Lane Group Flow (vph)	46	304	0	106	331	0	0	360	0	0	197	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Prot			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4						2			6		
Actuated Green, G (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Effective Green, g (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Actuated g/C Ratio	0.31	0.31		0.09	0.45			0.38			0.38	
Clearance Time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	267	927		140	1329			1145			1086	
v/s Ratio Prot		c0.10		c0.07	0.11							
v/s Ratio Perm	0.05							c0.12			0.07	
v/c Ratio	0.17	0.33		0.76	0.25			0.31			0.18	
Uniform Delay, d1	16.4	17.3		28.8	11.2			14.0			13.2	
Progression Factor	0.59	0.58		1.32	1.01			0.71			0.75	
Incremental Delay, d2	1.4	0.9		26.3	0.4			0.7			0.4	
Delay (s)	11.0	10.9		64.2	11.7			10.6			10.3	
Level of Service	B	B		E	B			B			B	
Approach Delay (s)		10.9			23.9			10.6			10.3	
Approach LOS		B			C			B			B	

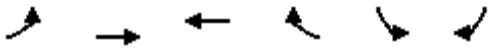
Intersection Summary			
HCM Average Control Delay	15.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	43.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	14	273	16	69	377	69	34	93	160	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	14	12	10	15	10
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			0.95				
Frt		0.99			0.98			0.92				
Flt Protected		1.00			0.99			0.99				
Satd. Flow (prot)		1585			1560			3165				
Flt Permitted		0.97			0.92			0.99				
Satd. Flow (perm)		1545			1437			3165				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	16	303	18	77	419	77	38	103	178	0	0	0
RTOR Reduction (vph)	0	2	0	0	7	0	0	137	0	0	0	0
Lane Group Flow (vph)	0	335	0	0	566	0	0	182	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		41.9			41.9			15.1				
Effective Green, g (s)		41.9			41.9			15.1				
Actuated g/C Ratio		0.64			0.64			0.23				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		3.0			3.0			8.0				
Lane Grp Cap (vph)		996			926			735				
v/s Ratio Prot												
v/s Ratio Perm		0.22			c0.39			0.06				
v/c Ratio		0.34			0.61			0.25				
Uniform Delay, d1		5.2			6.8			20.3				
Progression Factor		2.07			1.00			1.00				
Incremental Delay, d2		0.9			3.0			0.8				
Delay (s)		11.7			9.8			21.1				
Level of Service		B			A			C				
Approach Delay (s)		11.7			9.8			21.1			0.0	
Approach LOS		B			A			C			A	

Intersection Summary			
HCM Average Control Delay	13.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	65.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	84	349	422	44	64	90
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	88	367	444	46	67	95
Pedestrians		3	5		21	
Lane Width (ft)		16.0	16.0		10.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1319	491			
pX, platoon unblocked	0.86				0.86	0.86
vC, conflicting volume	512				1038	491
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	351				962	327
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	91				69	84
cM capacity (veh/h)	979				218	603

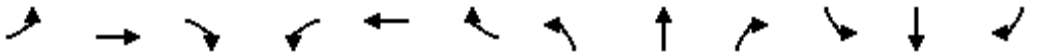
Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	456	491	67	95
Volume Left	88	0	67	0
Volume Right	0	46	0	95
cSH	979	1700	218	603
Volume to Capacity	0.09	0.29	0.31	0.16
Queue Length 95th (ft)	7	0	32	14
Control Delay (s)	2.6	0.0	28.8	12.1
Lane LOS	A		D	B
Approach Delay (s)	2.6	0.0	19.0	
Approach LOS			C	

Intersection Summary			
Average Delay	3.8		
Intersection Capacity Utilization	65.4%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	464	1	26	658	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0			4.0		
Lane Util. Factor	1.00			1.00		
Frt	1.00			1.00		
Flt Protected	1.00			1.00		
Satd. Flow (prot)	1714			1711		
Flt Permitted	1.00			0.97		
Satd. Flow (perm)	1714			1663		
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	516	1	29	731	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	517	0	0	760	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type			Perm			
Protected Phases	1 2 4			4	3	
Permitted Phases			4			
Actuated Green, G (s)	63.0			31.0		
Effective Green, g (s)	59.0			31.0		
Actuated g/C Ratio	0.69			0.36		
Clearance Time (s)				4.0		
Lane Grp Cap (vph)	1190			607		
v/s Ratio Prot	c0.30					
v/s Ratio Perm				c0.46		
v/c Ratio	0.43			1.25		
Uniform Delay, d1	5.7			27.0		
Progression Factor	0.05			1.00		
Incremental Delay, d2	0.1			126.6		
Delay (s)	0.4			153.6		
Level of Service	A			F		
Approach Delay (s)	0.4			153.6	0.0	
Approach LOS	A			F	A	

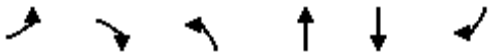
Intersection Summary			
HCM Average Control Delay	91.6	HCM Level of Service	F
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	62.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	184	191	25	551	0	0	0	0	3	0	250
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	204	212	28	612	0	0	0	0	3	0	278
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	612			204			978	978	208	770	872	612
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	612			204			978	978	208	770	872	612
tC, single (s)	4.1			5.5			7.5	6.5	6.9	7.5	6.5	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.9			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			100	100	100	99	100	36
cM capacity (veh/h)	977			985			72	245	804	287	283	431

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	136	280	640	3	278
Volume Left	0	0	28	3	0
Volume Right	0	212	0	0	278
cSH	1700	1700	985	287	431
Volume to Capacity	0.08	0.16	0.03	0.01	0.64
Queue Length 95th (ft)	0	0	2	1	110
Control Delay (s)	0.0	0.0	0.7	17.7	27.3
Lane LOS			A	C	D
Approach Delay (s)	0.0		0.7	27.2	
Approach LOS				D	

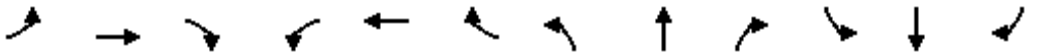
Intersection Summary			
Average Delay	6.1		
Intersection Capacity Utilization	57.2%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	187	0	576	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	208	0	640	0	0	0

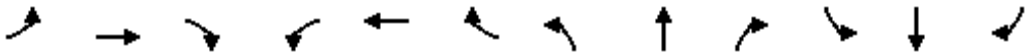
Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	104	104	640
Volume Left (vph)	104	104	640
Volume Right (vph)	0	0	0
Hadj (s)	0.58	0.58	0.29
Departure Headway (s)	6.8	6.8	4.8
Degree Utilization, x	0.20	0.20	0.86
Capacity (veh/h)	511	512	734
Control Delay (s)	10.2	10.2	30.0
Approach Delay (s)	10.2		30.0
Approach LOS	B		D

Intersection Summary			
Delay		25.1	
HCM Level of Service		D	
Intersection Capacity Utilization		46.0%	ICU Level of Service A
Analysis Period (min)		15	



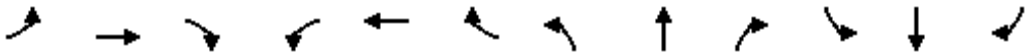
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	646	207	169	511	0	0	0	0	207	115	294
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	13	12	12	12	12	10	10	11
Total Lost time (s)		6.0	6.0		6.0					6.0	6.0	6.0
Lane Util. Factor		0.95	1.00		0.95					0.86	0.81	0.86
Frpb, ped/bikes		1.00	0.98		1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	0.94	0.85
Flt Protected		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (prot)		2978	1202		3372					1346	3705	1122
Flt Permitted		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (perm)		2978	1202		3372					1346	3705	1122
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	680	218	178	538	0	0	0	0	218	121	309
RTOR Reduction (vph)	0	0	106	0	0	0	0	0	0	0	82	90
Lane Group Flow (vph)	0	680	112	0	716	0	0	0	0	120	292	64
Confl. Peds. (#/hr)	5		3	3		5						
Heavy Vehicles (%)	0%	11%	9%	2%	4%	0%	0%	0%	0%	2%	2%	2%
Parking (#/hr)			0									0
Turn Type			Perm	Split						Split		custom
Protected Phases		2		10 12 14	10 12 14					4	4	
Permitted Phases			2									4 2
Actuated Green, G (s)		39.2	39.2		68.3					21.8	21.8	67.0
Effective Green, g (s)		39.2	39.2		68.3					21.8	21.8	67.0
Actuated g/C Ratio		0.25	0.25		0.43					0.14	0.14	0.42
Clearance Time (s)		6.0	6.0							6.0	6.0	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		730	294		1439					183	505	470
v/s Ratio Prot		c0.23			c0.21					c0.09	0.08	
v/s Ratio Perm			0.09									0.06
v/c Ratio		0.93	0.38		0.50					0.66	0.58	0.14
Uniform Delay, d1		59.1	50.3		33.4					65.5	64.8	28.7
Progression Factor		1.00	1.00		0.02					1.00	1.00	1.00
Incremental Delay, d2		20.2	3.7		0.1					8.2	1.6	0.1
Delay (s)		79.3	54.0		0.7					73.7	66.4	28.8
Level of Service		E	D		A					E	E	C
Approach Delay (s)		73.2			0.7			0.0			58.8	
Approach LOS		E			A			A			E	

Intersection Summary			
HCM Average Control Delay	46.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	32.7
Intersection Capacity Utilization	60.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



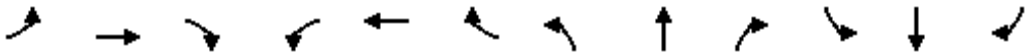
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	210	643	0	0	452	112	228	144	189	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	13	12	12	11	12	13	13	14	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0				
Lane Util. Factor	1.00	0.95			0.95	1.00	0.91	0.91				
Frt	1.00	1.00			1.00	0.85	1.00	0.92				
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00				
Satd. Flow (prot)	1574	3366			3149	1457	1531	2961				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	1.00				
Satd. Flow (perm)	1574	3366			3149	1457	1531	2961				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	233	714	0	0	502	124	253	160	210	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	88	0	118	0	0	0	0
Lane Group Flow (vph)	233	714	0	0	502	36	215	290	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Split					Perm	Split					
Protected Phases	2 4 8	2 4 8			10		12	12				
Permitted Phases						10						
Actuated Green, G (s)	83.7	83.7			33.6	33.6	15.8	15.8				
Effective Green, g (s)	83.7	83.7			33.6	33.6	15.8	15.8				
Actuated g/C Ratio	0.52	0.52			0.21	0.21	0.10	0.10				
Clearance Time (s)					6.0	6.0	6.0	6.0				
Vehicle Extension (s)					3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	823	1761			661	306	151	292				
v/s Ratio Prot	0.15	c0.21			c0.16		c0.14	0.10				
v/s Ratio Perm						0.02						
v/c Ratio	0.28	0.41			0.76	0.12	1.42	0.99				
Uniform Delay, d1	21.4	23.1			59.4	51.2	72.1	72.0				
Progression Factor	0.07	0.06			1.00	1.00	1.00	1.00				
Incremental Delay, d2	0.1	0.1			5.0	0.2	224.7	50.5				
Delay (s)	1.5	1.5			64.4	51.4	296.8	122.5				
Level of Service	A	A			E	D	F	F				
Approach Delay (s)		1.5			61.8			182.7			0.0	
Approach LOS		A			E			F			A	

Intersection Summary			
HCM Average Control Delay	70.1	HCM Level of Service	E
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	28.9
Intersection Capacity Utilization	52.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	214	318	73	35	355	45	86	803	60	56	727	99
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	14	12	10	10	12	9	10	12
Total Lost time (s)	4.0	4.0	5.0	4.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1546	1556	1328	1595	1760		1532	2990		1508	2921	
Flt Permitted	0.23	1.00	1.00	0.43	1.00		0.18	1.00		0.16	1.00	
Satd. Flow (perm)	376	1556	1328	722	1760		288	2990		255	2921	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	225	335	77	37	374	47	91	845	63	59	765	104
RTOR Reduction (vph)	0	0	50	0	5	0	0	6	0	0	12	0
Lane Group Flow (vph)	225	335	27	37	416	0	91	902	0	59	857	0
Confl. Peds. (#/hr)	33		3	3		33	42		8	8		42
Confl. Bikes (#/hr)							1					1
Heavy Vehicles (%)	3%	8%	6%	0%	7%	5%	4%	5%	11%	2%	6%	9%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	38.2	31.2	31.2	32.4	28.3		39.6	34.1		39.6	34.1	
Effective Green, g (s)	36.2	32.2	31.2	30.4	28.3		37.6	34.1		37.6	34.1	
Actuated g/C Ratio	0.40	0.36	0.35	0.34	0.31		0.42	0.38		0.42	0.38	
Clearance Time (s)	3.0	5.0	5.0	3.0	5.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	229	557	461	274	554		183	1134		169	1108	
v/s Ratio Prot	c0.07	0.22		0.00	0.24		c0.02	c0.30		0.02	0.29	
v/s Ratio Perm	c0.33		0.02	0.04			0.18			0.13		
v/c Ratio	0.98	0.60	0.06	0.14	0.75		0.50	0.80		0.35	0.77	
Uniform Delay, d1	25.9	23.6	19.6	20.4	27.6		17.7	24.8		17.5	24.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	54.2	4.8	0.2	0.2	9.1		2.1	5.8		1.3	5.3	
Delay (s)	80.1	28.4	19.8	20.6	36.7		19.8	30.6		18.7	29.8	
Level of Service	F	C	B	C	D		B	C		B	C	
Approach Delay (s)		45.6			35.4			29.6			29.1	
Approach LOS		D			D			C			C	

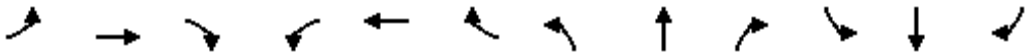
Intersection Summary			
HCM Average Control Delay	33.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	89.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	81.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	53	295	26	5	311	19	78	79	16	11	42	81
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	10	10	10	12	15	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Frpb, ped/bikes		1.00	0.97		1.00	0.97		1.00			0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.99			0.92	
Flt Protected		0.99	1.00		1.00	1.00		0.98			1.00	
Satd. Flow (prot)		1910	1482		1600	1198		1903			1790	
Flt Permitted		0.92	1.00		1.00	1.00		0.83			0.98	
Satd. Flow (perm)		1762	1482		1595	1198		1625			1759	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	56	311	27	5	327	20	82	83	17	12	44	85
RTOR Reduction (vph)	0	0	14	0	0	10	0	6	0	0	50	0
Lane Group Flow (vph)	0	367	13	0	332	10	0	176	0	0	91	0
Confl. Peds. (#/hr)	6		11	11		6	4		8	8		4
Confl. Bikes (#/hr)	1		1	1		1			1	1		
Heavy Vehicles (%)	0%	7%	0%	0%	5%	16%	0%	0%	0%	10%	0%	3%
Turn Type	Perm		Perm	Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Effective Green, g (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Actuated g/C Ratio		0.49	0.49		0.49	0.49		0.42			0.42	
Clearance Time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		867	730		785	590		675			731	
v/s Ratio Prot												
v/s Ratio Perm		c0.21	0.01		0.21	0.01		c0.11			0.05	
v/c Ratio		0.42	0.02		0.42	0.02		0.26			0.12	
Uniform Delay, d1		10.6	8.5		10.6	8.4		12.5			11.7	
Progression Factor		1.00	1.00		1.68	2.24		1.00			1.48	
Incremental Delay, d2		1.5	0.0		1.6	0.0		0.9			0.4	
Delay (s)		12.1	8.5		19.3	18.9		13.4			17.7	
Level of Service		B	A		B	B		B			B	
Approach Delay (s)		11.9			19.3			13.4			17.7	
Approach LOS		B			B			B			B	

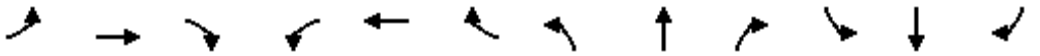
Intersection Summary			
HCM Average Control Delay	15.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	77.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	82	208	34	6	176	6	82	216	21	9	51	72
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.98		1.00	0.96		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.93	
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		1.00	
Satd. Flow (prot)		1664	1392		1608	1497		1733	1390		1569	
Flt Permitted		0.86	1.00		0.99	1.00		0.88	1.00		0.98	
Satd. Flow (perm)		1443	1392		1593	1497		1551	1390		1540	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	86	219	36	6	185	6	86	227	22	9	54	76
RTOR Reduction (vph)	0	0	23	0	0	4	0	0	11	0	39	0
Lane Group Flow (vph)	0	305	13	0	191	2	0	313	11	0	100	0
Confl. Peds. (#/hr)	11		17	17		11	4		17	17		4
Confl. Bikes (#/hr)	1		1	1		1	1					1
Heavy Vehicles (%)	0%	9%	5%	33%	11%	0%	6%	1%	6%	0%	0%	8%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Effective Green, g (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Actuated g/C Ratio		0.35	0.35		0.35	0.35		0.49	0.49		0.49	
Clearance Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Grp Cap (vph)		511	493		564	530		764	684		758	
v/s Ratio Prot												
v/s Ratio Perm		c0.21	0.01		0.12	0.00		c0.20	0.01		0.07	
v/c Ratio		0.60	0.03		0.34	0.00		0.41	0.02		0.13	
Uniform Delay, d1		17.2	13.7		15.4	13.6		10.5	8.4		9.0	
Progression Factor		1.92	3.40		0.95	0.98		0.27	0.18		1.15	
Incremental Delay, d2		4.7	0.1		1.6	0.0		0.8	0.0		0.4	
Delay (s)		37.7	46.7		16.2	13.3		3.6	1.6		10.6	
Level of Service		D	D		B	B		A	A		B	
Approach Delay (s)		38.6			16.1			3.5			10.6	
Approach LOS		D			B			A			B	

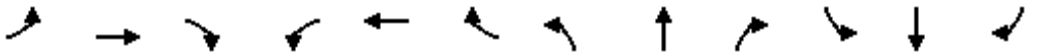
Intersection Summary			
HCM Average Control Delay	18.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	76.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	161	22	34	9	27	6	43	286	19	6	194	111
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.97		0.99			1.00			1.00	0.95
Flpb, ped/bikes		0.98	1.00		1.00			1.00			1.00	1.00
Frt		1.00	0.85		0.98			0.99			1.00	0.85
Flt Protected		0.96	1.00		0.99			0.99			1.00	1.00
Satd. Flow (prot)		1770	1390		1835			1970			1873	1328
Flt Permitted		0.79	1.00		0.94			0.95			0.99	1.00
Satd. Flow (perm)		1469	1390		1751			1876			1858	1328
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	179	24	38	10	30	7	48	318	21	7	216	123
RTOR Reduction (vph)	0	0	22	0	5	0	0	3	0	0	0	62
Lane Group Flow (vph)	0	203	16	0	42	0	0	384	0	0	223	61
Confl. Peds. (#/hr)	49		22	22		49	34		17	17		34
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	9%	0%	7%	0%	0%	0%	0%	2%	0%	0%	9%	9%
Turn Type	pm+pt		Perm	Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		27.0	27.0		17.0			32.0			32.0	32.0
Effective Green, g (s)		27.0	27.0		17.0			32.0			32.0	32.0
Actuated g/C Ratio		0.42	0.42		0.26			0.49			0.49	0.49
Clearance Time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		647	577		458			924			915	654
v/s Ratio Prot		c0.04										
v/s Ratio Perm		0.09	0.01		0.02			c0.20			0.12	0.05
v/c Ratio		0.31	0.03		0.09			0.42			0.24	0.09
Uniform Delay, d1		12.8	11.2		18.2			10.5			9.5	8.8
Progression Factor		0.80	1.38		1.00			0.45			0.53	0.31
Incremental Delay, d2		1.1	0.1		0.4			1.2			0.6	0.3
Delay (s)		11.3	15.6		18.6			5.9			5.7	3.0
Level of Service		B	B		B			A			A	A
Approach Delay (s)		12.0			18.6			5.9			4.7	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	7.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	60.3%	ICU Level of Service	B
Analysis Period (min)	15		

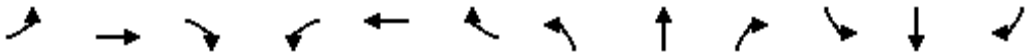
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	984	220	328	1128	0	0	0	0	274	200	374
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	11	8	8	8	11	12	14
Total Lost time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Lane Util. Factor		0.91		1.00	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00		1.00	1.00					1.00	0.99	0.99
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.97		1.00	1.00					1.00	0.94	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.99	1.00
Satd. Flow (prot)		4322		1589	3226					1419	2711	1355
Flt Permitted		1.00		0.13	1.00					0.95	0.99	1.00
Satd. Flow (perm)		4322		210	3226					1419	2711	1355
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1036	232	345	1187	0	0	0	0	288	211	394
RTOR Reduction (vph)	0	32	0	0	0	0	0	0	0	0	61	61
Lane Group Flow (vph)	0	1236	0	345	1187	0	0	0	0	233	390	148
Confl. Peds. (#/hr)	6		4	4		6	2					2
Heavy Vehicles (%)	0%	11%	7%	4%	6%	0%	0%	0%	0%	6%	4%	8%
Turn Type				pm+pt						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Actuated Green, G (s)		44.8		69.4	69.4					23.6	23.6	23.6
Effective Green, g (s)		44.8		69.4	69.4					23.6	23.6	23.6
Actuated g/C Ratio		0.43		0.66	0.66					0.22	0.22	0.22
Clearance Time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Vehicle Extension (s)		7.0		3.5	7.0					3.5	3.5	3.5
Lane Grp Cap (vph)		1844		403	2132					319	609	305
v/s Ratio Prot		0.29		c0.16	0.37							
v/s Ratio Perm				c0.40						c0.16	0.14	0.11
v/c Ratio		0.67		0.86	0.56					0.73	0.64	0.48
Uniform Delay, d1		24.2		23.9	9.5					37.7	36.9	35.4
Progression Factor		1.00		0.88	1.68					1.00	1.00	1.00
Incremental Delay, d2		2.0		9.0	0.5					8.6	2.3	1.4
Delay (s)		26.1		30.0	16.5					46.3	39.2	36.8
Level of Service		C		C	B					D	D	D
Approach Delay (s)		26.1			19.6			0.0			40.5	
Approach LOS		C			B			A			D	

Intersection Summary			
HCM Average Control Delay	26.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	108.2%	ICU Level of Service	G
Analysis Period (min)	15		

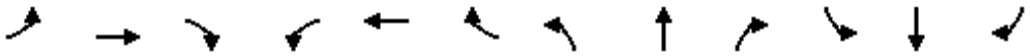
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	309	949	0	0	934	234	521	346	661	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	11	12	12	12	12	12	12	12
Total Lost time (s)	6.0	6.0			6.0			6.0				
Lane Util. Factor	0.97	0.95			0.91			0.91				
Frpb, ped/bikes	1.00	1.00			1.00			1.00				
Flpb, ped/bikes	1.00	1.00			1.00			1.00				
Frt	1.00	1.00			0.97			0.94				
Flt Protected	0.95	1.00			1.00			0.98				
Satd. Flow (prot)	2915	3138			4350			4336				
Flt Permitted	0.13	1.00			1.00			0.98				
Satd. Flow (perm)	407	3138			4350			4336				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	325	999	0	0	983	246	548	364	696	0	0	0
RTOR Reduction (vph)	0	0	0	0	36	0	0	90	0	0	0	0
Lane Group Flow (vph)	325	999	0	0	1193	0	0	1518	0	0	0	0
Confl. Peds. (#/hr)	4					4						
Heavy Vehicles (%)	10%	9%	0%	0%	6%	4%	4%	3%	5%	0%	0%	0%
Turn Type	pm+pt						Perm					
Protected Phases	5	2			6			8				
Permitted Phases	2						8					
Actuated Green, G (s)	63.6	63.6			45.5			29.4				
Effective Green, g (s)	63.6	63.6			45.5			29.4				
Actuated g/C Ratio	0.61	0.61			0.43			0.28				
Clearance Time (s)	6.0	6.0			6.0			6.0				
Vehicle Extension (s)	3.5	7.0			7.0			5.0				
Lane Grp Cap (vph)	536	1901			1885			1214				
v/s Ratio Prot	0.07	c0.32			0.27							
v/s Ratio Perm	c0.30							0.35				
v/c Ratio	0.61	0.53			0.63			1.38dr				
Uniform Delay, d1	12.9	12.0			23.2			37.8				
Progression Factor	0.64	0.65			1.01			1.00				
Incremental Delay, d2	1.5	0.8			0.9			119.7				
Delay (s)	9.7	8.6			24.3			157.5				
Level of Service	A	A			C			F				
Approach Delay (s)		8.8			24.3			157.5			0.0	
Approach LOS		A			C			F			A	

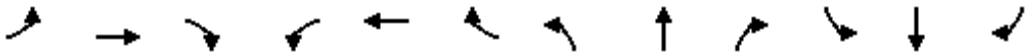
Intersection Summary			
HCM Average Control Delay	70.8	HCM Level of Service	E
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	108.2%	ICU Level of Service	G
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	103	931	221	76	859	50	226	178	40	76	111	91
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	11	12	12	10	10	13	10	10	10
Total Lost time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.97		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1565	3061	1291	1604	3231		1445	3007		1544	2782	
Flt Permitted	0.11	1.00	1.00	0.29	1.00		0.56	1.00		0.61	1.00	
Satd. Flow (perm)	174	3061	1291	494	3231		845	3007		990	2782	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	108	980	233	80	904	53	238	187	42	80	117	96
RTOR Reduction (vph)	0	0	96	0	4	0	0	21	0	0	80	0
Lane Group Flow (vph)	108	980	137	80	953	0	238	208	0	80	133	0
Confl. Peds. (#/hr)	3		12	12		3	9		6	6		9
Heavy Vehicles (%)	2%	8%	5%	3%	5%	3%	10%	3%	2%	3%	7%	4%
Parking (#/hr)			0									
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	62.8	52.8	61.8	40.8	34.3		28.7	19.7		24.7	17.7	
Effective Green, g (s)	62.8	52.8	61.8	40.8	34.3		28.7	19.7		24.7	17.7	
Actuated g/C Ratio	0.60	0.50	0.59	0.39	0.33		0.27	0.19		0.24	0.17	
Clearance Time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0		3.0	7.0		3.0	7.0	
Lane Grp Cap (vph)	435	1539	760	261	1055		282	564		270	469	
v/s Ratio Prot	0.06	c0.32	0.02	c0.02	c0.29		c0.07	0.07		0.02	0.05	
v/s Ratio Perm	0.09		0.09	0.10			c0.16			0.05		
v/c Ratio	0.25	0.64	0.18	0.31	0.90		0.84	0.37		0.30	0.28	
Uniform Delay, d1	12.9	19.1	9.9	20.7	33.8		34.6	37.2		32.4	38.1	
Progression Factor	1.05	1.19	2.47	1.00	1.00		0.95	0.90		1.00	1.00	
Incremental Delay, d2	0.8	1.1	0.1	0.7	12.4		19.0	1.4		0.6	1.2	
Delay (s)	14.2	23.8	24.6	21.3	46.2		52.1	34.9		33.0	39.3	
Level of Service	B	C	C	C	D		D	C		C	D	
Approach Delay (s)		23.2			44.3			43.7			37.6	
Approach LOS		C			D			D			D	

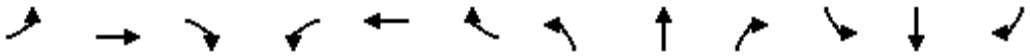
Intersection Summary			
HCM Average Control Delay	34.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	22.5
Intersection Capacity Utilization	75.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	323	273	79	209	98	328	380	161	91	258	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	12	11	12	12	11	13	12	10	11	12
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.93		1.00	0.95		1.00	0.96		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1635	2920		1463	3049		1589	3173		1549	3135	
Flt Permitted	0.53	1.00		0.25	1.00		0.46	1.00		0.44	1.00	
Satd. Flow (perm)	905	2920		381	3049		772	3173		714	3135	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	62	340	287	83	220	103	345	400	169	96	272	57
RTOR Reduction (vph)	0	139	0	0	51	0	0	44	0	0	17	0
Lane Group Flow (vph)	62	488	0	83	272	0	345	525	0	96	312	0
Confl. Peds. (#/hr)	20					20	1		2	2		1
Heavy Vehicles (%)	4%	5%	6%	13%	6%	5%	4%	6%	5%	3%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	35.4	28.4		36.2	28.8		53.2	41.9		38.6	31.3	
Effective Green, g (s)	35.4	28.4		36.2	28.8		53.2	41.9		38.6	31.3	
Actuated g/C Ratio	0.34	0.27		0.34	0.27		0.51	0.40		0.37	0.30	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.5	7.0		3.5	7.0		3.5	7.0		3.5	7.0	
Lane Grp Cap (vph)	354	790		208	836		530	1266		321	935	
v/s Ratio Prot	0.01	c0.17		c0.03	0.09		c0.11	0.17		0.02	0.10	
v/s Ratio Perm	0.05			0.11			c0.22			0.09		
v/c Ratio	0.18	0.62		0.40	0.33		0.65	0.41		0.30	0.33	
Uniform Delay, d1	24.0	33.5		24.6	30.4		16.6	22.7		22.4	28.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.03	0.90	
Incremental Delay, d2	0.3	3.6		1.5	1.0		3.0	1.0		0.6	0.9	
Delay (s)	24.3	37.1		26.1	31.4		19.6	23.7		23.6	26.8	
Level of Service	C	D		C	C		B	C		C	C	
Approach Delay (s)		36.0			30.3			22.2			26.1	
Approach LOS		D			C			C			C	

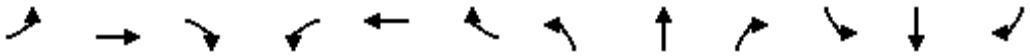
Intersection Summary			
HCM Average Control Delay	28.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	72.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	165	392	610	6	401	108	198	592	7	80	368	100
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	9	11	12	9	9	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.99			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.92			0.97		1.00	1.00		1.00	0.97	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		2584			2887		1436	3186		1451	2800	
Flt Permitted		0.63			0.94		0.38	1.00		0.28	1.00	
Satd. Flow (perm)		1631			2703		578	3186		432	2800	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	183	436	678	7	446	120	220	658	8	89	409	111
RTOR Reduction (vph)	0	200	0	0	37	0	0	1	0	0	38	0
Lane Group Flow (vph)	0	1097	0	0	536	0	220	665	0	89	482	0
Confl. Peds. (#/hr)	9		11	11		9	11		14	14		11
Heavy Vehicles (%)	3%	6%	18%	50%	6%	6%	7%	3%	50%	6%	7%	2%
Turn Type	pm+pt			Perm			pm+pt			pm+pt		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			19.0		26.0	22.0		26.0	22.0	
Effective Green, g (s)		27.0			19.0		26.0	22.0		26.0	22.0	
Actuated g/C Ratio		0.42			0.29		0.40	0.34		0.40	0.34	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		736			790		284	1078		236	948	
v/s Ratio Prot		c0.09					c0.05	0.21		0.02	0.17	
v/s Ratio Perm		c0.53			0.20		c0.26			0.13		
v/c Ratio		1.49			0.68		0.77	0.62		0.38	0.51	
Uniform Delay, d1		19.0			20.3		16.0	18.0		12.8	17.2	
Progression Factor		1.00			1.51		1.10	0.99		1.00	1.00	
Incremental Delay, d2		228.0			0.4		14.4	2.0		4.5	1.9	
Delay (s)		247.0			31.2		32.0	19.8		17.4	19.1	
Level of Service		F			C		C	B		B	B	
Approach Delay (s)		247.0			31.2			22.8			18.9	
Approach LOS		F			C			C			B	

Intersection Summary			
HCM Average Control Delay	109.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	49	111	341	856	127	13	110	780	274	10	949	43
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.89		1.00	0.99		1.00	0.96		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1665	1691		1620	1938		1659	3108		1139	3233	
Flt Permitted	0.67	1.00		0.30	1.00		0.19	1.00		0.17	1.00	
Satd. Flow (perm)	1166	1691		517	1938		340	3108		205	3233	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	51	114	352	882	131	13	113	804	282	10	978	44
RTOR Reduction (vph)	0	44	0	0	6	0	0	54	0	0	5	0
Lane Group Flow (vph)	51	422	0	882	138	0	113	1032	0	10	1017	0
Confl. Peds. (#/hr)	10		16	16		10	4		6	6		4
Confl. Bikes (#/hr)			4	4								
Heavy Vehicles (%)	2%	4%	5%	5%	4%	0%	3%	4%	8%	50%	5%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.48	0.48		0.48	0.48	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	431	624		191	716		162	1482		98	1542	
v/s Ratio Prot		0.25			0.07			0.33			0.31	
v/s Ratio Perm	0.04			c1.71			c0.33			0.05		
v/c Ratio	0.12	0.68		4.62	0.19		0.70	0.70		0.10	0.66	
Uniform Delay, d1	13.5	17.2		20.5	13.9		13.3	13.3		9.3	13.0	
Progression Factor	1.00	1.00		1.74	1.94		1.00	1.00		0.99	0.97	
Incremental Delay, d2	0.6	5.8		1629.1	0.1		22.1	2.7		0.2	0.2	
Delay (s)	14.1	23.1		1664.7	27.0		35.4	16.0		9.4	12.8	
Level of Service	B	C		F	C		D	B		A	B	
Approach Delay (s)		22.2			1434.9			17.9			12.8	
Approach LOS		C			F			B			B	

Intersection Summary			
HCM Average Control Delay	402.3	HCM Level of Service	F
HCM Volume to Capacity ratio	2.41		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	131.8%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR	SBR2
Lane Configurations												
Volume (vph)	422	948	556	14	3	14	3	46	10	0	2	4
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	12	12	16	12	12	16	12	12
Total Lost time (s)	5.0		5.0				4.0			4.0		
Lane Util. Factor	0.95		0.95				1.00			1.00		
Frpb, ped/bikes	1.00		1.00				1.00			0.99		
Flpb, ped/bikes	1.00		1.00				1.00			1.00		
Frt	1.00		1.00				0.91			0.95		
Flt Protected	1.00		0.97				0.99			0.97		
Satd. Flow (prot)	2956		2879				1732			1864		
Flt Permitted	1.00		0.59				0.94			0.87		
Satd. Flow (perm)	2956		1743				1650			1672		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	444	998	585	15	3	15	3	48	11	0	2	4
RTOR Reduction (vph)	0	0	1	0	0	0	38	0	0	3	0	0
Lane Group Flow (vph)	444	0	1597	0	0	0	31	0	0	14	0	0
Confl. Peds. (#/hr)		7		6		3					3	
Confl. Bikes (#/hr)		1										
Heavy Vehicles (%)	8%	8%	6%	0%	0%	8%	0%	5%	0%	0%	0%	0%
Turn Type		custom				Perm			Perm			
Protected Phases	8	7	4				2			6		
Permitted Phases		4 7				2			6			
Actuated Green, G (s)	18.0		27.0				14.0			14.0		
Effective Green, g (s)	18.0		27.0				14.0			14.0		
Actuated g/C Ratio	0.28		0.42				0.22			0.22		
Clearance Time (s)	5.0		5.0				4.0			4.0		
Lane Grp Cap (vph)	819		829				355			360		
v/s Ratio Prot	0.15		c0.18									
v/s Ratio Perm			c0.62				c0.02			0.01		
v/c Ratio	0.54		3.34dl				0.09			0.04		
Uniform Delay, d1	20.0		19.0				20.4			20.2		
Progression Factor	1.23		0.67				1.00			1.00		
Incremental Delay, d2	0.2		419.8				0.5			0.2		
Delay (s)	24.7		432.5				20.9			20.4		
Level of Service	C		F				C			C		
Approach Delay (s)	24.7		432.5				20.9			20.4		
Approach LOS	C		F				C			C		

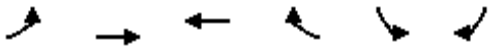
Intersection Summary			
HCM Average Control Delay	356.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.42		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	124.8%	ICU Level of Service	H
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group



Movement	NEL	NER
Lane Configurations		
Volume (vph)	1	410
Ideal Flow (vphpl)	1800	1800
Lane Width	12	12
Total Lost time (s)	5.0	
Lane Util. Factor	1.00	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Frt	0.87	
Flt Protected	1.00	
Satd. Flow (prot)	1429	
Flt Permitted	1.00	
Satd. Flow (perm)	1429	
Peak-hour factor, PHF	0.95	0.95
Adj. Flow (vph)	1	432
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	433	0
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Heavy Vehicles (%)	0%	9%
Turn Type		
Protected Phases	3	
Permitted Phases		
Actuated Green, G (s)	10.0	
Effective Green, g (s)	10.0	
Actuated g/C Ratio	0.15	
Clearance Time (s)	5.0	
Lane Grp Cap (vph)	220	
v/s Ratio Prot	c0.30	
v/s Ratio Perm		
v/c Ratio	1.97	
Uniform Delay, d1	27.5	
Progression Factor	1.25	
Incremental Delay, d2	448.0	
Delay (s)	482.3	
Level of Service	F	
Approach Delay (s)	482.3	
Approach LOS	F	

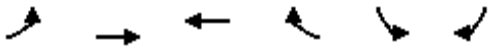
Intersection Summary



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	206	733	1284	64	41	235
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frt		1.00	0.99		1.00	0.85
Flt Protected		0.99	1.00		0.95	1.00
Satd. Flow (prot)		3222	3234		1629	1457
Flt Permitted		0.51	1.00		0.95	1.00
Satd. Flow (perm)		1670	3234		1629	1457
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	229	814	1427	71	46	261
RTOR Reduction (vph)	0	0	5	0	0	36
Lane Group Flow (vph)	0	1043	1493	0	46	225
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		40.0	40.0		17.0	17.0
Effective Green, g (s)		40.0	40.0		17.0	17.0
Actuated g/C Ratio		0.62	0.62		0.26	0.26
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1028	1990		426	381
v/s Ratio Prot			0.46		0.03	
v/s Ratio Perm		c0.62				c0.15
v/c Ratio		2.04dl	0.75		0.11	0.59
Uniform Delay, d1		12.5	8.9		18.2	21.0
Progression Factor		1.78	0.89		0.99	0.97
Incremental Delay, d2		12.4	1.6		0.5	6.6
Delay (s)		34.6	9.5		18.6	26.8
Level of Service		C	A		B	C
Approach Delay (s)		34.6	9.5		25.6	
Approach LOS		C	A		C	

Intersection Summary			
HCM Average Control Delay	20.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	80.7%	ICU Level of Service	D
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group



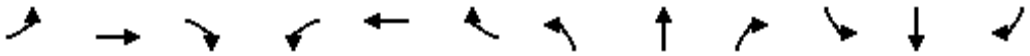
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	56	697	1269	190	131	74
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	12	10	11	12	10	10
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frpb, ped/bikes		1.00	1.00		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.98		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2928	2979		1464	1373
Flt Permitted		0.72	1.00		0.95	1.00
Satd. Flow (perm)		2102	2979		1464	1373
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	59	734	1336	200	138	78
RTOR Reduction (vph)	0	0	18	0	0	36
Lane Group Flow (vph)	0	793	1518	0	138	42
Confl. Peds. (#/hr)	1			1		
Confl. Bikes (#/hr)	1			1		
Heavy Vehicles (%)	4%	9%	8%	12%	9%	4%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		38.0	38.0		19.0	19.0
Effective Green, g (s)		38.0	38.0		19.0	19.0
Actuated g/C Ratio		0.58	0.58		0.29	0.29
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1229	1742		428	401
v/s Ratio Prot			c0.51		c0.09	
v/s Ratio Perm		0.38				0.03
v/c Ratio		0.65	0.87		0.32	0.10
Uniform Delay, d1		9.0	11.4		18.0	16.8
Progression Factor		0.92	1.03		0.94	1.01
Incremental Delay, d2		0.8	2.0		2.0	0.5
Delay (s)		9.0	13.8		18.9	17.5
Level of Service		A	B		B	B
Approach Delay (s)		9.0	13.8		18.4	
Approach LOS		A	B		B	

Intersection Summary			
HCM Average Control Delay	12.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	79.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

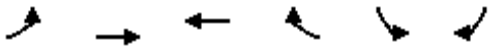
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	662	168	104	1164	460	79
Ideal Flow (vphpl)	2300	1800	1800	2300	1800	1800
Lane Width	15	12	14	16	15	12
Total Lost time (s)	5.0		5.0	5.0	5.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.97		1.00	1.00	0.98	
Flt Protected	1.00		0.95	1.00	0.96	
Satd. Flow (prot)	2223		1770	2436	1820	
Flt Permitted	1.00		0.13	1.00	0.96	
Satd. Flow (perm)	2223		240	2436	1820	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	676	171	106	1188	469	81
RTOR Reduction (vph)	14	0	0	0	9	0
Lane Group Flow (vph)	833	0	106	1188	541	0
Confl. Peds. (#/hr)		4	4			8
Heavy Vehicles (%)	11%	7%	3%	7%	2%	2%
Turn Type			Perm			
Protected Phases	4			8	2	
Permitted Phases			8			
Actuated Green, G (s)	31.0		31.0	31.0	24.0	
Effective Green, g (s)	31.0		31.0	31.0	24.0	
Actuated g/C Ratio	0.48		0.48	0.48	0.37	
Clearance Time (s)	5.0		5.0	5.0	5.0	
Lane Grp Cap (vph)	1060		114	1162	672	
v/s Ratio Prot	0.37			c0.49	c0.30	
v/s Ratio Perm			0.44			
v/c Ratio	0.79		0.93	1.02	0.80	
Uniform Delay, d1	14.2		16.0	17.0	18.4	
Progression Factor	1.51		1.00	1.00	1.00	
Incremental Delay, d2	4.8		67.0	32.2	9.9	
Delay (s)	26.2		83.0	49.2	28.3	
Level of Service	C		F	D	C	
Approach Delay (s)	26.2			52.0	28.3	
Approach LOS	C			D	C	

Intersection Summary			
HCM Average Control Delay	39.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	91.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	708	95	251	1203	9	107	0	177	1	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	15	13	11	11	12	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0	4.0	3.0	3.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00		0.95	
Satd. Flow (prot)	1881	3213	1422	1589	3138	1366		1642	1443		969	
Flt Permitted	0.20	1.00	1.00	0.27	1.00	1.00		0.76	1.00		0.62	
Satd. Flow (perm)	405	3213	1422	455	3138	1366		1309	1443		636	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	787	106	279	1337	10	119	0	197	1	0	0
RTOR Reduction (vph)	0	0	50	0	0	2	0	0	167	0	0	0
Lane Group Flow (vph)	1	787	56	279	1337	8	0	119	30	0	1	0
Heavy Vehicles (%)	0%	10%	4%	4%	9%	12%	18%	0%	6%	100%	0%	0%
Turn Type	Perm		Perm	custom		custom	Perm		Perm	Perm		
Protected Phases		4		3	3 8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)	44.7	44.7	44.7	64.0	64.0	64.0		13.0	13.0		13.0	
Effective Green, g (s)	44.7	44.7	44.7	64.0	64.0	64.0		13.0	13.0		13.0	
Actuated g/C Ratio	0.53	0.53	0.53	0.75	0.75	0.75		0.15	0.15		0.15	
Clearance Time (s)	4.0	4.0	4.0	3.0		4.0		4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0		3.0	
Lane Grp Cap (vph)	213	1690	748	560	2363	1029		200	221		97	
v/s Ratio Prot		0.24		0.10	c0.43							
v/s Ratio Perm	0.00		0.04	0.28		0.01		c0.09	0.02		0.00	
v/c Ratio	0.00	0.47	0.07	0.50	0.57	0.01		0.59	0.14		0.01	
Uniform Delay, d1	9.6	12.7	9.9	4.5	4.5	2.6		33.5	31.1		30.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	0.0	0.9	0.2	0.7	0.3	0.0		4.7	0.3		0.0	
Delay (s)	9.6	13.6	10.1	5.2	4.8	2.6		38.2	31.4		30.6	
Level of Service	A	B	B	A	A	A		D	C		C	
Approach Delay (s)		13.2			4.9			34.0			30.6	
Approach LOS		B			A			C			C	

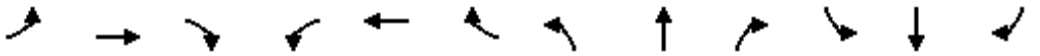
Intersection Summary			
HCM Average Control Delay	10.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	54.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	12	775	801	43	23	9
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	12	10	10
Total Lost time (s)		5.0	5.0		3.0	
Lane Util. Factor		0.95	0.95		1.00	
Frt		1.00	0.99		0.96	
Flt Protected		1.00	1.00		0.97	
Satd. Flow (prot)		3038	3017		1486	
Flt Permitted		0.94	1.00		0.97	
Satd. Flow (perm)		2843	3017		1486	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	13	861	890	48	26	10
RTOR Reduction (vph)	0	0	4	0	9	0
Lane Group Flow (vph)	0	874	934	0	27	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type	Perm					
Protected Phases		4	8 2 11		5	
Permitted Phases	4					
Actuated Green, G (s)		33.0	64.0		7.0	
Effective Green, g (s)		33.0	64.0		7.0	
Actuated g/C Ratio		0.37	0.71		0.08	
Clearance Time (s)		5.0			3.0	
Lane Grp Cap (vph)		1042	2145		116	
v/s Ratio Prot			c0.31		c0.02	
v/s Ratio Perm		c0.31				
v/c Ratio		0.84	0.44		0.23	
Uniform Delay, d1		26.1	5.4		39.0	
Progression Factor		1.00	0.00		1.00	
Incremental Delay, d2		8.1	0.3		4.6	
Delay (s)		34.2	0.3		43.6	
Level of Service		C	A		D	
Approach Delay (s)		34.2	0.3		43.6	
Approach LOS		C	A		D	

Intersection Summary			
HCM Average Control Delay	17.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	42.4%	ICU Level of Service	A
Analysis Period (min)	15		

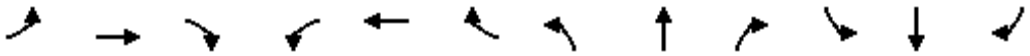
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	78	423	1	26	554	78	0	0	1	43	3	91
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12	12	11	12	11
Total Lost time (s)		4.0			4.0			3.0			3.0	3.0
Lane Util. Factor		1.00			0.95			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			0.92			1.00	0.96
Flpb, ped/bikes		1.00			1.00			1.00			0.98	1.00
Frt		1.00			0.98			0.86			1.00	0.85
Flt Protected		0.99			1.00			1.00			0.96	1.00
Satd. Flow (prot)		1728			3231			1432			1610	1282
Flt Permitted		0.79			0.93			1.00			0.94	1.00
Satd. Flow (perm)		1382			3025			1432			1581	1282
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	87	470	1	29	616	87	0	0	1	48	3	101
RTOR Reduction (vph)	0	0	0	0	12	0	0	1	0	0	0	68
Lane Group Flow (vph)	0	558	0	0	720	0	0	0	0	0	51	33
Confl. Peds. (#/hr)	33		13	13		33	29		13	13		29
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	4%	3%	0%	0%	4%	0%	0%	0%	0%	5%	0%	11%
Turn Type	Perm			Prot			Perm			pm+pt		Perm
Protected Phases		4		3	3 4			1		2	1 2	
Permitted Phases	4				3		1	1		1 2		1 2
Actuated Green, G (s)		31.0			45.0			9.0			25.0	28.0
Effective Green, g (s)		31.0			45.0			9.0			25.0	28.0
Actuated g/C Ratio		0.36			0.53			0.11			0.29	0.33
Clearance Time (s)		4.0						3.0				
Lane Grp Cap (vph)		504			1635			152			470	422
v/s Ratio Prot					c0.07			0.00			c0.02	
v/s Ratio Perm		c0.40			0.16						c0.01	0.03
v/c Ratio		1.11			0.44			0.00			0.11	0.08
Uniform Delay, d1		27.0			12.3			34.0			21.9	19.6
Progression Factor		1.00			1.76			1.00			1.00	1.00
Incremental Delay, d2		72.7			0.1			0.0			0.5	0.4
Delay (s)		99.7			21.7			34.0			22.3	20.0
Level of Service		F			C			C			C	B
Approach Delay (s)		99.7			21.7			34.0			20.8	
Approach LOS		F			C			C			C	

Intersection Summary			
HCM Average Control Delay	51.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	71.4%	ICU Level of Service	C
Analysis Period (min)	15		

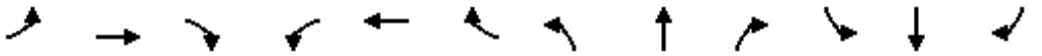
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	598	28	35	997	57	36	35	48	23	26	87
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	16	10	10	16	8	15	8	8	14	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			0.98	
Flpb, ped/bikes	0.98	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.99			0.95			0.91	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1556	3022		1587	3021			1816			1706	
Flt Permitted	0.17	1.00		0.36	1.00			0.89			0.95	
Satd. Flow (perm)	286	3022		604	3021			1649			1630	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	41	629	29	37	1049	60	38	37	51	24	27	92
RTOR Reduction (vph)	0	5	0	0	6	0	0	33	0	0	22	0
Lane Group Flow (vph)	41	653	0	37	1103	0	0	93	0	0	121	0
Confl. Peds. (#/hr)	145		16	16		145	17		19	19		17
Confl. Bikes (#/hr)	5					5			2	2		
Heavy Vehicles (%)	0%	5%	0%	0%	4%	2%	0%	0%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			22.0			22.0	
Effective Green, g (s)	34.0	34.0		34.0	34.0			23.0			23.0	
Actuated g/C Ratio	0.52	0.52		0.52	0.52			0.35			0.35	
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0			5.0	
Lane Grp Cap (vph)	150	1581		316	1580			583			577	
v/s Ratio Prot		0.22			c0.37							
v/s Ratio Perm	0.14			0.06				0.06			c0.07	
v/c Ratio	0.27	0.41		0.12	0.70			0.16			0.21	
Uniform Delay, d1	8.6	9.4		7.9	11.6			14.4			14.7	
Progression Factor	1.00	1.00		0.70	1.38			1.00			1.00	
Incremental Delay, d2	4.5	0.8		0.7	2.3			0.6			0.8	
Delay (s)	13.1	10.2		6.2	18.4			15.0			15.5	
Level of Service	B	B		A	B			B			B	
Approach Delay (s)		10.4			18.0			15.0			15.5	
Approach LOS		B			B			B			B	

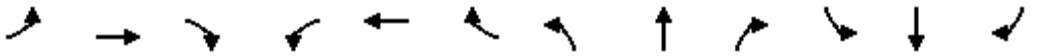
Intersection Summary			
HCM Average Control Delay	15.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	787	5	31	619	40	0	0	0	578	88	375
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00				0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.67				1.00	1.00	0.98
Flpb, ped/bikes	0.92	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	790	3379		1710	3226	514				3285	1731	1481
Flt Permitted	0.40	1.00		0.14	1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	336	3379		248	3226	514				3285	1731	1481
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	26	828	5	33	652	42	0	0	0	608	93	395
RTOR Reduction (vph)	0	0	0	0	0	18	0	0	0	0	0	168
Lane Group Flow (vph)	26	833	0	33	652	24	0	0	0	608	93	227
Confl. Peds. (#/hr)	350		4	4		350	8		6	6		8
Confl. Bikes (#/hr)	7		1	1		7						
Heavy Vehicles (%)	100%	1%	20%	0%	6%	100%	0%	0%	0%	1%	4%	1%
Turn Type	pm+pt			pm+pt		Perm				Split		Perm
Protected Phases	7	4		3	8					6	6	
Permitted Phases	4			8		8						6
Actuated Green, G (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Effective Green, g (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Actuated g/C Ratio	0.33	0.33		0.56	0.56	0.56				0.23	0.23	0.23
Clearance Time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Grp Cap (vph)	160	1118		634	1812	289				758	399	342
v/s Ratio Prot	0.02	c0.25		0.02	c0.20					c0.19	0.05	
v/s Ratio Perm	0.04			0.01		0.05						0.15
v/c Ratio	0.16	0.75		0.05	0.36	0.08				0.80	0.23	0.66
Uniform Delay, d1	31.6	38.6		15.2	15.7	13.1				47.2	40.6	45.4
Progression Factor	0.85	0.86		0.34	0.75	1.27				1.00	1.00	1.00
Incremental Delay, d2	2.1	4.4		0.1	0.4	0.4				8.8	1.4	9.8
Delay (s)	28.9	37.4		5.2	12.2	17.0				56.0	42.0	55.2
Level of Service	C	D		A	B	B				E	D	E
Approach Delay (s)		37.2			12.1			0.0			54.5	
Approach LOS		D			B			A			D	

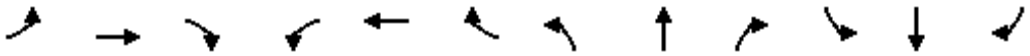
Intersection Summary			
HCM Average Control Delay	37.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	52.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	338	809	218	53	560	280	100	247	54	39	0	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.67		1.00	0.91	1.00		0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.97		1.00	1.00	0.85		1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (prot)	3285	3263		1710	3138	1018		3301	1359	855		734
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (perm)	3285	3263		1710	3138	1018		3301	1359	855		734
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	356	852	229	56	589	295	105	260	57	41	0	32
RTOR Reduction (vph)	0	18	0	0	0	222	0	0	42	0	0	30
Lane Group Flow (vph)	356	1063	0	56	589	73	0	365	15	41	0	2
Confl. Peds. (#/hr)	327		13	13		327	6		60	60		6
Confl. Bikes (#/hr)	6					6						
Heavy Vehicles (%)	1%	1%	0%	0%	9%	1%	0%	3%	2%	100%	0%	100%
Turn Type	Prot			Prot		Perm	Split		Perm	Prot		custom
Protected Phases	7	4		3	8		2	2		6		
Permitted Phases						8			2			6
Actuated Green, G (s)	44.0	68.0		8.0	32.0	32.0		28.0	28.0	8.0		8.0
Effective Green, g (s)	44.0	68.0		8.0	32.0	32.0		28.0	28.0	8.0		8.0
Actuated g/C Ratio	0.34	0.52		0.06	0.25	0.25		0.22	0.22	0.06		0.06
Clearance Time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	1112	1707		105	772	251		711	293	53		45
v/s Ratio Prot	0.11	c0.33		0.03	c0.19			c0.11		c0.05		
v/s Ratio Perm						0.07			0.01			0.00
v/c Ratio	0.32	0.62		0.53	0.76	0.29		0.51	0.05	0.77		0.04
Uniform Delay, d1	31.9	21.9		59.2	45.5	39.8		45.0	40.5	60.1		57.4
Progression Factor	0.94	0.17		1.00	1.00	1.00		0.95	1.00	1.00		1.00
Incremental Delay, d2	0.5	1.1		18.0	7.0	2.9		2.6	0.3	49.7		0.4
Delay (s)	30.5	4.7		77.2	52.5	42.7		45.2	40.9	109.9		57.8
Level of Service	C	A		E	D	D		D	D	F		E
Approach Delay (s)		11.1			50.9			44.7			87.0	
Approach LOS		B			D			D			F	

Intersection Summary			
HCM Average Control Delay	31.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	68.0%	ICU Level of Service	C
Analysis Period (min)	15		

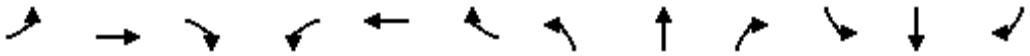
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	885	165	102	813	0	74	0	89	9	15	7
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	11	11	8	12	12	12	14	15	12
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes		0.99		1.00	1.00		1.00		0.98	1.00	0.98	
Flpb, ped/bikes		1.00		1.00	1.00		0.97		1.00	0.99	1.00	
Frt		0.98		1.00	1.00		1.00		0.85	1.00	0.95	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		2997		1649	3149		1388		1451	1803	1857	
Flt Permitted		1.00		0.18	1.00		0.74		1.00	0.95	1.00	
Satd. Flow (perm)		2997		304	3149		1082		1451	1803	1857	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	983	183	113	903	0	82	0	99	10	17	8
RTOR Reduction (vph)	0	15	0	0	0	0	0	0	67	0	5	0
Lane Group Flow (vph)	0	1151	0	113	903	0	82	0	32	10	20	0
Confl. Peds. (#/hr)	67		19	19		67	38		12	12		38
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	2%	11%	0%	5%	0%	19%	0%	3%	0%	0%	0%
Turn Type				Perm			custom		custom	Perm		
Protected Phases		4			8						6	
Permitted Phases				8			2		2	6		
Actuated Green, G (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Effective Green, g (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Actuated g/C Ratio		0.60		0.60	0.60		0.32		0.32	0.32	0.32	
Clearance Time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)		1798		182	1889		346		464	577	594	
v/s Ratio Prot		c0.38			0.29						0.01	
v/s Ratio Perm				0.37			c0.08		0.02	0.01		
v/c Ratio		0.64		0.62	0.48		0.24		0.07	0.02	0.03	
Uniform Delay, d1		13.0		12.7	11.2		25.0		23.6	23.2	23.4	
Progression Factor		1.00		1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		1.8		14.9	0.9		1.6		0.3	0.1	0.1	
Delay (s)		14.7		27.6	12.1		26.6		23.9	23.3	23.5	
Level of Service		B		C	B		C		C	C	C	
Approach Delay (s)		14.7			13.8			25.1			23.4	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	15.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.0%	ICU Level of Service	B
Analysis Period (min)	15		

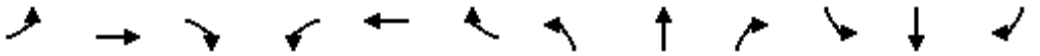
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	291	0	1188	214	682	0	0	792	490
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	12	10	10	12	12	11	12
Total Lost time (s)				4.0		5.0	3.0	4.0			4.0	
Lane Util. Factor				0.95		1.00	1.00	0.91			0.91	
Frpb, ped/bikes				1.00		1.00	1.00	1.00			0.98	
Flpb, ped/bikes				1.00		1.00	1.00	1.00			1.00	
Frt				1.00		0.85	1.00	1.00			0.94	
Flt Protected				0.95		1.00	0.95	1.00			1.00	
Satd. Flow (prot)				1540		1530	1535	4327			4271	
Flt Permitted				0.95		1.00	0.95	1.00			1.00	
Satd. Flow (perm)				1540		1530	1535	4327			4271	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	297	0	1212	218	696	0	0	808	500
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	297	0	1212	218	696	0	0	1308	0
Confl. Peds. (#/hr)	2					2	18		3	3		18
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%	4%	6%	0%	0%	4%	1%
Turn Type				Split		Prot	Prot					
Protected Phases				8	8	8	5	2			6	
Permitted Phases												
Actuated Green, G (s)				30.0		30.0	32.0	66.0			31.0	
Effective Green, g (s)				31.0		30.0	32.0	66.0			31.0	
Actuated g/C Ratio				0.30		0.29	0.30	0.63			0.30	
Clearance Time (s)				5.0		5.0	3.0	4.0			4.0	
Lane Grp Cap (vph)				455		437	468	2720			1261	
v/s Ratio Prot				0.19		c0.79	c0.14	0.16			c0.31	
v/s Ratio Perm												
v/c Ratio				0.65		2.77	0.47	0.26			1.16dr	
Uniform Delay, d1				32.3		37.5	29.6	8.6			37.0	
Progression Factor				1.00		1.00	0.64	2.10			1.00	
Incremental Delay, d2				7.1		804.4	2.8	0.2			35.5	
Delay (s)				39.4		841.9	21.6	18.3			72.5	
Level of Service				D		F	C	B			E	
Approach Delay (s)		0.0			684.0			19.1			72.5	
Approach LOS		A			F			B			E	

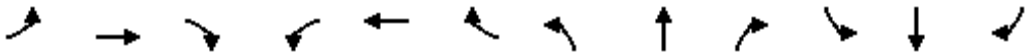
Intersection Summary			
HCM Average Control Delay	306.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.40		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	99.3%	ICU Level of Service	F
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	324	770	146	0	0	0	0	572	403	355	727	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	13	12	12	12	12	12	10	10	8	12	12	12
Total Lost time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Util. Factor	0.91	0.91						0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00						1.00	1.00	1.00	1.00	
Flpb, ped/bikes	0.99	1.00						1.00	1.00	1.00	1.00	
Frt	1.00	0.98						1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1509	3156						4368	2244	1598	4680	
Flt Permitted	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1509	3156						4368	2244	1598	4680	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	334	794	151	0	0	0	0	590	415	366	749	0
RTOR Reduction (vph)	0	14	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	301	964	0	0	0	0	0	590	415	366	749	0
Confl. Peds. (#/hr)	6		1	1		6	6					6
Heavy Vehicles (%)	6%	1%	0%	0%	0%	0%	0%	5%	4%	7%	5%	0%
Turn Type	Perm								Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Actuated Green, G (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Effective Green, g (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Actuated g/C Ratio	0.32	0.32						0.27	0.27	0.30	0.59	
Clearance Time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Grp Cap (vph)	489	1022						1165	598	472	2763	
v/s Ratio Prot								0.14		c0.23	0.16	
v/s Ratio Perm	0.20	0.31							c0.18			
v/c Ratio	0.62	0.94						0.51	0.69	0.78	0.27	
Uniform Delay, d1	30.0	34.6						32.6	34.6	33.8	10.5	
Progression Factor	1.00	1.00						1.14	1.14	0.86	0.21	
Incremental Delay, d2	5.7	17.5						1.4	5.9	4.6	0.1	
Delay (s)	35.7	52.0						38.7	45.4	33.7	2.3	
Level of Service	D	D						D	D	C	A	
Approach Delay (s)		48.2			0.0			41.5			12.6	
Approach LOS		D			A			D			B	

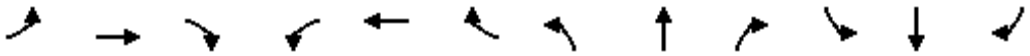
Intersection Summary			
HCM Average Control Delay	34.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	99.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	287	25	24	11	157	0	0	147	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	14	12	12	16	12
Total Lost time (s)				4.0	4.0		4.0	4.0			-3.0	
Lane Util. Factor				1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes				1.00	0.99		1.00	1.00			1.00	
Flpb, ped/bikes				1.00	1.00		1.00	1.00			1.00	
Frt				1.00	0.93		1.00	1.00			1.00	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1688	3132		1710	1846			1955	
Flt Permitted				0.95	1.00		0.54	1.00			1.00	
Satd. Flow (perm)				1688	3132		979	1846			1955	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	319	28	27	12	174	0	0	163	6
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	319	37	0	12	174	0	0	168	0
Confl. Peds. (#/hr)	2		2	2		2			6	6		
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	0%	4%	0%	0%	4%	0%
Turn Type				Perm			pm+pt					
Protected Phases					8		7	2			6	
Permitted Phases				8			2					
Actuated Green, G (s)				27.0	27.0		50.0	50.0			40.0	
Effective Green, g (s)				27.0	27.0		50.0	50.0			46.0	
Actuated g/C Ratio				0.32	0.32		0.59	0.59			0.54	
Clearance Time (s)				4.0	4.0		4.0	4.0			3.0	
Lane Grp Cap (vph)				536	995		636	1086			1058	
v/s Ratio Prot					0.01		0.00	c0.09			0.09	
v/s Ratio Perm				c0.19			0.01					
v/c Ratio				0.60	0.04		0.02	0.16			0.16	
Uniform Delay, d1				24.4	20.0		10.5	8.0			9.8	
Progression Factor				1.00	1.00		1.05	1.17			1.00	
Incremental Delay, d2				4.8	0.1		0.1	0.3			0.3	
Delay (s)				29.2	20.1		11.1	9.7			10.1	
Level of Service				C	C		B	A			B	
Approach Delay (s)		0.0			27.9			9.8			10.1	
Approach LOS		A			C			A			B	

Intersection Summary			
HCM Average Control Delay	19.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	36.8%	ICU Level of Service	A
Analysis Period (min)	15		

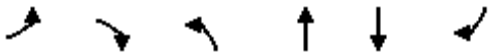
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	12	11	23	5	0	14	0	142	43	46	389	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	16	15	12	8	12	8	12	12	12	10	13	12
Total Lost time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.97			0.98			0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00			1.00		1.00	1.00	
Frt	1.00	0.90			0.90			0.97		1.00	1.00	
Flt Protected	0.95	1.00			0.99			1.00		0.95	1.00	
Satd. Flow (prot)	1935	1735			1565			1718		1590	1860	
Flt Permitted	0.74	1.00			0.97			1.00		0.60	1.00	
Satd. Flow (perm)	1516	1735			1531			1718		1004	1860	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	13	12	24	5	0	15	0	149	45	48	409	0
RTOR Reduction (vph)	0	16	0	0	10	0	0	13	0	0	0	0
Lane Group Flow (vph)	13	20	0	0	10	0	0	181	0	48	409	0
Confl. Peds. (#/hr)	1		11	11		1	1		10	10		1
Confl. Bikes (#/hr)			2	2			1		2	2		1
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Turn Type	Perm			Perm						pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Effective Green, g (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Actuated g/C Ratio	0.32	0.32			0.32			0.47		0.59	0.59	
Clearance Time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Grp Cap (vph)	482	551			486			808		639	1094	
v/s Ratio Prot		c0.01						0.11		0.01	c0.22	
v/s Ratio Perm	0.01				0.01					0.04		
v/c Ratio	0.03	0.04			0.02			0.22		0.08	0.37	
Uniform Delay, d1	20.0	20.0			19.9			13.3		8.6	9.2	
Progression Factor	1.00	1.00			1.00			1.00		0.97	0.87	
Incremental Delay, d2	0.1	0.1			0.1			0.6		0.2	0.9	
Delay (s)	20.1	20.1			20.0			14.0		8.6	8.9	
Level of Service	C	C			B			B		A	A	
Approach Delay (s)		20.1			20.0			14.0			8.9	
Approach LOS		C			B			B			A	

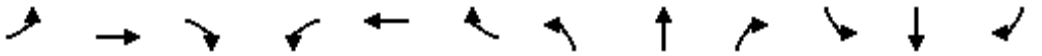
Intersection Summary			
HCM Average Control Delay	11.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	41.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



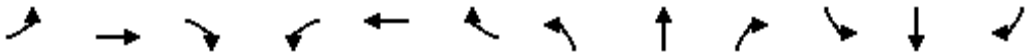
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	46	40	12	183	273	27
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	14	12	13	12	10	12
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.94		1.00	1.00	0.99	
Flt Protected	0.97		0.95	1.00	1.00	
Satd. Flow (prot)	1753		1765	1782	1656	
Flt Permitted	0.97		0.52	1.00	1.00	
Satd. Flow (perm)	1753		966	1782	1656	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	51	44	13	203	303	30
RTOR Reduction (vph)	30	0	0	0	5	0
Lane Group Flow (vph)	65	0	13	203	328	0
Confl. Peds. (#/hr)			2			2
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.0		36.0	36.0	36.0	
Effective Green, g (s)	21.0		36.0	36.0	36.0	
Actuated g/C Ratio	0.32		0.55	0.55	0.55	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	566		535	987	917	
v/s Ratio Prot	c0.04			0.11	c0.20	
v/s Ratio Perm			0.01			
v/c Ratio	0.12		0.02	0.21	0.36	
Uniform Delay, d1	15.5		6.6	7.3	8.1	
Progression Factor	1.00		0.49	0.60	1.44	
Incremental Delay, d2	0.4		0.1	0.5	0.9	
Delay (s)	15.9		3.3	4.8	12.6	
Level of Service	B		A	A	B	
Approach Delay (s)	15.9			4.7	12.6	
Approach LOS	B			A	B	

Intersection Summary			
HCM Average Control Delay	10.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	28.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



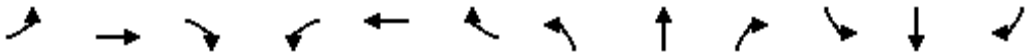
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	31	265	9	257	132	0	0	277	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	14	16	12	12	15	12	12	13	10
Total Lost time (s)					4.0		4.0	4.0			3.0	3.0
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Frt					1.00		1.00	1.00			1.00	0.85
Flt Protected					0.99		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3771		1693	1678			1738	1428
Flt Permitted					0.99		0.48	1.00			1.00	1.00
Satd. Flow (perm)					3771		854	1678			1738	1428
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	34	294	10	286	147	0	0	308	19
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	0	0	0	11
Lane Group Flow (vph)	0	0	0	0	335	0	286	147	0	0	308	8
Confl. Peds. (#/hr)	1					1			5	5		
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	1%	18%	0%	0%	7%	0%
Turn Type				Split			pm+pt					Perm
Protected Phases				8	8		7	2			6	
Permitted Phases							2					6
Actuated Green, G (s)					26.0		51.0	51.0			38.0	38.0
Effective Green, g (s)					26.0		51.0	51.0			38.0	38.0
Actuated g/C Ratio					0.31		0.60	0.60			0.45	0.45
Clearance Time (s)					4.0		4.0	4.0			3.0	3.0
Lane Grp Cap (vph)					1153		611	1007			777	638
v/s Ratio Prot					c0.09		c0.06	0.09			0.18	
v/s Ratio Perm							c0.23					0.01
v/c Ratio					0.29		0.47	0.15			0.40	0.01
Uniform Delay, d1					22.5		13.5	7.5			15.8	13.1
Progression Factor					1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2					0.6		2.6	0.3			1.5	0.0
Delay (s)					23.1		16.1	7.8			17.3	13.1
Level of Service					C		B	A			B	B
Approach Delay (s)		0.0			23.1			13.3			17.1	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM Average Control Delay	17.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	95	94	38	133	205	30	59	703	44
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	15	12	12	12	12	12	13	12
Total Lost time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.98		1.00	0.98		1.00	0.99	
Flt Protected					0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1896		1710	3287		1707	3467	
Flt Permitted					0.98		0.25	1.00		0.59	1.00	
Satd. Flow (perm)					1896		446	3287		1061	3467	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	106	104	42	148	228	33	66	781	49
RTOR Reduction (vph)	0	0	0	0	10	0	0	15	0	0	6	0
Lane Group Flow (vph)	0	0	0	0	242	0	148	246	0	66	824	0
Confl. Peds. (#/hr)							5		5	5		5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	1%	0%
Turn Type				Split			pm+pt			pm+pt		
Protected Phases				8	8		5	2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)					23.0		41.0	34.0		41.0	34.0	
Effective Green, g (s)					23.0		41.0	34.0		41.0	34.0	
Actuated g/C Ratio					0.31		0.55	0.45		0.55	0.45	
Clearance Time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Grp Cap (vph)					581		362	1490		640	1572	
v/s Ratio Prot					c0.13		c0.04	0.07		0.01	c0.24	
v/s Ratio Perm							0.19			0.05		
v/c Ratio					0.42		0.41	0.16		0.10	0.52	
Uniform Delay, d1					20.7		16.4	12.1		8.2	14.7	
Progression Factor					1.00		0.84	0.82		1.00	1.00	
Incremental Delay, d2					2.2		3.4	0.2		0.3	1.3	
Delay (s)					22.9		17.1	10.2		8.5	16.0	
Level of Service					C		B	B		A	B	
Approach Delay (s)		0.0			22.9			12.7			15.4	
Approach LOS		A			C			B			B	

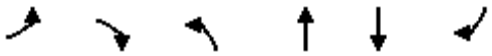
Intersection Summary			
HCM Average Control Delay	15.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	53.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	32	49	13	9	63	63	7	273	24	159	589	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	16	12	12	10	11	12	12	11	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.94		1.00	0.99		1.00	0.99	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1964			1655		1595	3172		1704	3231	
Flt Permitted		0.89			0.99		0.36	1.00		0.56	1.00	
Satd. Flow (perm)		1775			1637		600	3172		1008	3231	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	34	52	14	9	66	66	7	287	25	167	620	53
RTOR Reduction (vph)	0	8	0	0	42	0	0	9	0	0	8	0
Lane Group Flow (vph)	0	92	0	0	99	0	7	303	0	167	665	0
Confl. Peds. (#/hr)	2					2	1		6	6		1
Confl. Bikes (#/hr)			1	1			3					3
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	0%	3%	0%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Effective Green, g (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Actuated g/C Ratio		0.33			0.33		0.56	0.56		0.56	0.56	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		592			546		336	1776		564	1809	
v/s Ratio Prot								0.10			c0.21	
v/s Ratio Perm		0.05			c0.06		0.01			0.17		
v/c Ratio		0.16			0.18		0.02	0.17		0.30	0.37	
Uniform Delay, d1		17.6			17.7		7.3	8.0		8.7	9.1	
Progression Factor		1.00			1.00		1.00	1.00		0.27	0.25	
Incremental Delay, d2		0.6			0.7		0.1	0.2		1.2	0.5	
Delay (s)		18.1			18.5		7.5	8.2		3.5	2.8	
Level of Service		B			B		A	A		A	A	
Approach Delay (s)		18.1			18.5			8.2			2.9	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	6.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	48.4%	ICU Level of Service	A
Analysis Period (min)	15		

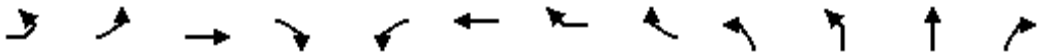
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	35	182	64	238	558	77
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	39	202	71	264	620	86

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	241	159	176	413	292
Volume Left (vph)	39	71	0	0	0
Volume Right (vph)	202	0	0	0	86
Hadj (s)	-0.42	0.27	0.05	0.05	-0.15
Departure Headway (s)	5.7	6.4	6.2	5.8	5.6
Degree Utilization, x	0.38	0.28	0.30	0.66	0.45
Capacity (veh/h)	599	538	557	611	632
Control Delay (s)	12.1	10.8	10.7	18.2	11.9
Approach Delay (s)	12.1	10.7		15.6	
Approach LOS	B	B		C	

Intersection Summary			
Delay	13.6		
HCM Level of Service	B		
Intersection Capacity Utilization	51.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	32	35	378	18	24	410	77	81	55	68	351	32
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	0.95	
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.93			1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Frt		1.00	1.00	0.85	1.00	1.00	0.85			1.00	0.99	
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	
Satd. Flow (prot)		1612	1731	1530	1710	1731	1421			1710	3250	
Flt Permitted		0.14	1.00	1.00	0.52	1.00	1.00			0.14	1.00	
Satd. Flow (perm)		238	1731	1530	930	1731	1421			257	3250	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	36	39	420	20	27	456	86	90	61	76	390	36
RTOR Reduction (vph)	0	0	0	12	0	0	36	0	0	0	7	0
Lane Group Flow (vph)	0	75	420	8	27	456	140	0	0	137	419	0
Confl. Peds. (#/hr)		25					25					3
Heavy Vehicles (%)	6%	6%	4%	0%	0%	4%	0%	0%	0%	0%	4%	0%
Turn Type	Perm	pm+pt		Perm	Perm		Perm		Perm	Perm		
Protected Phases		7	4			8					2	
Permitted Phases	4	4		4	8		8		2	2		
Actuated Green, G (s)		44.0	44.0	44.0	25.0	25.0	25.0			28.0	28.0	
Effective Green, g (s)		44.0	44.0	44.0	25.0	25.0	25.0			28.0	28.0	
Actuated g/C Ratio		0.42	0.42	0.42	0.24	0.24	0.24			0.27	0.27	
Clearance Time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Grp Cap (vph)		303	725	641	221	412	338			69	867	
v/s Ratio Prot		0.04	c0.24			c0.26					0.13	
v/s Ratio Perm		0.07		0.01	0.03		0.10			c0.53		
v/c Ratio		0.25	0.58	0.01	0.12	1.11	0.41			1.99	0.48	
Uniform Delay, d1		21.6	23.4	17.8	31.4	40.0	33.8			38.5	32.4	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Incremental Delay, d2		1.9	3.4	0.0	1.1	76.5	3.7			491.0	1.9	
Delay (s)		23.5	26.8	17.9	32.5	116.5	37.5			529.5	34.3	
Level of Service		C	C	B	C	F	D			F	C	
Approach Delay (s)			25.9			92.0					154.8	
Approach LOS			C			F					F	

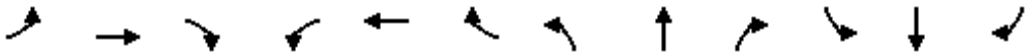
Intersection Summary			
HCM Average Control Delay	139.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.43		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	102.5%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations								
Volume (vph)	105	559	80	101	4	110	587	190
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5				4.5	4.5	
Lane Util. Factor	1.00	0.95				1.00	0.88	
Frpb, ped/bikes	1.00	1.00				1.00	1.00	
Flpb, ped/bikes	1.00	1.00				1.00	1.00	
Frt	1.00	0.96				1.00	0.85	
Flt Protected	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1705	3246				1710	2633	
Flt Permitted	0.38	1.00				0.95	1.00	
Satd. Flow (perm)	675	3246				1710	2633	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	117	621	89	112	4	122	652	211
RTOR Reduction (vph)	0	12	0	0	0	0	26	0
Lane Group Flow (vph)	117	810	0	0	0	126	837	0
Confl. Peds. (#/hr)	3							
Heavy Vehicles (%)	0%	2%	0%	0%	0%	0%	3%	0%
Turn Type	Perm				Split		Perm	
Protected Phases		6			9	9		
Permitted Phases	6						9	
Actuated Green, G (s)	27.5	27.5				20.5	20.5	
Effective Green, g (s)	27.5	27.5				20.5	20.5	
Actuated g/C Ratio	0.26	0.26				0.20	0.20	
Clearance Time (s)	4.5	4.5				4.5	4.5	
Lane Grp Cap (vph)	177	850				334	514	
v/s Ratio Prot		0.25				0.07		
v/s Ratio Perm	0.17						c0.32	
v/c Ratio	0.66	0.95				0.38	1.63	
Uniform Delay, d1	34.6	38.1				36.7	42.2	
Progression Factor	1.00	1.00				1.00	1.00	
Incremental Delay, d2	17.8	21.4				3.2	291.8	
Delay (s)	52.4	59.5				39.9	334.0	
Level of Service	D	E				D	F	
Approach Delay (s)		58.6				296.6		
Approach LOS		E				F		

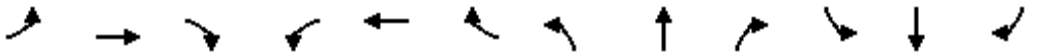
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	64	589	0	0	495	49	83	51	18	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	11	11	16	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.99			0.98				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		1681			1957			1841				
Flt Permitted		0.90			1.00			0.97				
Satd. Flow (perm)		1526			1957			1841				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	71	654	0	0	550	54	92	57	20	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	725	0	0	604	0	0	169	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		40.0			40.0			17.0				
Effective Green, g (s)		40.0			40.0			17.0				
Actuated g/C Ratio		0.62			0.62			0.26				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		939			1204			481				
v/s Ratio Prot					0.31							
v/s Ratio Perm		c0.48						0.09				
v/c Ratio		0.77			0.50			0.35				
Uniform Delay, d1		9.2			7.0			19.5				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		6.1			1.5			2.0				
Delay (s)		15.3			8.4			21.5				
Level of Service		B			A			C				
Approach Delay (s)		15.3			8.4			21.5			0.0	
Approach LOS		B			A			C			A	

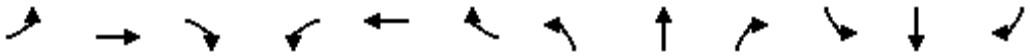
Intersection Summary			
HCM Average Control Delay	13.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	85.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	69	420	159	114	327	122	104	625	82	136	751	93
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	9	9	10	9
Total Lost time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.96	1.00	1.00	0.95	1.00	1.00	0.94
Flpb, ped/bikes		1.00	1.00		0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1985	1434		1950	1444	1546	3040	1296	1505	3069	1252
Flt Permitted		0.41	1.00		0.57	1.00	0.23	1.00	1.00	0.30	1.00	1.00
Satd. Flow (perm)		822	1434		1119	1444	379	3040	1296	468	3069	1252
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	73	442	167	120	344	128	109	658	86	143	791	98
RTOR Reduction (vph)	0	0	99	0	0	91	0	0	51	0	0	49
Lane Group Flow (vph)	0	515	68	0	464	37	109	658	35	143	791	49
Confl. Peds. (#/hr)	24		45	45		24	36		24	24		36
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	2%	2%	2%	2%	3%	2%	3%	5%	1%	2%	4%	3%
Turn Type	pm+pt		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		43.0	43.0		30.0	30.0	50.6	42.3	42.3	51.4	42.7	42.7
Effective Green, g (s)		43.0	43.0		30.0	30.0	50.6	42.3	42.3	51.4	42.7	42.7
Actuated g/C Ratio		0.41	0.41		0.29	0.29	0.48	0.40	0.40	0.49	0.41	0.41
Clearance Time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		447	587		320	413	275	1225	522	315	1248	509
v/s Ratio Prot		c0.11					0.03	0.22		c0.04	c0.26	
v/s Ratio Perm		0.36	0.05		c0.41	0.03	0.16		0.03	0.18		0.04
v/c Ratio		1.15	0.12		1.45	0.09	0.40	0.54	0.07	0.45	0.63	0.10
Uniform Delay, d1		31.0	19.2		37.5	27.5	16.4	23.9	19.2	15.9	24.9	19.2
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.76	1.56	2.71
Incremental Delay, d2		91.3	0.4		219.2	0.4	0.9	1.7	0.2	1.0	2.4	0.4
Delay (s)		122.3	19.6		256.7	27.9	17.3	25.6	19.5	29.0	41.2	52.4
Level of Service		F	B		F	C	B	C	B	C	D	D
Approach Delay (s)		97.2			207.3			23.9			40.6	
Approach LOS		F			F			C			D	

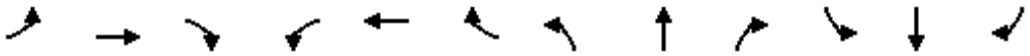
Intersection Summary			
HCM Average Control Delay	79.5	HCM Level of Service	E
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	93.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	83	474	97	90	451	90	53	59	67	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		0.98			0.98			0.95				
Flt Protected		0.99			0.99			0.99				
Satd. Flow (prot)		1645			1645			1799				
Flt Permitted		0.85			0.84			0.99				
Satd. Flow (perm)		1414			1387			1799				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	92	527	108	100	501	100	59	66	74	0	0	0
RTOR Reduction (vph)	0	10	0	0	9	0	0	32	0	0	0	0
Lane Group Flow (vph)	0	717	0	0	692	0	0	167	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		40.0			40.0			17.0				
Effective Green, g (s)		40.0			40.0			17.0				
Actuated g/C Ratio		0.62			0.62			0.26				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		870			854			471				
v/s Ratio Prot												
v/s Ratio Perm		c0.51			0.50			0.09				
v/c Ratio		0.82			0.81			0.35				
Uniform Delay, d1		9.8			9.6			19.5				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		8.8			8.2			2.1				
Delay (s)		18.5			17.8			21.6				
Level of Service		B			B			C				
Approach Delay (s)		18.5			17.8			21.6			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM Average Control Delay	18.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.3%	ICU Level of Service	C
Analysis Period (min)	15		

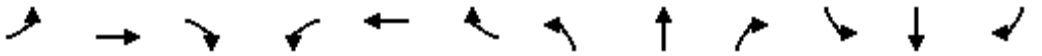
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	53	472	80	74	509	36	39	76	72	53	235	55
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	11	12	12	15	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.96		1.00	0.96		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		0.99	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.98	
Flt Protected		0.99	1.00		0.99	1.00		0.98	1.00		0.99	
Satd. Flow (prot)		1684	1382		1713	1417		1685	1455		1878	
Flt Permitted		0.90	1.00		0.86	1.00		0.82	1.00		0.94	
Satd. Flow (perm)		1529	1382		1490	1417		1409	1455		1774	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	56	497	84	78	536	38	41	80	76	56	247	58
RTOR Reduction (vph)	0	0	36	0	0	12	0	0	52	0	10	0
Lane Group Flow (vph)	0	553	48	0	614	26	0	121	24	0	351	0
Confl. Peds. (#/hr)	25		19	19		25	36		30	30		36
Confl. Bikes (#/hr)	1		2	2		1	3					3
Heavy Vehicles (%)	0%	3%	3%	0%	1%	0%	0%	1%	1%	0%	1%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Effective Green, g (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.32	0.32		0.32	
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Grp Cap (vph)		877	792		854	812		451	466		568	
v/s Ratio Prot												
v/s Ratio Perm		0.36	0.03		c0.41	0.02		0.09	0.02		c0.20	
v/c Ratio		0.63	0.06		0.72	0.03		0.27	0.05		0.62	
Uniform Delay, d1		10.7	7.1		11.6	7.0		19.0	17.6		21.6	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		3.4	0.1		5.2	0.1		1.5	0.2		5.0	
Delay (s)		14.1	7.2		16.8	7.0		20.4	17.8		26.6	
Level of Service		B	A		B	A		C	B		C	
Approach Delay (s)		13.2			16.2			19.4			26.6	
Approach LOS		B			B			B			C	

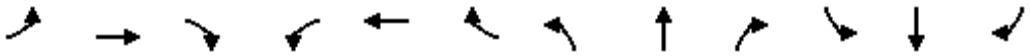
Intersection Summary			
HCM Average Control Delay	17.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	98.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	479	34	44	521	52	45	165	55	117	199	31
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	11	16	8	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	0.98	1.00		1.00	1.00		0.99	1.00	1.00	0.99	1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1532	3065		1652	3730		1585	1663	1370	1568	1680	1397
Flt Permitted	0.36	1.00		0.40	1.00		0.59	1.00	1.00	0.63	1.00	1.00
Satd. Flow (perm)	581	3065		692	3730		977	1663	1370	1043	1680	1397
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	66	532	38	49	579	58	50	183	61	130	221	34
RTOR Reduction (vph)	0	8	0	0	12	0	0	0	37	0	0	20
Lane Group Flow (vph)	66	562	0	49	625	0	50	183	24	130	221	14
Confl. Peds. (#/hr)	51		3	3		51	13		13	13		13
Heavy Vehicles (%)	2%	3%	3%	0%	2%	0%	0%	1%	2%	1%	0%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Effective Green, g (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	277	1462		330	1779		391	665	548	417	672	559
v/s Ratio Prot		c0.18			0.17			0.11			c0.13	
v/s Ratio Perm	0.11			0.07			0.05		0.02	0.12		0.01
v/c Ratio	0.24	0.38		0.15	0.35		0.13	0.28	0.04	0.31	0.33	0.02
Uniform Delay, d1	10.0	10.9		9.6	10.7		12.3	13.1	11.9	13.4	13.5	11.8
Progression Factor	1.00	1.00		1.00	1.00		0.84	0.89	0.76	0.59	0.59	0.27
Incremental Delay, d2	2.0	0.8		0.9	0.5		0.7	1.0	0.2	1.9	1.3	0.1
Delay (s)	12.1	11.7		10.5	11.2		11.0	12.7	9.2	9.8	9.3	3.3
Level of Service	B	B		B	B		B	B	A	A	A	A
Approach Delay (s)		11.7			11.2			11.7			8.9	
Approach LOS		B			B			B			A	

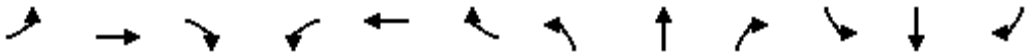
Intersection Summary			
HCM Average Control Delay	11.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	409	81	70	376	64	57	179	64	87	240	78
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	11	10	11	11	10	11	11	10	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	0.96	1.00		0.95	1.00		0.99	1.00		0.96	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.96		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1327	3134		1519	3129		1579	2918		1452	2998	
Flt Permitted	0.46	1.00		0.42	1.00		0.54	1.00		0.59	1.00	
Satd. Flow (perm)	639	3134		678	3129		891	2918		908	2998	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	63	431	85	74	396	67	60	188	67	92	253	82
RTOR Reduction (vph)	0	0	0	0	0	0	0	39	0	0	42	0
Lane Group Flow (vph)	63	516	0	74	463	0	60	216	0	92	293	0
Confl. Peds. (#/hr)	112		99	99		112	23		53	53		23
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	16%	1%	0%	0%	1%	9%	0%	8%	2%	5%	5%	7%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.41	0.41		0.41	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	307	1504		325	1502		368	1206		375	1239	
v/s Ratio Prot		c0.16			0.15			0.07			0.10	
v/s Ratio Perm	0.10			0.11			0.07			c0.10		
v/c Ratio	0.21	0.34		0.23	0.31		0.16	0.18		0.25	0.24	
Uniform Delay, d1	11.2	12.1		11.4	11.9		13.8	13.9		14.4	14.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.5	0.6		1.6	0.5		1.0	0.3		1.6	0.5	
Delay (s)	12.8	12.8		13.0	12.4		14.8	14.3		15.9	14.8	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		12.8			12.5			14.4			15.0	
Approach LOS		B			B			B			B	

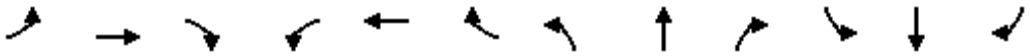
Intersection Summary			
HCM Average Control Delay	13.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	94	428	61	31	503	46	82	194	57	76	473	109
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	8	16	12	9	10	10	9	10	10
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1594	1651		1369	1974		1534	2998		1534	3013	
Flt Permitted	0.26	1.00		0.32	1.00		0.28	1.00		0.59	1.00	
Satd. Flow (perm)	442	1651		464	1974		453	2998		951	3013	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	99	451	64	33	529	48	86	204	60	80	498	115
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	99	515	0	33	577	0	86	264	0	80	613	0
Confl. Peds. (#/hr)	21		95	95		21	36		8	8		36
Confl. Bikes (#/hr)	2		3	3		2	2					2
Heavy Vehicles (%)	0%	2%	0%	7%	2%	0%	0%	3%	0%	0%	2%	1%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	44.0	39.4		40.8	37.8		26.6	21.8		26.6	21.8	
Effective Green, g (s)	44.0	37.4		40.8	35.8		26.6	19.8		26.6	19.8	
Actuated g/C Ratio	0.52	0.44		0.48	0.42		0.31	0.23		0.31	0.23	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	291	726		255	831		203	698		331	702	
v/s Ratio Prot	c0.02	c0.31		0.00	0.29		c0.02	0.09		0.01	c0.20	
v/s Ratio Perm	0.16			0.06			0.11			0.06		
v/c Ratio	0.34	0.71		0.13	0.69		0.42	0.38		0.24	0.87	
Uniform Delay, d1	22.2	19.4		19.6	20.1		29.0	27.4		21.9	31.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.7	5.8		0.2	4.8		1.4	1.6		0.4	14.2	
Delay (s)	22.9	25.2		19.8	24.9		30.5	29.0		22.3	45.5	
Level of Service	C	C		B	C		C	C		C	D	
Approach Delay (s)		24.8			24.6			29.3			42.9	
Approach LOS		C			C			C			D	

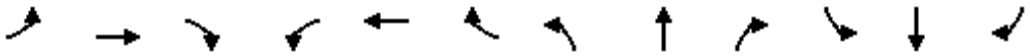
Intersection Summary			
HCM Average Control Delay	31.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	77.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	73	379	63	111	483	112	64	150	55	121	348	78
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	11	11	11	11	12	12	10	10	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		0.99	1.00	
Frt		0.98			0.98		1.00	0.96		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3680			3131		1652	3237		1549	3026	
Flt Permitted		0.73			0.74		0.44	1.00		0.61	1.00	
Satd. Flow (perm)		2708			2332		766	3237		994	3026	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	81	421	70	123	537	124	71	167	61	134	387	87
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	572	0	0	784	0	71	228	0	134	474	0
Confl. Peds. (#/hr)	23		30	30		23	1		20	20		1
Confl. Bikes (#/hr)	3					3						
Heavy Vehicles (%)	0%	3%	0%	2%	2%	0%	0%	1%	0%	2%	2%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.0			33.0		32.0	32.0		32.0	32.0	
Effective Green, g (s)		34.0			34.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio		0.45			0.45		0.44	0.44		0.44	0.44	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		1228			1057		337	1424		437	1331	
v/s Ratio Prot								0.07			c0.16	
v/s Ratio Perm		0.21			c0.34		0.09			0.13		
v/c Ratio		0.47			0.74		0.21	0.16		0.31	0.36	
Uniform Delay, d1		14.2			16.9		13.0	12.7		13.6	13.9	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.3			4.7		1.4	0.2		1.8	0.7	
Delay (s)		15.5			21.6		14.4	12.9		15.4	14.7	
Level of Service		B			C		B	B		B	B	
Approach Delay (s)		15.5			21.6			13.2			14.8	
Approach LOS		B			C			B			B	

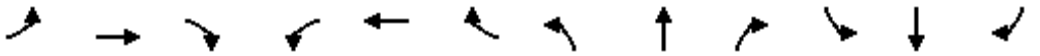
Intersection Summary			
HCM Average Control Delay	17.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	71.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	93	827	6	19	554	236	1	1	9	202	1	76
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	12	12	12	12	12	13	13	13
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	1.00		1.00	1.00	0.85		0.89			0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00		1.00			0.97	
Satd. Flow (prot)	1605	3206		1660	3320	1485		1545			3176	
Flt Permitted	0.40	1.00		0.27	1.00	1.00		0.98			0.77	
Satd. Flow (perm)	679	3206		470	3320	1485		1519			2535	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	103	919	7	21	616	262	1	1	10	224	1	84
RTOR Reduction (vph)	0	0	0	0	0	96	0	7	0	0	53	0
Lane Group Flow (vph)	103	926	0	21	616	166	0	5	0	0	256	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	46.1	46.1		46.1	46.1	46.1		18.6			18.6	
Effective Green, g (s)	46.1	46.1		46.1	46.1	46.1		18.6			18.6	
Actuated g/C Ratio	0.63	0.63		0.63	0.63	0.63		0.26			0.26	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		8.0			8.0	
Lane Grp Cap (vph)	431	2033		298	2105	942		389			649	
v/s Ratio Prot		c0.29			0.19							
v/s Ratio Perm	0.15			0.04		0.11		0.00			c0.10	
v/c Ratio	0.24	0.46		0.07	0.29	0.18		0.01			0.39	
Uniform Delay, d1	5.7	6.8		5.1	6.0	5.5		20.2			22.4	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	1.3	0.7		0.5	0.4	0.4		0.1			1.7	
Delay (s)	7.0	7.6		5.6	6.3	5.9		20.2			24.1	
Level of Service	A	A		A	A	A		C			C	
Approach Delay (s)		7.5			6.2			20.2			24.1	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM Average Control Delay	9.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	72.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	124	216	119	94	162	56	140	876	87	128	816	97
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	9	12	10	10	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.95		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1560	1504		1563	1585		1493	3069	1337	1523	3099	1318
Flt Permitted	0.45	1.00		0.24	1.00		0.21	1.00	1.00	0.18	1.00	1.00
Satd. Flow (perm)	746	1504		393	1585		323	3069	1337	285	3099	1318
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	131	227	125	99	171	59	147	922	92	135	859	102
RTOR Reduction (vph)	0	23	0	0	15	0	0	0	40	0	0	48
Lane Group Flow (vph)	131	329	0	99	215	0	147	922	52	135	859	54
Confl. Peds. (#/hr)	10		13	13		10	18		7	7		18
Confl. Bikes (#/hr)	2					2	2		1	1		2
Heavy Vehicles (%)	2%	1%	1%	2%	1%	2%	3%	4%	0%	1%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	28.0	21.0		28.0	21.0		42.0	35.0	35.0	42.0	35.0	35.0
Effective Green, g (s)	26.0	22.0		26.0	22.0		40.0	35.0	35.0	40.0	35.0	35.0
Actuated g/C Ratio	0.31	0.26		0.31	0.26		0.47	0.41	0.41	0.47	0.41	0.41
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	286	389		203	410		235	1264	551	222	1276	543
v/s Ratio Prot	0.03	c0.22		c0.03	0.14		c0.04	c0.30		0.04	0.28	
v/s Ratio Perm	0.11			0.11			0.25		0.04	0.24		0.04
v/c Ratio	0.46	0.85		0.49	0.52		0.63	0.73	0.09	0.61	0.67	0.10
Uniform Delay, d1	22.5	29.9		22.7	27.0		14.6	21.0	15.3	14.8	20.3	15.3
Progression Factor	1.00	1.00		1.00	1.00		0.67	0.79	0.53	1.00	1.00	1.00
Incremental Delay, d2	5.2	19.8		8.2	4.7		11.0	3.4	0.3	11.8	2.9	0.4
Delay (s)	27.7	49.6		30.9	31.8		20.7	19.9	8.5	26.6	23.2	15.7
Level of Service	C	D		C	C		C	B	A	C	C	B
Approach Delay (s)		43.7			31.5			19.1			22.9	
Approach LOS		D			C			B			C	

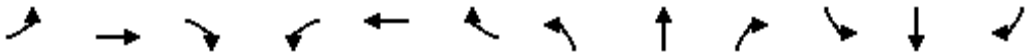
Intersection Summary			
HCM Average Control Delay	25.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	72.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	22	179	37	20	173	22	32	141	38	46	251	49
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	14	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.99			1.00			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.99			0.98			0.98	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1836			1848			1938			1975	
Flt Permitted		0.97			0.96			0.92			0.94	
Satd. Flow (perm)		1781			1790			1800			1871	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	23	185	38	21	178	23	33	145	39	47	259	51
RTOR Reduction (vph)	0	10	0	0	6	0	0	12	0	0	9	0
Lane Group Flow (vph)	0	236	0	0	216	0	0	205	0	0	348	0
Confl. Peds. (#/hr)	18		34	34		18	16		19	19		16
Confl. Bikes (#/hr)			6	6			1		4	4		1
Heavy Vehicles (%)	0%	1%	0%	5%	1%	0%	0%	2%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.42			0.42			0.46			0.46	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		740			744			831			864	
v/s Ratio Prot												
v/s Ratio Perm		c0.13			0.12			0.11			c0.19	
v/c Ratio		0.32			0.29			0.25			0.40	
Uniform Delay, d1		12.8			12.6			10.6			11.6	
Progression Factor		1.00			0.69			1.23			1.00	
Incremental Delay, d2		1.1			1.0			0.7			1.4	
Delay (s)		13.9			9.7			13.8			13.0	
Level of Service		B			A			B			B	
Approach Delay (s)		13.9			9.7			13.8			13.0	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	12.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.7%	ICU Level of Service	A
Analysis Period (min)	15		

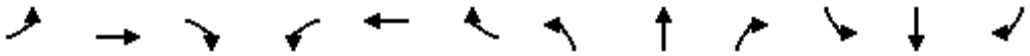
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	190	39	25	180	19	49	199	31	42	206	38
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.97	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.99		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1496	3056		1576	3119		1518	3119		1550	3075	
Flt Permitted	0.61	1.00		0.59	1.00		0.58	1.00		0.59	1.00	
Satd. Flow (perm)	966	3056		987	3119		935	3119		969	3075	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	211	43	28	200	21	54	221	34	47	229	42
RTOR Reduction (vph)	0	26	0	0	12	0	0	14	0	0	17	0
Lane Group Flow (vph)	27	228	0	28	209	0	54	241	0	47	254	0
Confl. Peds. (#/hr)	20		17	17		20	2					2
Confl. Bikes (#/hr)	32		36	36		32	22		25	25		22
Heavy Vehicles (%)	4%	1%	0%	0%	0%	0%	5%	0%	0%	3%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0		39.0	39.0		39.0	39.0	
Effective Green, g (s)	19.0	19.0		19.0	19.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.58	0.58		0.58	0.58	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	282	893		289	912		547	1823		566	1798	
v/s Ratio Prot		c0.07			0.07			0.08			c0.08	
v/s Ratio Perm	0.03			0.03			0.06			0.05		
v/c Ratio	0.10	0.26		0.10	0.23		0.10	0.13		0.08	0.14	
Uniform Delay, d1	16.7	17.6		16.8	17.4		6.0	6.1		5.9	6.1	
Progression Factor	0.93	0.96		0.77	0.76		1.29	1.29		0.40	0.36	
Incremental Delay, d2	0.6	0.7		0.7	0.6		0.3	0.1		0.3	0.2	
Delay (s)	16.3	17.5		13.5	13.8		8.0	8.0		2.6	2.3	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		17.4			13.8			8.0			2.4	
Approach LOS		B			B			A			A	

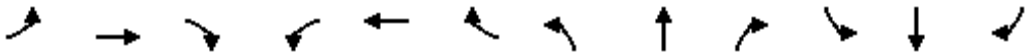
Intersection Summary			
HCM Average Control Delay	10.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.18		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



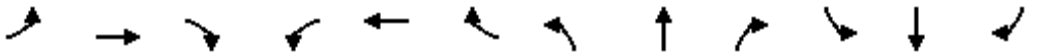
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	66	165	41	24	153	37	27	245	16	40	321	33
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	9	9	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.97		1.00	0.97			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1555	3056		1525	2936			1922			1938	
Flt Permitted	0.62	1.00		0.61	1.00			0.94			0.94	
Satd. Flow (perm)	1014	3056		977	2936			1822			1840	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	73	183	46	27	170	41	30	272	18	44	357	37
RTOR Reduction (vph)	0	28	0	0	25	0	0	3	0	0	5	0
Lane Group Flow (vph)	73	201	0	27	186	0	0	317	0	0	433	0
Confl. Peds. (#/hr)	11		17	17		11	26		7	7		26
Heavy Vehicles (%)	2%	1%	0%	0%	1%	3%	4%	5%	0%	0%	4%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Effective Green, g (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40			0.48			0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	406	1222		391	1174			869			878	
v/s Ratio Prot		0.07			0.06							
v/s Ratio Perm	c0.07			0.03				0.17			c0.24	
v/c Ratio	0.18	0.16		0.07	0.16			0.36			0.49	
Uniform Delay, d1	12.6	12.5		12.0	12.5			10.8			11.6	
Progression Factor	1.03	0.98		0.78	0.76			1.00			1.00	
Incremental Delay, d2	1.0	0.3		0.3	0.3			1.2			2.0	
Delay (s)	14.0	12.5		9.7	9.8			11.9			13.6	
Level of Service	B	B		A	A			B			B	
Approach Delay (s)		12.9			9.8			11.9			13.6	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	12.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



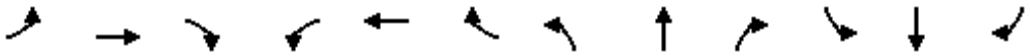
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	47	111	28	19	153	26	40	230	11	33	360	57
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	16	12	10	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.97		1.00	0.98			0.99			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			1.00	
Satd. Flow (prot)	1652	1970		1584	1975			1981			1979	
Flt Permitted	0.58	1.00		0.65	1.00			0.90			0.96	
Satd. Flow (perm)	1013	1970		1087	1975			1800			1912	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	52	123	31	21	170	29	44	256	12	37	400	63
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	52	154	0	21	199	0	0	312	0	0	500	0
Confl. Peds. (#/hr)	1		10	10		1	2		5	5		2
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	2%	0%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Effective Green, g (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Actuated g/C Ratio	0.31	0.31		0.31	0.31			0.57			0.57	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	312	606		334	608			1025			1088	
v/s Ratio Prot		0.08			c0.10							
v/s Ratio Perm	0.05			0.02				0.17			c0.26	
v/c Ratio	0.17	0.25		0.06	0.33			0.30			0.46	
Uniform Delay, d1	16.4	16.9		15.9	17.3			7.3			8.2	
Progression Factor	0.82	0.80		0.93	0.93			0.97			1.00	
Incremental Delay, d2	1.1	1.0		0.4	1.4			0.8			1.4	
Delay (s)	14.6	14.5		15.1	17.5			7.8			9.6	
Level of Service	B	B		B	B			A			A	
Approach Delay (s)		14.5			17.3			7.8			9.6	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



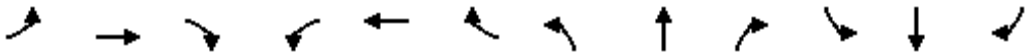
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	51	12	92	2	5	10	59	223	5	5	442	72
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	10	11	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98		1.00	0.98		1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.87		1.00	0.90		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1695	1726		1702	1808		1594	1647	1428	1653	2000	1496
Flt Permitted	0.75	1.00		0.68	1.00		0.41	1.00	1.00	0.60	1.00	1.00
Satd. Flow (perm)	1332	1726		1224	1808		693	1647	1428	1049	2000	1496
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	57	13	102	2	6	11	66	248	6	6	491	80
RTOR Reduction (vph)	0	74	0	0	8	0	0	0	2	0	0	28
Lane Group Flow (vph)	57	41	0	2	9	0	66	248	4	6	491	52
Confl. Peds. (#/hr)	5		5	5		5	3					3
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	0%	2%	0%	0%	2%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	17.0	17.0		17.0	17.0		39.0	39.0	39.0	39.0	39.0	39.0
Effective Green, g (s)	18.0	18.0		18.0	18.0		39.0	39.0	39.0	39.0	39.0	39.0
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.60	0.60	0.60	0.60	0.60	0.60
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	369	478		339	501		416	988	857	629	1200	898
v/s Ratio Prot		0.02			0.01			0.15			c0.25	
v/s Ratio Perm	c0.04			0.00			0.10		0.00	0.01		0.04
v/c Ratio	0.15	0.09		0.01	0.02		0.16	0.25	0.00	0.01	0.41	0.06
Uniform Delay, d1	17.8	17.4		17.0	17.1		5.7	6.1	5.2	5.2	6.9	5.4
Progression Factor	1.41	2.83		1.00	1.00		0.79	0.74	0.91	1.00	1.00	1.00
Incremental Delay, d2	0.9	0.3		0.0	0.1		0.7	0.5	0.0	0.0	1.0	0.1
Delay (s)	25.8	49.5		17.1	17.1		5.2	5.0	4.8	5.3	7.9	5.5
Level of Service	C	D		B	B		A	A	A	A	A	A
Approach Delay (s)		41.7			17.1			5.1			7.6	
Approach LOS		D			B			A			A	

Intersection Summary			
HCM Average Control Delay	12.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	255	163	197	214	0	0	0	0	111	470	377
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)		4.0		3.0	3.0					5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	
Frpb, ped/bikes		0.99		1.00	1.00					1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Frt		0.94		1.00	1.00					1.00	0.93	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		2905		1693	3288					1503	3021	
Flt Permitted		1.00		0.40	1.00					0.95	1.00	
Satd. Flow (perm)		2905		719	3288					1503	3021	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	268	172	207	225	0	0	0	0	117	495	397
RTOR Reduction (vph)	0	101	0	0	0	0	0	0	0	0	141	0
Lane Group Flow (vph)	0	339	0	207	225	0	0	0	0	117	751	0
Confl. Peds. (#/hr)	18		3	3		18	1					1
Heavy Vehicles (%)	0%	4%	1%	1%	4%	0%	0%	0%	0%	10%	2%	1%
Turn Type				D.P+P						Split		
Protected Phases		8		7	7 8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		33.0		53.0	56.0					37.0	37.0	
Effective Green, g (s)		33.0		53.0	56.0					37.0	37.0	
Actuated g/C Ratio		0.32		0.52	0.55					0.36	0.36	
Clearance Time (s)		4.0		3.0						5.0	5.0	
Lane Grp Cap (vph)		940		565	1805					545	1096	
v/s Ratio Prot		0.12		c0.07	0.07					0.08	c0.25	
v/s Ratio Perm				c0.12								
v/c Ratio		0.36		0.37	0.12					0.21	0.68	
Uniform Delay, d1		26.4		13.7	11.1					22.5	27.6	
Progression Factor		1.00		2.25	2.17					1.00	1.00	
Incremental Delay, d2		1.1		1.6	0.1					0.9	3.5	
Delay (s)		27.5		32.3	24.3					23.4	31.0	
Level of Service		C		C	C					C	C	
Approach Delay (s)		27.5			28.1			0.0			30.1	
Approach LOS		C			C			A			C	

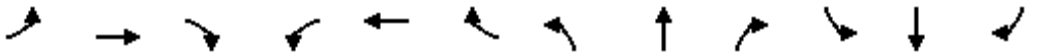
Intersection Summary			
HCM Average Control Delay	29.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	102.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	62.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	141	225	0	0	338	119	73	511	224	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	9	12	13	12	13	12	12	12
Total Lost time (s)	4.0	4.0			4.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.96		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1675	3196			2855		1767	1782	1560			
Flt Permitted	0.32	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	568	3196			2855		1767	1782	1560			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	148	237	0	0	356	125	77	538	236	0	0	0
RTOR Reduction (vph)	0	0	0	0	34	0	0	0	167	0	0	0
Lane Group Flow (vph)	148	237	0	0	447	0	77	538	69	0	0	0
Confl. Peds. (#/hr)	9		13	13		9			1	1		
Confl. Bikes (#/hr)	3					3						
Heavy Vehicles (%)	2%	7%	0%	0%	3%	1%	0%	1%	0%	0%	0%	0%
Turn Type	pm+pt						custom		Perm			
Protected Phases	4	1 4			1		2	2				
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	59.0	63.0			26.0		30.0	30.0	30.0			
Effective Green, g (s)	59.0	63.0			26.0		30.0	30.0	30.0			
Actuated g/C Ratio	0.58	0.62			0.25		0.29	0.29	0.29			
Clearance Time (s)	4.0				4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	687	1974			728		520	524	459			
v/s Ratio Prot	c0.07	0.07			c0.16		0.04	c0.30				
v/s Ratio Perm	0.05								0.04			
v/c Ratio	0.22	0.12			0.61		0.15	1.03	0.15			
Uniform Delay, d1	10.4	8.1			33.6		26.6	36.0	26.6			
Progression Factor	0.42	0.43			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.7	0.1			3.8		0.6	46.3	0.7			
Delay (s)	5.0	3.6			37.4		27.2	82.3	27.3			
Level of Service	A	A			D		C	F	C			
Approach Delay (s)		4.1			37.4			62.1			0.0	
Approach LOS		A			D			E			A	

Intersection Summary			
HCM Average Control Delay	42.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	102.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	62.2%	ICU Level of Service	B
Analysis Period (min)	15		

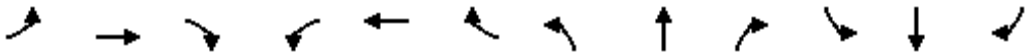
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	491	455	77	507	0	0	0	0	13	436	301
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	11	12	12	12	12	10	10	12
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	1.00
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.93		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3099		1710	3306					1596	3192	1530
Flt Permitted		1.00		0.11	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3099		205	3306					1596	3192	1530
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	511	474	80	528	0	0	0	0	14	454	314
RTOR Reduction (vph)	0	167	0	0	0	0	0	0	0	0	0	207
Lane Group Flow (vph)	0	818	0	80	528	0	0	0	0	14	454	107
Confl. Peds. (#/hr)	8		8	8		8	3					3
Confl. Bikes (#/hr)	9					9			61	61		
Heavy Vehicles (%)	0%	1%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type				pm+pt						Split		Prot
Protected Phases		8		7	7 8					6	6	6
Permitted Phases				7 8								
Actuated Green, G (s)		36.0		54.0	58.0					34.0	34.0	34.0
Effective Green, g (s)		36.0		54.0	58.0					34.0	34.0	34.0
Actuated g/C Ratio		0.36		0.54	0.58					0.34	0.34	0.34
Clearance Time (s)		4.0		4.0						4.0	4.0	4.0
Lane Grp Cap (vph)		1116		382	1917					543	1085	520
v/s Ratio Prot		c0.26		0.04	c0.16					0.01	c0.14	0.07
v/s Ratio Perm				0.08								
v/c Ratio		0.73		0.21	0.28					0.03	0.42	0.21
Uniform Delay, d1		27.8		13.9	10.5					22.0	25.4	23.4
Progression Factor		1.00		1.01	1.19					1.00	1.00	1.00
Incremental Delay, d2		4.3		0.9	0.3					0.1	1.2	0.9
Delay (s)		32.1		15.0	12.8					22.1	26.6	24.3
Level of Service		C		B	B					C	C	C
Approach Delay (s)		32.1			13.1			0.0			25.6	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM Average Control Delay	25.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	90.7%	ICU Level of Service	E
Analysis Period (min)	15		

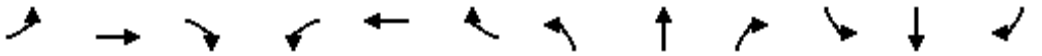
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	401	99	0	0	142	6	441	456	55	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	10	12	11	11	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	0.91	0.91			0.95		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.99		1.00	1.00	0.85			
Flt Protected	0.95	0.97			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1469	3109			3168		1555	1653	1530			
Flt Permitted	0.66	0.72			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	1014	2311			3168		1555	1653	1530			
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	413	102	0	0	146	6	455	470	57	0	0	0
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	36	0	0	0
Lane Group Flow (vph)	206	309	0	0	149	0	455	470	21	0	0	0
Confl. Peds. (#/hr)	13		6	6		13			8	8		
Confl. Bikes (#/hr)	1					1			2	2		
Heavy Vehicles (%)	2%	1%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%
Turn Type	pm+pt						custom		custom			
Protected Phases	4	1 4			1		2	2	2			
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Effective Green, g (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Actuated g/C Ratio	0.51	0.51			0.15		0.37	0.37	0.37			
Clearance Time (s)	4.0				4.0		4.0	4.0	4.0			
Lane Grp Cap (vph)	681	1466			475		575	612	566			
v/s Ratio Prot	c0.11	0.08			c0.05		c0.29	0.28	0.01			
v/s Ratio Perm	0.05	0.03										
v/c Ratio	0.30	0.21			0.31		0.79	0.77	0.04			
Uniform Delay, d1	14.0	13.5			37.9		28.1	27.7	20.1			
Progression Factor	0.25	0.27			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.7	0.2			1.7		10.7	9.0	0.1			
Delay (s)	4.3	3.8			39.6		38.7	36.7	20.2			
Level of Service	A	A			D		D	D	C			
Approach Delay (s)		4.0			39.6			36.7			0.0	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM Average Control Delay	26.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	90.7%	ICU Level of Service	E
Analysis Period (min)	15		

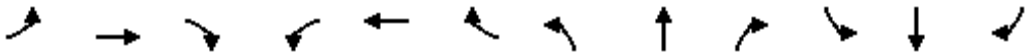
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	78	315	116	105	260	107	83	663	72	99	875	64
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	9	10	9	9	10	9
Total Lost time (s)		4.0			4.0		4.0	3.5	4.0	4.0	3.5	4.0
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		0.99			0.99		1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.97			0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		2955			2936		1508	3069	1309	1508	3099	1298
Flt Permitted		0.77			0.73		0.16	1.00	1.00	0.27	1.00	1.00
Satd. Flow (perm)		2307			2163		261	3069	1309	433	3099	1298
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	81	328	121	109	271	111	86	691	75	103	911	67
RTOR Reduction (vph)	0	32	0	0	32	0	0	0	46	0	0	33
Lane Group Flow (vph)	0	498	0	0	459	0	86	691	29	103	911	34
Confl. Peds. (#/hr)	35		30	30		35	34		8	8		34
Confl. Bikes (#/hr)	1					1	1					1
Heavy Vehicles (%)	1%	4%	0%	1%	3%	3%	2%	4%	2%	2%	3%	2%
Turn Type	pm+pt			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		35.0			27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)		36.0			28.0		36.0	33.5	33.0	36.0	33.5	33.0
Actuated g/C Ratio		0.42			0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)		5.0			5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)		1023			713		169	1210	508	234	1221	504
v/s Ratio Prot		c0.03					c0.02	0.23		0.02	c0.29	
v/s Ratio Perm		0.17			c0.21		0.19		0.02	0.17		0.03
v/c Ratio		0.49			0.64		0.51	0.57	0.06	0.44	0.75	0.07
Uniform Delay, d1		17.8			24.3		16.6	20.1	16.3	15.8	22.1	16.3
Progression Factor		1.00			1.00		1.43	0.68	0.67	1.10	1.17	1.77
Incremental Delay, d2		1.7			4.4		9.7	1.8	0.2	4.3	3.1	0.2
Delay (s)		19.4			28.7		33.4	15.4	11.1	21.8	28.9	29.2
Level of Service		B			C		C	B	B	C	C	C
Approach Delay (s)		19.4			28.7			16.9			28.2	
Approach LOS		B			C			B			C	

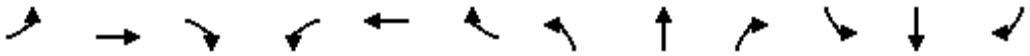
Intersection Summary			
HCM Average Control Delay	23.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	74.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	76	410	0	0	353	81	53	43	32	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.97			0.97				
Flt Protected		0.99			1.00			0.98				
Satd. Flow (prot)		1734			1704			1654				
Flt Permitted		0.87			1.00			0.98				
Satd. Flow (perm)		1525			1704			1654				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	84	456	0	0	392	90	59	48	36	0	0	0
RTOR Reduction (vph)	0	0	0	0	13	0	0	18	0	0	0	0
Lane Group Flow (vph)	0	540	0	0	469	0	0	125	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		38.0			38.0			19.0				
Effective Green, g (s)		38.0			38.0			19.0				
Actuated g/C Ratio		0.58			0.58			0.29				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		892			996			483				
v/s Ratio Prot					0.28							
v/s Ratio Perm		c0.35						0.08				
v/c Ratio		0.61			0.47			0.26				
Uniform Delay, d1		8.7			7.7			17.6				
Progression Factor		1.00			0.71			1.00				
Incremental Delay, d2		3.0			1.4			1.3				
Delay (s)		11.7			6.9			18.9				
Level of Service		B			A			B				
Approach Delay (s)		11.7			6.9			18.9			0.0	
Approach LOS		B			A			B			A	

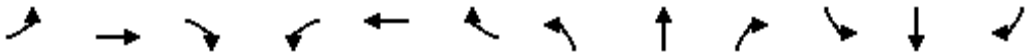
Intersection Summary			
HCM Average Control Delay	10.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	29	374	37	37	355	48	30	112	37	52	148	45
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	10	12	12	10	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			0.98	
Flpb, ped/bikes		1.00			1.00			0.99			1.00	
Frt		0.99			0.99			0.97			0.97	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1954			1941			2968			2979	
Flt Permitted		0.95			0.94			0.88			0.86	
Satd. Flow (perm)		1872			1828			2647			2596	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	32	416	41	41	394	53	33	124	41	58	164	50
RTOR Reduction (vph)	0	5	0	0	7	0	0	24	0	0	29	0
Lane Group Flow (vph)	0	484	0	0	481	0	0	174	0	0	243	0
Confl. Peds. (#/hr)	32		25	25		32	59		24	24		59
Confl. Bikes (#/hr)	3		2	2		3	4		2	2		4
Heavy Vehicles (%)	0%	3%	0%	3%	3%	0%	0%	0%	7%	4%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0			27.0			27.0	
Effective Green, g (s)		30.0			30.0			27.0			27.0	
Actuated g/C Ratio		0.46			0.46			0.42			0.42	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		864			844			1100			1078	
v/s Ratio Prot												
v/s Ratio Perm		0.26			c0.26			0.07			c0.09	
v/c Ratio		0.56			0.57			0.16			0.23	
Uniform Delay, d1		12.7			12.8			11.9			12.3	
Progression Factor		0.55			0.40			1.34			0.45	
Incremental Delay, d2		2.1			2.5			0.3			0.5	
Delay (s)		9.2			7.7			16.2			5.9	
Level of Service		A			A			B			A	
Approach Delay (s)		9.2			7.7			16.2			5.9	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM Average Control Delay	9.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	71.5%	ICU Level of Service	C
Analysis Period (min)	15		

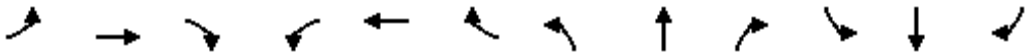
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	51	320	49	78	445	82	46	217	97	79	215	62
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	9	10	10	9	10	10	12	10	10	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		0.99	1.00		0.99	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.95		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1509	3034		1572	3077		1587	2962		1585	3070	
Flt Permitted	0.34	1.00		0.47	1.00		0.56	1.00		0.54	1.00	
Satd. Flow (perm)	534	3034		775	3077		943	2962		905	3070	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	57	356	54	87	494	91	51	241	108	88	239	69
RTOR Reduction (vph)	0	19	0	0	23	0	0	50	0	0	32	0
Lane Group Flow (vph)	57	391	0	87	562	0	51	299	0	88	276	0
Confl. Peds. (#/hr)	20		31	31		20	16		20	20		16
Confl. Bikes (#/hr)							1		3	3		1
Heavy Vehicles (%)	5%	3%	0%	0%	1%	0%	0%	2%	2%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	181	1027		262	1041		508	1595		487	1653	
v/s Ratio Prot		0.13			c0.18			c0.10			0.09	
v/s Ratio Perm	0.11			0.11			0.05			0.10		
v/c Ratio	0.31	0.38		0.33	0.54		0.10	0.19		0.18	0.17	
Uniform Delay, d1	15.9	16.3		16.0	17.4		7.3	7.7		7.7	7.6	
Progression Factor	0.66	0.63		0.94	0.94		0.72	0.62		1.10	1.11	
Incremental Delay, d2	4.0	0.9		3.3	2.0		0.4	0.3		0.8	0.2	
Delay (s)	14.5	11.2		18.4	18.3		5.6	5.0		9.2	8.6	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		11.6			18.3			5.1			8.8	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	12.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.7%	ICU Level of Service	A
Analysis Period (min)	15		

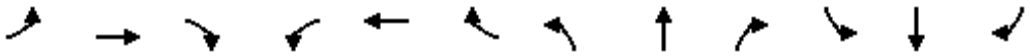
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	338	78	83	395	48	45	226	57	46	279	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	9	10	9	9	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			0.98	
Flpb, ped/bikes	0.98	1.00		0.99	1.00			0.99			1.00	
Frt	1.00	0.97		1.00	0.98			0.97			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1508	3016		1430	3722			3485			3519	
Flt Permitted	0.46	1.00		0.48	1.00			0.86			0.88	
Satd. Flow (perm)	734	3016		725	3722			3031			3121	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	62	356	82	87	416	51	47	238	60	48	294	68
RTOR Reduction (vph)	0	30	0	0	15	0	0	27	0	0	25	0
Lane Group Flow (vph)	62	408	0	87	452	0	0	318	0	0	385	0
Confl. Peds. (#/hr)	38		17	17		38	125		53	53		125
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	3%	0%	7%	2%	0%	0%	6%	10%	2%	5%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Effective Green, g (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48			0.40			0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	350	1438		346	1775			1212			1248	
v/s Ratio Prot		c0.14			0.12							
v/s Ratio Perm	0.08			0.12				0.10			c0.12	
v/c Ratio	0.18	0.28		0.25	0.25			0.26			0.31	
Uniform Delay, d1	9.7	10.3		10.1	10.1			13.1			13.3	
Progression Factor	1.60	1.75		1.12	1.11			0.44			0.73	
Incremental Delay, d2	1.1	0.5		1.6	0.3			0.5			0.6	
Delay (s)	16.6	18.5		12.9	11.6			6.3			10.3	
Level of Service	B	B		B	B			A			B	
Approach Delay (s)		18.2			11.8			6.3			10.3	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM Average Control Delay	12.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	86	284	91	88	276	88	116	79	45	45	79	115
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	16	12	12	16	12
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		0.95			1.00			1.00	
Frt		1.00	0.85		0.97			0.97			0.94	
Flt Protected		0.99	1.00		0.99			0.98			0.99	
Satd. Flow (prot)		1670	1436		3086			1885			1835	
Flt Permitted		0.79	1.00		0.80			0.68			0.91	
Satd. Flow (perm)		1342	1436		2487			1319			1679	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	96	316	101	98	307	98	129	88	50	50	88	128
RTOR Reduction (vph)	0	0	48	0	32	0	0	13	0	0	51	0
Lane Group Flow (vph)	0	412	53	0	471	0	0	254	0	0	215	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		34.0	34.0		34.0			21.0			21.0	
Effective Green, g (s)		34.0	34.0		34.0			21.0			21.0	
Actuated g/C Ratio		0.52	0.52		0.52			0.32			0.32	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Grp Cap (vph)		702	751		1301			426			542	
v/s Ratio Prot												
v/s Ratio Perm		c0.31	0.04		0.19			c0.19			0.13	
v/c Ratio		0.59	0.07		0.36			0.60			0.40	
Uniform Delay, d1		10.7	7.7		9.1			18.4			17.1	
Progression Factor		1.82	4.59		0.53			1.00			1.00	
Incremental Delay, d2		3.5	0.2		0.8			6.0			2.2	
Delay (s)		22.9	35.4		5.6			24.5			19.2	
Level of Service		C	D		A			C			B	
Approach Delay (s)		25.4			5.6			24.5			19.2	
Approach LOS		C			A			C			B	

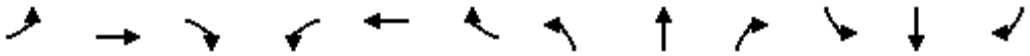
Intersection Summary			
HCM Average Control Delay	17.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	77.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	55	271	28	25	311	58	26	130	46	62	145	63
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	15	8	16	8	8	16	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.98			0.97			0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1443	3025		1565	3019			3581			3598	
Flt Permitted	0.50	1.00		0.55	1.00			0.90			0.84	
Satd. Flow (perm)	757	3025		909	3019			3234			3071	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	61	301	31	28	346	64	29	144	51	69	161	70
RTOR Reduction (vph)	0	12	0	0	23	0	0	30	0	0	41	0
Lane Group Flow (vph)	61	320	0	28	387	0	0	194	0	0	259	0
Confl. Peds. (#/hr)	24		47	47		24	9		36	36		9
Confl. Bikes (#/hr)			4	4			1					1
Heavy Vehicles (%)	9%	4%	0%	0%	3%	0%	0%	1%	10%	0%	0%	8%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	30.0	30.0		30.0	30.0			27.0			27.0	
Effective Green, g (s)	30.0	30.0		30.0	30.0			27.0			27.0	
Actuated g/C Ratio	0.46	0.46		0.46	0.46			0.42			0.42	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	349	1396		420	1393			1343			1276	
v/s Ratio Prot		0.11			c0.13							
v/s Ratio Perm	0.08			0.03				0.06			c0.08	
v/c Ratio	0.17	0.23		0.07	0.28			0.14			0.20	
Uniform Delay, d1	10.2	10.5		9.7	10.8			11.8			12.1	
Progression Factor	0.68	0.68		0.81	0.64			1.03			0.41	
Incremental Delay, d2	0.9	0.3		0.2	0.2			0.2			0.3	
Delay (s)	7.8	7.5		8.0	7.2			12.3			5.2	
Level of Service	A	A		A	A			B			A	
Approach Delay (s)		7.5			7.3			12.3			5.2	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM Average Control Delay	7.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

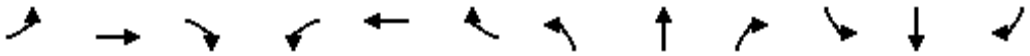


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	47	440	26	83	483	213	23	118	109	323	248	78
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.99			0.96			0.93			0.98	
Flt Protected		1.00			0.99			1.00			0.98	
Satd. Flow (prot)		3280			3167			3089			3181	
Flt Permitted		0.78			0.80			0.91			0.71	
Satd. Flow (perm)		2557			2553			2816			2306	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	52	489	29	92	537	237	26	131	121	359	276	87
RTOR Reduction (vph)	0	6	0	0	60	0	0	65	0	0	16	0
Lane Group Flow (vph)	0	564	0	0	806	0	0	213	0	0	706	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0			30.0			17.0	
Effective Green, g (s)		25.0			25.0			30.0			17.0	
Actuated g/C Ratio		0.38			0.38			0.46			0.26	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		983			982			1342			603	
v/s Ratio Prot								c0.02				
v/s Ratio Perm		0.22			c0.32			0.05			c0.31	
v/c Ratio		0.57			0.82			0.16			1.27dl	
Uniform Delay, d1		15.8			18.0			10.2			24.0	
Progression Factor		1.48			1.00			1.00			0.81	
Incremental Delay, d2		2.4			7.7			0.3			93.0	
Delay (s)		25.8			25.7			10.4			112.4	
Level of Service		C			C			B			F	
Approach Delay (s)		25.8			25.7			10.4			112.4	
Approach LOS		C			C			B			F	

Intersection Summary			
HCM Average Control Delay	49.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	83.3%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

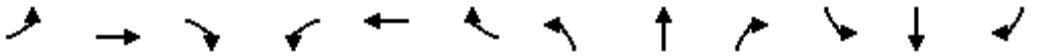
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	871	125	46	760	0	78	0	35	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	10	10	12	12	12	12	12	12	12
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			1.00				
Frt		0.98			1.00			0.96				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		3041			3090			1619				
Flt Permitted		1.00			0.81			0.79				
Satd. Flow (perm)		3041			2510			1329				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	968	139	51	844	0	87	0	39	0	0	0
RTOR Reduction (vph)	0	15	0	0	0	0	0	18	0	0	0	0
Lane Group Flow (vph)	0	1092	0	0	895	0	0	108	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	custom			Perm			Perm			Perm		
Protected Phases		4 5 6 11			8			2			2	
Permitted Phases	4 6 11			8			2			2		
Actuated Green, G (s)		65.0			33.0			16.0				
Effective Green, g (s)		58.0			33.0			16.0				
Actuated g/C Ratio		0.64			0.37			0.18				
Clearance Time (s)					5.0			5.0				
Lane Grp Cap (vph)		1960			920			236				
v/s Ratio Prot		c0.36										
v/s Ratio Perm					c0.36			c0.08				
v/c Ratio		0.56			0.97			0.46				
Uniform Delay, d1		8.9			28.1			33.1				
Progression Factor		0.11			1.41			1.00				
Incremental Delay, d2		0.4			22.8			6.3				
Delay (s)		1.4			62.4			39.4				
Level of Service		A			E			D				
Approach Delay (s)		1.4			62.4			39.4			0.0	
Approach LOS		A			E			D			A	

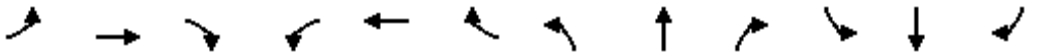
Intersection Summary			
HCM Average Control Delay	29.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	72.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	216	633	22	108	586	178	58	4	103	205	10	205
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	10	12	12	12	12	16	12	12	12	12
Total Lost time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85		0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (prot)	1550	3194		1660	3320	1485		1782		1660	1748	1485
Flt Permitted	0.31	1.00		0.34	1.00	1.00		0.88		0.44	1.00	1.00
Satd. Flow (perm)	504	3194		597	3320	1485		1594		761	1748	1485
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	240	703	24	120	651	198	64	4	114	228	11	228
RTOR Reduction (vph)	0	2	0	0	0	90	0	92	0	0	0	132
Lane Group Flow (vph)	240	725	0	120	651	108	0	90	0	228	11	96
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	55.5	43.3		48.4	39.2	49.2		11.5		24.5	24.5	37.8
Effective Green, g (s)	55.5	43.3		48.4	39.2	49.2		11.5		24.5	24.5	37.8
Actuated g/C Ratio	0.62	0.48		0.54	0.44	0.55		0.13		0.27	0.27	0.42
Clearance Time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Vehicle Extension (s)	4.0	3.0		4.0	3.0	3.0		4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	465	1537		430	1446	812		204		307	476	624
v/s Ratio Prot	c0.08	0.23		0.03	0.20	0.01				c0.08	0.01	0.02
v/s Ratio Perm	c0.24			0.12		0.06		0.06		c0.12		0.04
v/c Ratio	0.52	0.47		0.28	0.45	0.13		0.44		0.74	0.02	0.15
Uniform Delay, d1	8.7	15.7		10.4	17.8	10.0		36.3		28.6	24.0	16.2
Progression Factor	2.62	1.90		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	1.1	0.9		0.5	1.0	0.1		2.1		9.3	0.0	0.2
Delay (s)	23.9	30.7		10.9	18.8	10.0		38.3		38.0	24.0	16.3
Level of Service	C	C		B	B	B		D		D	C	B
Approach Delay (s)		29.0			16.1			38.3			27.1	
Approach LOS		C			B			D			C	

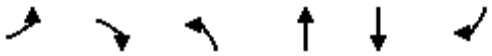
Intersection Summary			
HCM Average Control Delay	24.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	60.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	511	431	2	323	0	0	0	0	18	0	548
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	568	479	2	359	0	0	0	0	20	0	609
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		498										
pX, platoon unblocked												
vC, conflicting volume	359			568			752	931	284	647	931	179
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	359			568			752	931	284	647	931	179
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	94	100	27
cM capacity (veh/h)	1189			994			79	263	710	353	263	829

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	284	284	479	122	239	20	609
Volume Left	0	0	0	2	0	20	0
Volume Right	0	0	479	0	0	0	609
cSH	1700	1700	1700	994	1700	353	829
Volume to Capacity	0.17	0.17	0.28	0.00	0.14	0.06	0.73
Queue Length 95th (ft)	0	0	0	0	0	4	167
Control Delay (s)	0.0	0.0	0.0	0.2	0.0	15.8	20.3
Lane LOS				A		C	C
Approach Delay (s)	0.0			0.1		20.2	
Approach LOS						C	

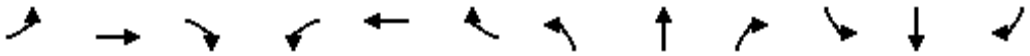
Intersection Summary				
Average Delay	6.2			
Intersection Capacity Utilization	52.0%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	529	0	325	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	588	0	361	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	294	294	361
Volume Left (vph)	294	294	361
Volume Right (vph)	0	0	0
Hadj (s)	0.55	0.55	0.25
Departure Headway (s)	6.1	6.1	5.6
Degree Utilization, x	0.50	0.50	0.56
Capacity (veh/h)	571	573	620
Control Delay (s)	13.9	13.9	15.3
Approach Delay (s)	13.9		15.3
Approach LOS	B		C

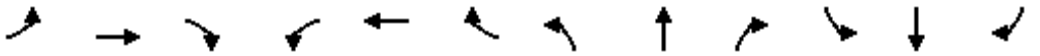
Intersection Summary			
Delay	14.5		
HCM Level of Service	B		
Intersection Capacity Utilization	41.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	472	90	188	584	0	0	0	0	101	21	58
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)		3.0		4.0	4.0						5.0	
Lane Util. Factor		0.95		1.00	0.95						0.95	
Frt		0.98		1.00	1.00						0.95	
Flt Protected		1.00		0.95	1.00						0.97	
Satd. Flow (prot)		3133		1605	3210						3074	
Flt Permitted		1.00		0.33	1.00						0.97	
Satd. Flow (perm)		3133		559	3210						3074	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	524	100	209	649	0	0	0	0	112	23	64
RTOR Reduction (vph)	0	18	0	0	0	0	0	0	0	0	44	0
Lane Group Flow (vph)	0	606	0	209	649	0	0	0	0	0	155	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type				pm+pt						Split		
Protected Phases		4		3	8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		36.0		49.0	49.0						27.0	
Effective Green, g (s)		36.0		49.0	49.0						27.0	
Actuated g/C Ratio		0.42		0.58	0.58						0.32	
Clearance Time (s)		3.0		4.0	4.0						5.0	
Lane Grp Cap (vph)		1327		445	1850						976	
v/s Ratio Prot		0.19		c0.06	0.20						c0.05	
v/s Ratio Perm				c0.22								
v/c Ratio		0.46		0.47	0.35						0.16	
Uniform Delay, d1		17.5		16.2	9.6						20.8	
Progression Factor		1.00		0.50	0.42						1.00	
Incremental Delay, d2		1.1		3.0	0.4						0.3	
Delay (s)		18.6		11.0	4.5						21.2	
Level of Service		B		B	A						C	
Approach Delay (s)		18.6			6.1			0.0			21.2	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	12.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	45.9%	ICU Level of Service	A
Analysis Period (min)	15		

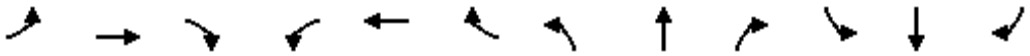
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	95	478	0	0	609	124	163	90	58	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	11	11	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0			3.0			5.0				
Lane Util. Factor	1.00	0.95			0.95			0.91				
Frt	1.00	1.00			0.97			0.97				
Flt Protected	0.95	1.00			1.00			0.97				
Satd. Flow (prot)	1660	3320			3128			4520				
Flt Permitted	0.23	1.00			1.00			0.97				
Satd. Flow (perm)	401	3320			3128			4520				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	106	531	0	0	677	138	181	100	64	0	0	0
RTOR Reduction (vph)	0	0	0	0	20	0	0	44	0	0	0	0
Lane Group Flow (vph)	106	531	0	0	795	0	0	301	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt						Split					
Protected Phases	7	4			8		2	2				
Permitted Phases	4											
Actuated Green, G (s)	48.0	48.0			35.0			27.0				
Effective Green, g (s)	48.0	48.0			35.0			27.0				
Actuated g/C Ratio	0.56	0.56			0.41			0.32				
Clearance Time (s)	5.0	5.0			3.0			5.0				
Lane Grp Cap (vph)	375	1875			1288			1436				
v/s Ratio Prot	0.03	c0.16			c0.25			c0.07				
v/s Ratio Perm	0.13											
v/c Ratio	0.28	0.28			0.62			0.21				
Uniform Delay, d1	17.6	9.6			19.7			21.2				
Progression Factor	0.40	0.33			1.00			1.00				
Incremental Delay, d2	1.7	0.4			2.2			0.3				
Delay (s)	8.7	3.5			21.9			21.5				
Level of Service	A	A			C			C				
Approach Delay (s)		4.4			21.9			21.5			0.0	
Approach LOS		A			C			C			A	

Intersection Summary			
HCM Average Control Delay	15.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.9%	ICU Level of Service	A
Analysis Period (min)	15		

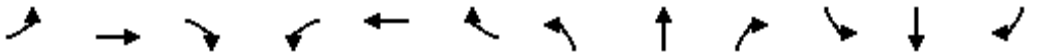
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	114	342	126	79	366	79	178	78	27	29	85	141
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	12	15	12	12	15	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		0.97			0.98			0.99			0.93	
Flt Protected		0.99			0.99			0.97			0.99	
Satd. Flow (prot)		2969			3006			1840			1768	
Flt Permitted		0.68			0.72			0.66			0.94	
Satd. Flow (perm)		2025			2179			1251			1677	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	127	380	140	88	407	88	198	87	30	32	94	157
RTOR Reduction (vph)	0	39	0	0	22	0	0	6	0	0	69	0
Lane Group Flow (vph)	0	608	0	0	561	0	0	309	0	0	214	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		23.0			23.0			32.0			32.0	
Effective Green, g (s)		23.0			23.0			32.0			32.0	
Actuated g/C Ratio		0.35			0.35			0.49			0.49	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		717			771			616			826	
v/s Ratio Prot												
v/s Ratio Perm		c0.30			0.26			c0.25			0.13	
v/c Ratio		0.85			0.73			0.50			0.26	
Uniform Delay, d1		19.4			18.3			11.1			9.6	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		11.9			5.9			2.9			0.8	
Delay (s)		31.3			24.2			14.0			10.4	
Level of Service		C			C			B			B	
Approach Delay (s)		31.3			24.2			14.0			10.4	
Approach LOS		C			C			B			B	

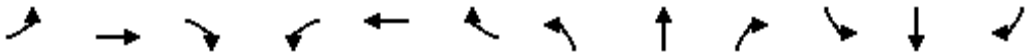
Intersection Summary			
HCM Average Control Delay	22.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	82.2%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	106	201	100	203	311	65	168	561	243	91	911	140
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	12	10	16	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.95		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1559	2967		1574	3683		1508	3069	1333	1521	3099	1336
Flt Permitted	0.45	1.00		0.52	1.00		0.13	1.00	1.00	0.32	1.00	1.00
Satd. Flow (perm)	739	2967		862	3683		212	3069	1333	520	3099	1336
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	112	212	105	214	327	68	177	591	256	96	959	147
RTOR Reduction (vph)	0	70	0	0	21	0	0	0	163	0	0	93
Lane Group Flow (vph)	112	247	0	214	374	0	177	591	93	96	959	54
Confl. Peds. (#/hr)	19		16	16		19	22		25	25		22
Heavy Vehicles (%)	2%	2%	0%	1%	2%	2%	2%	4%	0%	1%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	32.0	27.0		32.0	27.0		38.0	31.0	31.0	38.0	31.0	31.0
Effective Green, g (s)	30.0	28.0		30.0	28.0		36.0	31.0	31.0	36.0	31.0	31.0
Actuated g/C Ratio	0.35	0.33		0.35	0.33		0.42	0.36	0.36	0.42	0.36	0.36
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	299	977		338	1213		181	1119	486	291	1130	487
v/s Ratio Prot	0.02	0.08		c0.03	0.10		c0.07	0.19		0.02	0.31	
v/s Ratio Perm	0.11			c0.19			c0.35		0.07	0.12		0.04
v/c Ratio	0.37	0.25		0.63	0.31		0.98	0.53	0.19	0.33	0.85	0.11
Uniform Delay, d1	19.4	20.8		22.2	21.3		19.9	21.2	18.4	15.4	24.8	17.9
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.42	1.06	2.39
Incremental Delay, d2	3.6	0.6		8.7	0.7		61.4	1.8	0.9	2.2	6.0	0.3
Delay (s)	23.0	21.5		30.9	21.9		81.3	23.0	19.3	24.2	32.2	43.0
Level of Service	C	C		C	C		F	C	B	C	C	D
Approach Delay (s)		21.9			25.1			32.2			32.9	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	29.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	74.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	97	424	30	33	421	24	31	95	39	36	122	75
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	16	12	12	16	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00	0.98		1.00	0.99
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		0.99	1.00
Satd. Flow (prot)		1957	1466		1994	1480		2015	1506		2000	1511
Flt Permitted		0.73	1.00		0.94	1.00		0.92	1.00		0.92	1.00
Satd. Flow (perm)		1435	1466		1888	1480		1869	1506		1870	1511
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	102	446	32	35	443	25	33	100	41	38	128	79
RTOR Reduction (vph)	0	0	17	0	0	13	0	0	24	0	0	46
Lane Group Flow (vph)	0	548	15	0	478	12	0	133	17	0	166	33
Confl. Peds. (#/hr)	11		20	20		11	1		4	4		1
Confl. Bikes (#/hr)	1		1	1		1			1	1		
Heavy Vehicles (%)	4%	3%	0%	0%	2%	0%	0%	0%	0%	0%	1%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Effective Green, g (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Actuated g/C Ratio		0.46	0.46		0.46	0.46		0.42	0.42		0.42	0.42
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		662	677		871	683		776	626		777	628
v/s Ratio Prot												
v/s Ratio Perm		c0.38	0.01		0.25	0.01		0.07	0.01		c0.09	0.02
v/c Ratio		0.83	0.02		0.55	0.02		0.17	0.03		0.21	0.05
Uniform Delay, d1		15.2	9.5		12.6	9.5		12.0	11.2		12.2	11.4
Progression Factor		1.00	1.00		0.62	0.55		0.92	1.00		1.03	0.93
Incremental Delay, d2		11.4	0.1		2.4	0.0		0.4	0.1		0.6	0.2
Delay (s)		26.6	9.6		10.2	5.2		11.4	11.3		13.1	10.7
Level of Service		C	A		B	A		B	B		B	B
Approach Delay (s)		25.7			10.0			11.4			12.3	
Approach LOS		C			A			B			B	

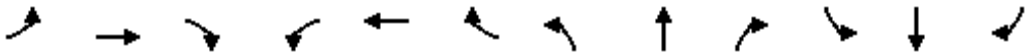
Intersection Summary			
HCM Average Control Delay	16.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	94.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	115	394	20	41	269	31	10	107	21	104	203	72
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.98		1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1550	3077		1550	3052		1550	3024		1550	2977	
Flt Permitted	0.95	1.00		0.49	1.00		0.55	1.00		0.66	1.00	
Satd. Flow (perm)	1550	3077		795	3052		897	3024		1080	2977	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	128	438	22	46	299	34	11	119	23	116	226	80
RTOR Reduction (vph)	0	6	0	0	13	0	0	13	0	0	47	0
Lane Group Flow (vph)	128	454	0	46	320	0	11	129	0	116	259	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Prot			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Effective Green, g (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.11	0.49		0.34	0.34		0.42	0.42		0.42	0.42	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	167	1515		269	1033		373	1256		449	1237	
v/s Ratio Prot	c0.08	c0.15			0.10			0.04			0.09	
v/s Ratio Perm				0.06			0.01			c0.11		
v/c Ratio	0.77	0.30		0.17	0.31		0.03	0.10		0.26	0.21	
Uniform Delay, d1	28.2	9.8		15.1	15.9		11.2	11.6		12.4	12.2	
Progression Factor	1.17	0.39		0.75	0.73		1.05	1.15		1.13	1.14	
Incremental Delay, d2	22.2	0.4		1.3	0.7		0.1	0.1		1.4	0.4	
Delay (s)	55.1	4.2		12.7	12.4		12.0	13.5		15.4	14.3	
Level of Service	E	A		B	B		B	B		B	B	
Approach Delay (s)		15.3			12.4			13.4			14.6	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	14.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	40.6%	ICU Level of Service	A
Analysis Period (min)	15		

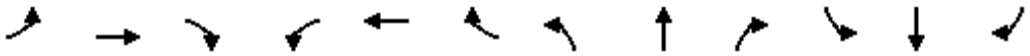
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	83	332	68	197	337	61	25	245	20	55	270	55
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.97		1.00	0.98			0.99			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1550	3020		1550	3028			3272			3225	
Flt Permitted	0.50	1.00		0.95	1.00			0.90			0.86	
Satd. Flow (perm)	809	3020		1550	3028			2966			2803	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	92	369	76	219	374	68	28	272	22	61	300	61
RTOR Reduction (vph)	0	26	0	0	23	0	0	8	0	0	21	0
Lane Group Flow (vph)	92	419	0	219	419	0	0	314	0	0	401	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Prot			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4						2			6		
Actuated Green, G (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Effective Green, g (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Actuated g/C Ratio	0.31	0.31		0.09	0.45			0.38			0.38	
Clearance Time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	249	929		143	1351			1141			1078	
v/s Ratio Prot		c0.14		c0.14	0.14							
v/s Ratio Perm	0.11							0.11			c0.14	
v/c Ratio	0.37	0.45		1.53	0.31			0.28			0.37	
Uniform Delay, d1	17.6	18.1		29.5	11.6			13.8			14.4	
Progression Factor	0.86	0.80		1.28	1.15			0.87			0.71	
Incremental Delay, d2	4.1	1.5		257.2	0.3			0.6			1.0	
Delay (s)	19.1	16.0		294.9	13.6			12.6			11.2	
Level of Service	B	B		F	B			B			B	
Approach Delay (s)		16.5			106.8			12.6			11.2	
Approach LOS		B			F			B			B	

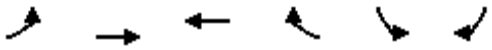
Intersection Summary			
HCM Average Control Delay	45.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	56.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	16	355	26	73	602	73	54	108	162	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	14	12	10	15	10
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			0.95				
Frt		0.99			0.99			0.93				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		1613			1602			3249				
Flt Permitted		0.96			0.92			0.99				
Satd. Flow (perm)		1558			1484			3249				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	18	394	29	81	669	81	60	120	180	0	0	0
RTOR Reduction (vph)	0	3	0	0	5	0	0	137	0	0	0	0
Lane Group Flow (vph)	0	438	0	0	826	0	0	223	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		41.5			41.5			15.5				
Effective Green, g (s)		41.5			41.5			15.5				
Actuated g/C Ratio		0.64			0.64			0.24				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		3.0			3.0			8.0				
Lane Grp Cap (vph)		995			947			775				
v/s Ratio Prot												
v/s Ratio Perm		0.28			c0.56			0.07				
v/c Ratio		0.44			0.87			0.29				
Uniform Delay, d1		5.9			9.6			20.2				
Progression Factor		2.02			1.00			1.00				
Incremental Delay, d2		1.3			10.9			0.9				
Delay (s)		13.2			20.5			21.1				
Level of Service		B			C			C				
Approach Delay (s)		13.2			20.5			21.1			0.0	
Approach LOS		B			C			C			A	

Intersection Summary			
HCM Average Control Delay	18.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	85.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	93	414	579	38	117	162
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	98	436	609	40	123	171
Pedestrians		5	6		17	
Lane Width (ft)		16.0	16.0		10.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		1	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1319	491			
pX, platoon unblocked	0.84				0.84	0.84
vC, conflicting volume	666				1284	651
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	504				1242	486
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	89				13	65
cM capacity (veh/h)	864				142	481

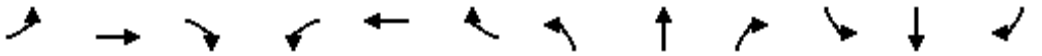
Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	534	649	123	171
Volume Left	98	0	123	0
Volume Right	0	40	0	171
cSH	864	1700	142	481
Volume to Capacity	0.11	0.38	0.87	0.35
Queue Length 95th (ft)	10	0	143	40
Control Delay (s)	3.0	0.0	104.6	16.5
Lane LOS	A		F	C
Approach Delay (s)	3.0	0.0	53.4	
Approach LOS			F	

Intersection Summary			
Average Delay	11.7		
Intersection Capacity Utilization	81.0%	ICU Level of Service	D
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	684	0	1	600	3	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frt	1.00			1.00	0.88	
Flt Protected	1.00			1.00	1.00	
Satd. Flow (prot)	1748			1747	1525	
Flt Permitted	1.00			1.00	1.00	
Satd. Flow (perm)	1748			1747	1525	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	760	0	1	667	3	32
RTOR Reduction (vph)	0	0	0	0	27	0
Lane Group Flow (vph)	760	0	0	668	8	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type			Perm			
Protected Phases	1 2 4			4	3	
Permitted Phases			4			
Actuated Green, G (s)	63.0			31.0	14.0	
Effective Green, g (s)	59.0			31.0	14.0	
Actuated g/C Ratio	0.69			0.36	0.16	
Clearance Time (s)				4.0	4.0	
Lane Grp Cap (vph)	1213			637	251	
v/s Ratio Prot	c0.43				c0.01	
v/s Ratio Perm				0.38		
v/c Ratio	0.63			1.05	0.03	
Uniform Delay, d1	7.0			27.0	29.8	
Progression Factor	0.10			1.00	1.00	
Incremental Delay, d2	1.1			49.1	0.2	
Delay (s)	1.8			76.1	30.1	
Level of Service	A			E	C	
Approach Delay (s)	1.8			76.1	30.1	
Approach LOS	A			E	C	

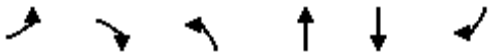
Intersection Summary			
HCM Average Control Delay	36.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	48.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	236	594	30	386	0	0	0	0	17	6	242
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	262	660	33	429	0	0	0	0	19	7	269
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	429			262			1091	1088	461	627	758	429
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	429			262			1091	1088	461	627	758	429
tC, single (s)	4.1			4.2			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			100	100	100	95	98	53
cM capacity (veh/h)	1141			1285			88	212	553	365	330	574

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	175	747	462	26	269
Volume Left	0	0	33	19	0
Volume Right	0	660	0	0	269
cSH	1700	1700	1285	355	574
Volume to Capacity	0.10	0.44	0.03	0.07	0.47
Queue Length 95th (ft)	0	0	2	6	62
Control Delay (s)	0.0	0.0	0.8	15.9	16.7
Lane LOS			A	C	C
Approach Delay (s)	0.0		0.8	16.6	
Approach LOS				C	

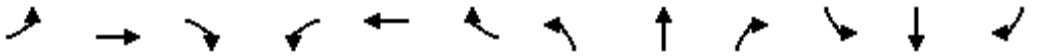
Intersection Summary				
Average Delay	3.1			
Intersection Capacity Utilization	57.6%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	253	0	417	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	281	0	463	0	0	0

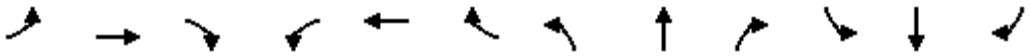
Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	141	141	463
Volume Left (vph)	141	141	463
Volume Right (vph)	0	0	0
Hadj (s)	0.55	0.55	0.25
Departure Headway (s)	6.3	6.3	5.0
Degree Utilization, x	0.25	0.25	0.64
Capacity (veh/h)	543	544	702
Control Delay (s)	10.1	10.1	16.3
Approach Delay (s)	10.1		16.3
Approach LOS	B		C

Intersection Summary			
Delay	14.0		
HCM Level of Service	B		
Intersection Capacity Utilization	38.7%	ICU Level of Service	A
Analysis Period (min)	15		



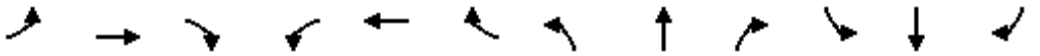
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	545	337	322	845	0	0	0	0	305	269	372
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	13	12	12	12	12	10	10	11
Total Lost time (s)		6.0	6.0		6.0					6.0	6.0	6.0
Lane Util. Factor		0.95	1.00		0.95					0.86	0.81	0.86
Frpb, ped/bikes		1.00	0.98		1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	0.95	0.85
Flt Protected		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (prot)		3179	1232		3427					1359	3807	1133
Flt Permitted		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (perm)		3179	1232		3427					1359	3807	1133
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	574	355	339	889	0	0	0	0	321	283	392
RTOR Reduction (vph)	0	0	206	0	0	0	0	0	0	0	52	113
Lane Group Flow (vph)	0	574	149	0	1228	0	0	0	0	177	571	83
Confl. Peds. (#/hr)	4		6	6		4						
Heavy Vehicles (%)	0%	4%	6%	1%	2%	0%	0%	0%	0%	1%	1%	1%
Parking (#/hr)			0									0
Turn Type			Perm	Split						Split		custom
Protected Phases		2		10 12 14	10 12 14					4	4	
Permitted Phases			2									4 2
Actuated Green, G (s)		39.0	39.0		67.4					23.0	23.0	68.0
Effective Green, g (s)		39.0	39.0		67.4					23.0	23.0	68.0
Actuated g/C Ratio		0.24	0.24		0.42					0.14	0.14	0.42
Clearance Time (s)		6.0	6.0							6.0	6.0	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		775	300		1444					195	547	482
v/s Ratio Prot		c0.18			c0.36					0.13	c0.15	
v/s Ratio Perm			0.12									0.07
v/c Ratio		0.74	0.50		0.85					0.91	1.04	0.17
Uniform Delay, d1		55.8	52.0		41.8					67.5	68.5	28.5
Progression Factor		1.00	1.00		0.16					1.00	1.00	1.00
Incremental Delay, d2		6.3	5.7		0.5					39.2	50.3	0.2
Delay (s)		62.1	57.8		7.1					106.7	118.8	28.7
Level of Service		E	E		A					F	F	C
Approach Delay (s)		60.5			7.1			0.0			98.9	
Approach LOS		E			A			A			F	

Intersection Summary			
HCM Average Control Delay	51.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	32.6
Intersection Capacity Utilization	83.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



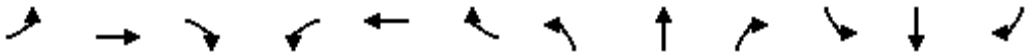
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	290	561	0	0	854	231	313	204	202	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	13	12	12	11	12	13	13	14	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0				
Lane Util. Factor	1.00	0.95			0.95	1.00	0.91	0.91				
Frt	1.00	1.00			1.00	0.85	1.00	0.94				
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (prot)	1605	3431			3210	1485	1561	3055				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (perm)	1605	3431			3210	1485	1561	3055				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	322	623	0	0	949	257	348	227	224	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	94	0	77	0	0	0	0
Lane Group Flow (vph)	322	623	0	0	949	163	271	451	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Split					Perm	Split					
Protected Phases	2 4 8	2 4 8			10		12	12				
Permitted Phases						10						
Actuated Green, G (s)	84.6	84.6			36.4	36.4	12.0	12.0				
Effective Green, g (s)	84.6	84.6			36.4	36.4	12.0	12.0				
Actuated g/C Ratio	0.53	0.53			0.23	0.23	0.08	0.08				
Clearance Time (s)					6.0	6.0	6.0	6.0				
Vehicle Extension (s)					3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	849	1814			730	338	117	229				
v/s Ratio Prot	c0.20	0.18			c0.30		c0.17	0.15				
v/s Ratio Perm						0.11						
v/c Ratio	0.38	0.34			1.30	0.48	2.32	1.97				
Uniform Delay, d1	22.2	21.7			61.8	53.6	74.0	74.0				
Progression Factor	0.06	0.06			1.00	1.00	1.00	1.00				
Incremental Delay, d2	0.2	0.1			145.0	1.1	618.2	452.1				
Delay (s)	1.4	1.3			206.8	54.7	692.2	526.1				
Level of Service	A	A			F	D	F	F				
Approach Delay (s)		1.3			174.3			582.5			0.0	
Approach LOS		A			F			F			A	

Intersection Summary			
HCM Average Control Delay	229.5	HCM Level of Service	F
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	29.0
Intersection Capacity Utilization	71.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	138	502	134	87	266	66	104	504	68	96	1150	120
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	14	12	10	10	12	9	10	12
Total Lost time (s)	4.0	4.0	5.0	4.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1575	1600	1373	1596	1791		1579	3015		1537	3027	
Flt Permitted	0.33	1.00	1.00	0.15	1.00		0.12	1.00		0.32	1.00	
Satd. Flow (perm)	549	1600	1373	251	1791		201	3015		523	3027	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	145	528	141	92	280	69	109	531	72	101	1211	126
RTOR Reduction (vph)	0	0	95	0	10	0	0	12	0	0	9	0
Lane Group Flow (vph)	145	528	46	92	339	0	109	591	0	101	1328	0
Confl. Peds. (#/hr)	28		8	8		28	59		11	11		59
Confl. Bikes (#/hr)	3					3	1		2	2		1
Heavy Vehicles (%)	1%	5%	2%	0%	4%	0%	1%	4%	0%	0%	3%	3%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	36.3	29.3	29.3	33.3	27.8		39.6	34.1		39.6	34.1	
Effective Green, g (s)	34.3	30.3	29.3	31.3	27.8		37.6	34.1		37.6	34.1	
Actuated g/C Ratio	0.38	0.34	0.33	0.35	0.31		0.42	0.38		0.42	0.38	
Clearance Time (s)	3.0	5.0	5.0	3.0	5.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	279	542	450	156	557		154	1150		271	1155	
v/s Ratio Prot	c0.03	c0.33		0.03	0.19		c0.04	0.20		0.02	c0.44	
v/s Ratio Perm	0.16		0.03	0.18			0.26			0.14		
v/c Ratio	0.52	0.97	0.10	0.59	0.61		0.71	0.51		0.37	1.15	
Uniform Delay, d1	19.6	29.2	20.9	22.3	26.2		21.2	21.3		16.5	27.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.6	32.8	0.5	5.6	4.9		13.8	1.6		0.9	77.9	
Delay (s)	21.2	61.9	21.4	27.9	31.1		35.0	22.9		17.3	105.5	
Level of Service	C	E	C	C	C		D	C		B	F	
Approach Delay (s)		47.7			30.4			24.8			99.3	
Approach LOS		D			C			C			F	

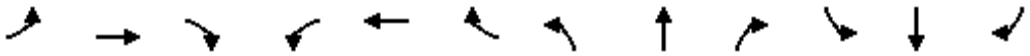
Intersection Summary			
HCM Average Control Delay	62.5	HCM Level of Service	E
HCM Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	89.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	91.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	87	454	109	13	324	21	48	57	19	20	88	79
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	10	10	10	12	15	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00			0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.98			0.94	
Flt Protected		0.99	1.00		1.00	1.00		0.98			0.99	
Satd. Flow (prot)		1963	1467		1629	1381		1890			1857	
Flt Permitted		0.89	1.00		0.98	1.00		0.86			0.97	
Satd. Flow (perm)		1764	1467		1597	1381		1653			1815	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	92	478	115	14	341	22	51	60	20	21	93	83
RTOR Reduction (vph)	0	0	45	0	0	11	0	10	0	0	40	0
Lane Group Flow (vph)	0	570	70	0	355	11	0	121	0	0	157	0
Confl. Peds. (#/hr)	12		20	20		12	8		2	2		8
Confl. Bikes (#/hr)	1		2	2		1			1	1		
Heavy Vehicles (%)	3%	3%	0%	0%	3%	0%	0%	0%	0%	0%	1%	3%
Turn Type	Perm		Perm	Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Effective Green, g (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Actuated g/C Ratio		0.49	0.49		0.49	0.49		0.42			0.42	
Clearance Time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		868	722		786	680		687			754	
v/s Ratio Prot												
v/s Ratio Perm		c0.32	0.05		0.22	0.01		0.07			c0.09	
v/c Ratio		0.66	0.10		0.45	0.02		0.18			0.21	
Uniform Delay, d1		12.4	8.8		10.8	8.4		12.0			12.2	
Progression Factor		1.00	1.00		1.85	2.62		1.00			1.99	
Incremental Delay, d2		3.9	0.3		1.8	0.0		0.6			0.6	
Delay (s)		16.2	9.1		21.7	22.2		12.5			24.8	
Level of Service		B	A		C	C		B			C	
Approach Delay (s)		15.0			21.8			12.5			24.8	
Approach LOS		B			C			B			C	

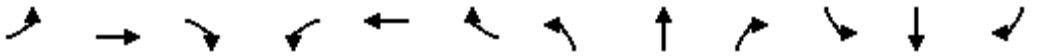
Intersection Summary			
HCM Average Control Delay	18.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	77.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	107	239	90	11	218	10	46	108	18	14	175	78
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.94		1.00	0.97		1.00	0.97		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.96	
Flt Protected		0.98	1.00		1.00	1.00		0.99	1.00		1.00	
Satd. Flow (prot)		1742	1443		1728	1487		1712	1489		1703	
Flt Permitted		0.80	1.00		0.98	1.00		0.86	1.00		0.98	
Satd. Flow (perm)		1411	1443		1691	1487		1494	1489		1681	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	113	252	95	12	229	11	48	114	19	15	184	82
RTOR Reduction (vph)	0	0	58	0	0	7	0	0	10	0	23	0
Lane Group Flow (vph)	0	365	37	0	241	4	0	162	9	0	258	0
Confl. Peds. (#/hr)	19		25	25		19	3		6	6		3
Confl. Bikes (#/hr)	1		2	2		1			1	1		
Heavy Vehicles (%)	0%	2%	0%	0%	4%	0%	0%	5%	0%	0%	0%	2%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Effective Green, g (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Actuated g/C Ratio		0.35	0.35		0.35	0.35		0.49	0.49		0.49	
Clearance Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Grp Cap (vph)		499	511		598	526		736	733		828	
v/s Ratio Prot												
v/s Ratio Perm		c0.26	0.03		0.14	0.00		0.11	0.01		c0.15	
v/c Ratio		0.73	0.07		0.40	0.01		0.22	0.01		0.31	
Uniform Delay, d1		18.3	13.9		15.8	13.6		9.4	8.4		9.9	
Progression Factor		1.80	3.68		0.96	0.98		0.16	0.20		1.07	
Incremental Delay, d2		7.3	0.2		2.0	0.0		0.1	0.0		1.0	
Delay (s)		40.2	51.5		17.1	13.3		1.6	1.7		11.6	
Level of Service		D	D		B	B		A	A		B	
Approach Delay (s)		42.5			17.0			1.6			11.6	
Approach LOS		D			B			A			B	

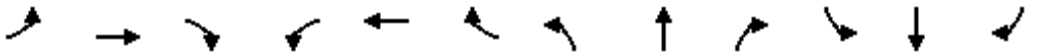
Intersection Summary			
HCM Average Control Delay	23.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	70.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	167	45	96	8	16	9	43	224	8	20	458	199
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.95		0.99			1.00			1.00	0.94
Flpb, ped/bikes		0.98	1.00		0.99			1.00			1.00	1.00
Frt		1.00	0.85		0.96			1.00			1.00	0.85
Flt Protected		0.96	1.00		0.99			0.99			1.00	1.00
Satd. Flow (prot)		1873	1440		1782			1991			1976	1382
Flt Permitted		0.81	1.00		0.93			0.89			0.98	1.00
Satd. Flow (perm)		1573	1440		1686			1780			1947	1382
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	186	50	107	9	18	10	48	249	9	22	509	221
RTOR Reduction (vph)	0	0	63	0	7	0	0	2	0	0	0	92
Lane Group Flow (vph)	0	236	44	0	30	0	0	304	0	0	531	129
Confl. Peds. (#/hr)	37		53	53		37	39		54	54		39
Confl. Bikes (#/hr)							2					2
Heavy Vehicles (%)	4%	0%	1%	0%	0%	0%	0%	1%	0%	0%	3%	4%
Turn Type	pm+pt		Perm	Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		27.0	27.0		17.0			32.0			32.0	32.0
Effective Green, g (s)		27.0	27.0		17.0			32.0			32.0	32.0
Actuated g/C Ratio		0.42	0.42		0.26			0.49			0.49	0.49
Clearance Time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		690	598		441			876			959	680
v/s Ratio Prot		c0.04										
v/s Ratio Perm		0.10	0.03		0.02			0.17			c0.27	0.09
v/c Ratio		0.34	0.07		0.07			0.35			0.55	0.19
Uniform Delay, d1		12.9	11.5		18.0			10.1			11.5	9.2
Progression Factor		1.00	1.79		1.00			0.53			0.64	0.22
Incremental Delay, d2		1.1	0.2		0.3			0.7			1.8	0.5
Delay (s)		14.0	20.7		18.3			6.0			9.1	2.5
Level of Service		B	C		B			A			A	A
Approach Delay (s)		16.1			18.3			6.0			7.1	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	9.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	71.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	922	289	666	1163	0	0	0	0	513	284	334
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	11	8	8	8	11	12	14
Total Lost time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Lane Util. Factor		0.91		1.00	0.95					0.91	0.86	0.91
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.96		1.00	1.00					1.00	0.98	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.98	1.00
Satd. Flow (prot)		4575		1621	3320					1489	2913	1442
Flt Permitted		1.00		0.10	1.00					0.95	0.98	1.00
Satd. Flow (perm)		4575		173	3320					1489	2913	1442
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	971	304	701	1224	0	0	0	0	540	299	352
RTOR Reduction (vph)	0	49	0	0	0	0	0	0	0	0	9	62
Lane Group Flow (vph)	0	1226	0	701	1224	0	0	0	0	308	603	209
Confl. Peds. (#/hr)	15		11	11		15						
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	0%	3%	3%	2%	3%	0%	0%	0%	0%	1%	3%	3%
Turn Type				pm+pt						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Actuated Green, G (s)		35.0		74.9	74.9					28.1	28.1	28.1
Effective Green, g (s)		35.0		74.9	74.9					28.1	28.1	28.1
Actuated g/C Ratio		0.30		0.65	0.65					0.24	0.24	0.24
Clearance Time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Vehicle Extension (s)		7.0		3.5	7.0					3.5	3.5	3.5
Lane Grp Cap (vph)		1392		558	2162					364	712	352
v/s Ratio Prot		0.27		c0.39	0.37							
v/s Ratio Perm				c0.43						0.21	0.21	0.14
v/c Ratio		0.88		1.26	0.57					0.85	0.85	0.59
Uniform Delay, d1		38.0		33.0	11.1					41.4	41.4	38.4
Progression Factor		1.00		0.86	2.10					1.00	1.00	1.00
Incremental Delay, d2		8.3		119.4	0.3					16.7	9.4	2.8
Delay (s)		46.3		147.7	23.6					58.1	50.8	41.2
Level of Service		D		F	C					E	D	D
Approach Delay (s)		46.3			68.8			0.0			50.5	
Approach LOS		D			E			A			D	

Intersection Summary			
HCM Average Control Delay	57.3	HCM Level of Service	E
HCM Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	118.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

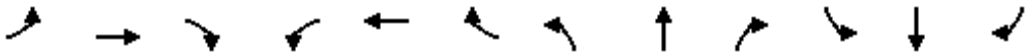
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	341	1094	0	0	1423	269	406	333	377	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	11	12	12	12	12	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0		6.0				
Lane Util. Factor	0.97	0.95			0.95	1.00		0.91				
Frpb, ped/bikes	1.00	1.00			1.00	0.98		1.00				
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00				
Frt	1.00	1.00			1.00	0.85		0.95				
Flt Protected	0.95	1.00			1.00	1.00		0.98				
Satd. Flow (prot)	3144	3353			3241	1489		4490				
Flt Permitted	0.07	1.00			1.00	1.00		0.98				
Satd. Flow (perm)	220	3353			3241	1489		4490				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	359	1152	0	0	1498	283	427	351	397	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	68	0	75	0	0	0	0
Lane Group Flow (vph)	359	1152	0	0	1498	215	0	1100	0	0	0	0
Confl. Peds. (#/hr)	7		5	5		7						
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	2%	2%	0%	0%	2%	1%	2%	1%	3%	0%	0%	0%
Turn Type	pm+pt					Perm	Perm					
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8					
Actuated Green, G (s)	74.0	74.0			54.1	54.1		29.0				
Effective Green, g (s)	74.0	74.0			54.1	54.1		29.0				
Actuated g/C Ratio	0.64	0.64			0.47	0.47		0.25				
Clearance Time (s)	6.0	6.0			6.0	6.0		6.0				
Vehicle Extension (s)	3.5	7.0			7.0	7.0		5.0				
Lane Grp Cap (vph)	495	2158			1525	700		1132				
v/s Ratio Prot	c0.09	0.34			c0.46							
v/s Ratio Perm	0.38					0.14		0.25				
v/c Ratio	0.73	0.53			0.98	0.31		0.97				
Uniform Delay, d1	31.6	11.1			30.0	18.8		42.6				
Progression Factor	1.55	0.03			0.90	1.06		1.00				
Incremental Delay, d2	2.6	0.5			3.9	0.1		20.4				
Delay (s)	51.7	0.7			31.0	20.1		63.0				
Level of Service	D	A			C	C		E				
Approach Delay (s)		12.8			29.3			63.0			0.0	
Approach LOS		B			C			E			A	

Intersection Summary			
HCM Average Control Delay	32.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	118.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	132	760	399	102	1183	99	227	179	66	85	162	121
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	11	12	12	10	10	13	10	10	10
Total Lost time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		0.99	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.96		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1565	3273	1313	1602	3284		1578	3002		1540	2941	
Flt Permitted	0.11	1.00	1.00	0.35	1.00		0.39	1.00		0.59	1.00	
Satd. Flow (perm)	174	3273	1313	589	3284		654	3002		961	2941	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	139	800	420	107	1245	104	239	188	69	89	171	127
RTOR Reduction (vph)	0	0	169	0	6	0	0	38	0	0	107	0
Lane Group Flow (vph)	139	800	251	107	1343	0	239	219	0	89	191	0
Confl. Peds. (#/hr)	11		23	23		11	8		12	12		8
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	2%	1%	3%	3%	3%	0%	1%	1%	2%	3%	0%	1%
Parking (#/hr)			0									
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	64.8	52.3	68.7	43.3	34.3		38.2	26.4		26.6	18.3	
Effective Green, g (s)	64.8	52.3	68.7	43.3	34.3		38.2	26.4		26.6	18.3	
Actuated g/C Ratio	0.56	0.45	0.60	0.38	0.30		0.33	0.23		0.23	0.16	
Clearance Time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0		3.0	7.0		3.0	7.0	
Lane Grp Cap (vph)	425	1489	784	301	979		349	689		264	468	
v/s Ratio Prot	c0.08	c0.24	0.05	0.03	c0.41		c0.10	0.07		0.02	0.07	
v/s Ratio Perm	0.11		0.15	0.11			c0.13			0.05		
v/c Ratio	0.33	0.54	0.32	0.36	1.37		0.68	0.32		0.34	0.41	
Uniform Delay, d1	17.4	22.6	11.5	24.0	40.4		30.5	36.8		36.1	43.5	
Progression Factor	0.78	0.77	1.36	1.00	1.00		1.03	1.05		1.00	1.00	
Incremental Delay, d2	1.6	1.1	0.2	0.7	174.0		5.2	0.9		0.8	2.1	
Delay (s)	15.2	18.4	15.9	24.7	214.4		36.7	39.5		36.8	45.5	
Level of Service	B	B	B	C	F		D	D		D	D	
Approach Delay (s)		17.3			200.4			38.1			43.5	
Approach LOS		B			F			D			D	

Intersection Summary			
HCM Average Control Delay	94.9	HCM Level of Service	F
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	88.3%	ICU Level of Service	E
Analysis Period (min)	15		

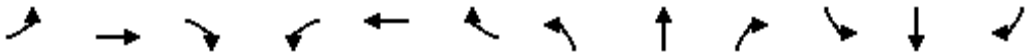
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	46	250	367	182	430	107	362	340	107	206	408	56
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	12	11	12	12	11	13	12	10	11	12
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.91		1.00	0.97		1.00	0.96		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1707	2925		1653	3269		1620	3381		1580	3183	
Flt Permitted	0.40	1.00		0.18	1.00		0.32	1.00		0.48	1.00	
Satd. Flow (perm)	723	2925		316	3269		544	3381		802	3183	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	48	263	386	192	453	113	381	358	113	217	429	59
RTOR Reduction (vph)	0	225	0	0	18	0	0	26	0	0	9	0
Lane Group Flow (vph)	48	424	0	192	548	0	381	445	0	217	479	0
Confl. Peds. (#/hr)	12		3	3		12	5					5
Heavy Vehicles (%)	0%	2%	2%	0%	1%	1%	2%	1%	0%	1%	2%	0%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	35.6	28.9		46.8	36.1		56.2	44.2		40.1	32.1	
Effective Green, g (s)	35.6	28.9		46.8	36.1		56.2	44.2		40.1	32.1	
Actuated g/C Ratio	0.31	0.25		0.41	0.31		0.49	0.38		0.35	0.28	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.5	7.0		3.5	7.0		3.5	7.0		3.5	7.0	
Lane Grp Cap (vph)	281	735		290	1026		454	1299		334	888	
v/s Ratio Prot	0.01	0.15		c0.08	0.17		c0.15	0.13		0.05	0.15	
v/s Ratio Perm	0.04			c0.19			c0.26			0.18		
v/c Ratio	0.17	0.58		0.66	0.53		0.84	0.34		0.65	0.54	
Uniform Delay, d1	28.2	37.7		24.9	32.5		20.8	25.1		28.8	35.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.98	
Incremental Delay, d2	0.3	3.3		5.8	2.0		13.1	0.7		4.2	2.2	
Delay (s)	28.6	41.0		30.7	34.5		33.9	25.8		33.0	36.5	
Level of Service	C	D		C	C		C	C		C	D	
Approach Delay (s)		40.1			33.5			29.4			35.5	
Approach LOS		D			C			C			D	

Intersection Summary			
HCM Average Control Delay	34.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.3%	ICU Level of Service	E
Analysis Period (min)	15		

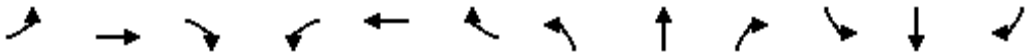
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	101	578	287	10	376	66	718	349	9	188	594	174
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	9	11	12	9	9	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.96			0.98		1.00	1.00		1.00	0.97	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		2965			3034		1452	3229		1523	2874	
Flt Permitted		0.71			0.92		0.20	1.00		0.49	1.00	
Satd. Flow (perm)		2128			2806		303	3229		781	2874	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	112	642	319	11	418	73	798	388	10	209	660	193
RTOR Reduction (vph)	0	72	0	0	21	0	0	3	0	0	42	0
Lane Group Flow (vph)	0	1001	0	0	481	0	798	395	0	209	811	0
Confl. Peds. (#/hr)	4		2	2		4	8		4	4		8
Confl. Bikes (#/hr)							2					2
Heavy Vehicles (%)	1%	2%	2%	0%	2%	6%	6%	2%	0%	1%	3%	3%
Turn Type	pm+pt			Perm			pm+pt			pm+pt		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			17.0		28.0	24.0		28.0	24.0	
Effective Green, g (s)		25.0			17.0		28.0	24.0		28.0	24.0	
Actuated g/C Ratio		0.38			0.26		0.43	0.37		0.43	0.37	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		870			734		201	1192		382	1061	
v/s Ratio Prot		c0.07					c0.24	0.12		0.03	0.28	
v/s Ratio Perm		c0.37			0.17		c1.46			0.20		
v/c Ratio		1.15			0.65		3.97	0.33		0.55	0.76	
Uniform Delay, d1		20.0			21.4		16.9	14.7		12.8	18.0	
Progression Factor		1.00			1.47		0.98	0.87		1.00	1.00	
Incremental Delay, d2		81.0			0.4		1337.6	0.1		5.5	5.3	
Delay (s)		101.0			31.9		1354.3	12.9		18.3	23.3	
Level of Service		F			C		F	B		B	C	
Approach Delay (s)		101.0			31.9			907.9			22.3	
Approach LOS		F			C			F			C	

Intersection Summary			
HCM Average Control Delay	321.9	HCM Level of Service	F
HCM Volume to Capacity ratio	2.63		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	122.0%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	67	198	222	331	159	27	412	1135	991	33	830	66
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.92		1.00	0.98		1.00	0.93		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1707	1840		1601	1991		1676	3012		1437	3283	
Flt Permitted	0.64	1.00		0.34	1.00		0.23	1.00		0.13	1.00	
Satd. Flow (perm)	1144	1840		574	1991		412	3012		195	3283	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	69	204	229	341	164	28	425	1170	1022	34	856	68
RTOR Reduction (vph)	0	62	0	0	9	0	0	242	0	0	9	0
Lane Group Flow (vph)	69	371	0	341	183	0	425	1950	0	34	915	0
Confl. Peds. (#/hr)	3		20	20		3	2		3	3		2
Confl. Bikes (#/hr)			1	1			2		2	2		2
Heavy Vehicles (%)	0%	0%	1%	6%	0%	0%	2%	3%	6%	19%	3%	2%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.48	0.48		0.48	0.48	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	422	679		212	735		196	1436		93	1566	
v/s Ratio Prot		0.20			0.09			0.65			0.28	
v/s Ratio Perm	0.06			c0.59			c1.03			0.17		
v/c Ratio	0.16	0.55		1.61	0.25		2.17	1.36		0.37	0.58	
Uniform Delay, d1	13.8	16.2		20.5	14.2		17.0	17.0		10.8	12.3	
Progression Factor	1.00	1.00		1.34	1.34		1.00	1.00		1.01	0.93	
Incremental Delay, d2	0.8	3.1		275.8	0.1		542.3	165.8		4.7	0.7	
Delay (s)	14.6	19.3		303.3	19.2		559.3	182.8		15.7	12.2	
Level of Service	B	B		F	B		F	F		B	B	
Approach Delay (s)		18.7			201.0			243.9			12.3	
Approach LOS		B			F			F			B	

Intersection Summary					
HCM Average Control Delay	166.3	HCM Level of Service		F	
HCM Volume to Capacity ratio	1.92				
Actuated Cycle Length (s)	65.0	Sum of lost time (s)		10.0	
Intersection Capacity Utilization	132.6%	ICU Level of Service		H	
Analysis Period (min)	15				

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	750	449	534	18	3	10	9	46	9	0	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	10	10	10	12	12	16	12	12	16	12
Total Lost time (s)		5.0		5.0				4.0			4.0	
Lane Util. Factor		0.95		0.95				1.00			1.00	
Frpb, ped/bikes		1.00		1.00				0.99			0.98	
Flpb, ped/bikes		1.00		1.00				1.00			1.00	
Frt		1.00		1.00				0.91			0.94	
Flt Protected		1.00		0.98				0.99			0.97	
Satd. Flow (prot)		3160		3064				1811			1824	
Flt Permitted		0.95		0.59				0.96			0.89	
Satd. Flow (perm)		3009		1841				1750			1672	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	2	789	473	562	19	3	11	9	48	9	0	3
RTOR Reduction (vph)	0	0	0	2	0	0	0	38	0	0	4	0
Lane Group Flow (vph)	0	791	0	1052	0	0	0	33	0	0	13	0
Confl. Peds. (#/hr)	7		4		7		7		2	2		7
Confl. Bikes (#/hr)							2		2	2		2
Heavy Vehicles (%)	0%	1%	2%	1%	6%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Perm		custom				Perm			Perm		
Protected Phases		8	7	4				2			6	
Permitted Phases	8		4 7				2			6		
Actuated Green, G (s)		18.0		27.0				14.0			14.0	
Effective Green, g (s)		18.0		27.0				14.0			14.0	
Actuated g/C Ratio		0.28		0.42				0.22			0.22	
Clearance Time (s)		5.0		5.0				4.0			4.0	
Lane Grp Cap (vph)		833		878				377			360	
v/s Ratio Prot				c0.11								
v/s Ratio Perm		0.26		c0.39				c0.02			0.01	
v/c Ratio		0.95		2.26dl				0.09			0.04	
Uniform Delay, d1		23.1		19.0				20.4			20.2	
Progression Factor		1.40		0.82				1.00			1.00	
Incremental Delay, d2		7.7		99.3				0.5			0.2	
Delay (s)		39.9		115.0				20.9			20.4	
Level of Service		D		F				C			C	
Approach Delay (s)		39.9		115.0				20.9			20.4	
Approach LOS		D		F				C			C	

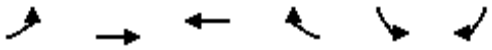
Intersection Summary			
HCM Average Control Delay	772.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.65		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	156.7%	ICU Level of Service	H
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group



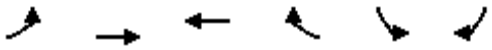
Movement	SBR2	NEL	NER
Lane Configurations			
Volume (vph)	5	3	1155
Ideal Flow (vphpl)	1800	1800	1800
Lane Width	12	12	12
Total Lost time (s)		5.0	
Lane Util. Factor		1.00	
Frpb, ped/bikes		1.00	
Flpb, ped/bikes		1.00	
Frt		0.87	
Flt Protected		1.00	
Satd. Flow (prot)		1557	
Flt Permitted		1.00	
Satd. Flow (perm)		1557	
Peak-hour factor, PHF	0.95	0.95	0.95
Adj. Flow (vph)	5	3	1216
RTOR Reduction (vph)	0	0	0
Lane Group Flow (vph)	0	1219	0
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Heavy Vehicles (%)	0%	0%	0%
Turn Type			
Protected Phases		3	
Permitted Phases			
Actuated Green, G (s)		10.0	
Effective Green, g (s)		10.0	
Actuated g/C Ratio		0.15	
Clearance Time (s)		5.0	
Lane Grp Cap (vph)		240	
v/s Ratio Prot		c0.78	
v/s Ratio Perm			
v/c Ratio		5.08	
Uniform Delay, d1		27.5	
Progression Factor		1.23	
Incremental Delay, d2		1836.5	
Delay (s)		1870.3	
Level of Service		F	
Approach Delay (s)		1870.3	
Approach LOS		F	

Intersection Summary



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	347	1591	762	62	91	245
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frt		1.00	0.99		1.00	0.85
Flt Protected		0.99	1.00		0.95	1.00
Satd. Flow (prot)		3291	3283		1660	1485
Flt Permitted		0.61	1.00		0.95	1.00
Satd. Flow (perm)		2025	3283		1660	1485
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	386	1768	847	69	101	272
RTOR Reduction (vph)	0	0	9	0	0	133
Lane Group Flow (vph)	0	2154	907	0	101	139
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		40.0	40.0		17.0	17.0
Effective Green, g (s)		40.0	40.0		17.0	17.0
Actuated g/C Ratio		0.62	0.62		0.26	0.26
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1246	2020		434	388
v/s Ratio Prot			0.28		0.06	
v/s Ratio Perm		c1.06				c0.09
v/c Ratio		1.73	0.45		0.23	0.36
Uniform Delay, d1		12.5	6.6		18.9	19.6
Progression Factor		2.00	0.97		1.26	1.58
Incremental Delay, d2		328.2	0.6		1.2	2.5
Delay (s)		353.2	7.1		25.0	33.4
Level of Service		F	A		C	C
Approach Delay (s)		353.2	7.1		31.2	
Approach LOS		F	A		C	

Intersection Summary			
HCM Average Control Delay	226.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.32		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	96.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



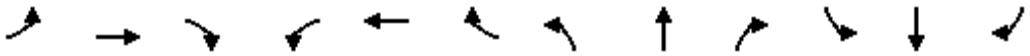
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	102	1583	734	148	259	92
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	12	10	11	12	10	10
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frpb, ped/bikes		1.00	1.00		1.00	0.99
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.97		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3122	3107		1506	1343
Flt Permitted		0.78	1.00		0.95	1.00
Satd. Flow (perm)		2429	3107		1506	1343
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	107	1666	773	156	273	97
RTOR Reduction (vph)	0	0	26	0	0	63
Lane Group Flow (vph)	0	1773	903	0	273	34
Confl. Peds. (#/hr)	2			2		1
Heavy Vehicles (%)	1%	2%	2%	10%	6%	5%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		34.0	34.0		23.0	23.0
Effective Green, g (s)		34.0	34.0		23.0	23.0
Actuated g/C Ratio		0.52	0.52		0.35	0.35
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1271	1625		533	475
v/s Ratio Prot			0.29		c0.18	
v/s Ratio Perm		c0.73				0.03
v/c Ratio		1.39	0.56		0.51	0.07
Uniform Delay, d1		15.5	10.4		16.6	13.9
Progression Factor		1.10	1.31		1.63	3.36
Incremental Delay, d2		178.2	1.1		3.1	0.3
Delay (s)		195.3	14.8		30.1	47.0
Level of Service		F	B		C	D
Approach Delay (s)		195.3	14.8		34.6	
Approach LOS		F	B		C	

Intersection Summary			
HCM Average Control Delay	121.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	100.9%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



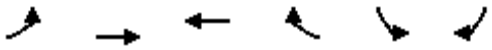
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1379	319	117	752	212	55
Ideal Flow (vphpl)	2300	1800	1800	2300	1800	1800
Lane Width	15	12	14	16	15	12
Total Lost time (s)	5.0		5.0	5.0	5.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.97		1.00	1.00	0.97	
Flt Protected	1.00		0.95	1.00	0.96	
Satd. Flow (prot)	2417		1788	2506	1749	
Flt Permitted	1.00		0.13	1.00	0.96	
Satd. Flow (perm)	2417		243	2506	1749	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	1407	326	119	767	216	56
RTOR Reduction (vph)	13	0	0	0	13	0
Lane Group Flow (vph)	1720	0	119	767	259	0
Confl. Peds. (#/hr)						1
Heavy Vehicles (%)	2%	2%	2%	4%	7%	0%
Turn Type			Perm			
Protected Phases	4			8	2	
Permitted Phases			8			
Actuated Green, G (s)	31.0		31.0	31.0	24.0	
Effective Green, g (s)	31.0		31.0	31.0	24.0	
Actuated g/C Ratio	0.48		0.48	0.48	0.37	
Clearance Time (s)	5.0		5.0	5.0	5.0	
Lane Grp Cap (vph)	1153		116	1195	646	
v/s Ratio Prot	c0.71			0.31	c0.15	
v/s Ratio Perm			0.49			
v/c Ratio	1.49		1.03	0.64	0.40	
Uniform Delay, d1	17.0		17.0	12.8	15.2	
Progression Factor	1.52		1.00	1.00	1.00	
Incremental Delay, d2	221.7		90.7	2.7	1.9	
Delay (s)	247.5		107.7	15.5	17.0	
Level of Service	F		F	B	B	
Approach Delay (s)	247.5			27.9	17.0	
Approach LOS	F			C	B	

Intersection Summary			
HCM Average Control Delay	158.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	111.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	1642	83	108	849	1	70	0	149	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	15	13	11	11	12	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0	4.0	3.0	3.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00			
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1881	3431	1479	1589	3320	1530		1938	1500			
Flt Permitted	0.30	1.00	1.00	0.08	1.00	1.00		0.76	1.00			
Satd. Flow (perm)	601	3431	1479	127	3320	1530		1545	1500			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	1824	92	120	943	1	78	0	166	0	0	0
RTOR Reduction (vph)	0	0	27	0	0	0	0	0	141	0	0	0
Lane Group Flow (vph)	1	1824	65	120	943	1	0	78	25	0	0	0
Heavy Vehicles (%)	0%	3%	0%	4%	3%	0%	0%	0%	2%	0%	0%	0%
Turn Type	Perm		Perm	custom		custom	Perm		Perm	Perm		
Protected Phases		4		3	3 8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)	49.8	49.8	49.8	67.3	67.3	67.3		9.7	9.7			
Effective Green, g (s)	49.8	49.8	49.8	67.3	67.3	67.3		9.7	9.7			
Actuated g/C Ratio	0.59	0.59	0.59	0.79	0.79	0.79		0.11	0.11			
Clearance Time (s)	4.0	4.0	4.0	3.0		4.0		4.0	4.0			
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0			
Lane Grp Cap (vph)	352	2010	867	350	2629	1211		176	171			
v/s Ratio Prot		c0.53		0.06	c0.28							
v/s Ratio Perm	0.00		0.04	0.21		0.00		c0.05	0.02			
v/c Ratio	0.00	0.91	0.07	0.34	0.36	0.00		0.44	0.15			
Uniform Delay, d1	7.3	15.6	7.6	14.0	2.6	1.8		35.1	33.9			
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00			
Incremental Delay, d2	0.0	7.4	0.2	0.6	0.1	0.0		1.8	0.4			
Delay (s)	7.3	23.0	7.8	14.5	2.7	1.8		36.9	34.3			
Level of Service	A	C	A	B	A	A		D	C			
Approach Delay (s)		22.3			4.0			35.1			0.0	
Approach LOS		C			A			D			A	

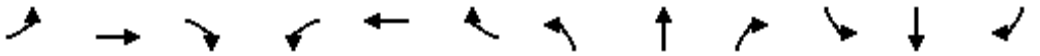
Intersection Summary			
HCM Average Control Delay	17.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	69.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	9	924	810	29	71	13
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10
Total Lost time (s)		5.0	5.0		3.0	
Lane Util. Factor		0.95	0.95		1.00	
Frt		1.00	0.99		0.98	
Flt Protected		1.00	1.00		0.96	
Satd. Flow (prot)		3098	3083		1533	
Flt Permitted		0.94	1.00		0.96	
Satd. Flow (perm)		2924	3083		1533	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	10	1027	900	32	79	14
RTOR Reduction (vph)	0	0	3	0	7	0
Lane Group Flow (vph)	0	1037	929	0	86	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Perm					
Protected Phases		4	8 2 11		5	
Permitted Phases	4					
Actuated Green, G (s)		33.0	64.0		7.0	
Effective Green, g (s)		33.0	64.0		7.0	
Actuated g/C Ratio		0.37	0.71		0.08	
Clearance Time (s)		5.0			3.0	
Lane Grp Cap (vph)		1072	2192		119	
v/s Ratio Prot			c0.30		c0.06	
v/s Ratio Perm		c0.35				
v/c Ratio		0.97	0.42		0.72	
Uniform Delay, d1		28.0	5.4		40.5	
Progression Factor		1.00	0.01		1.00	
Incremental Delay, d2		20.7	0.2		31.1	
Delay (s)		48.6	0.3		71.7	
Level of Service		D	A		E	
Approach Delay (s)		48.6	0.3		71.7	
Approach LOS		D	A		E	

Intersection Summary			
HCM Average Control Delay	27.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	46.1%	ICU Level of Service	A
Analysis Period (min)	15		

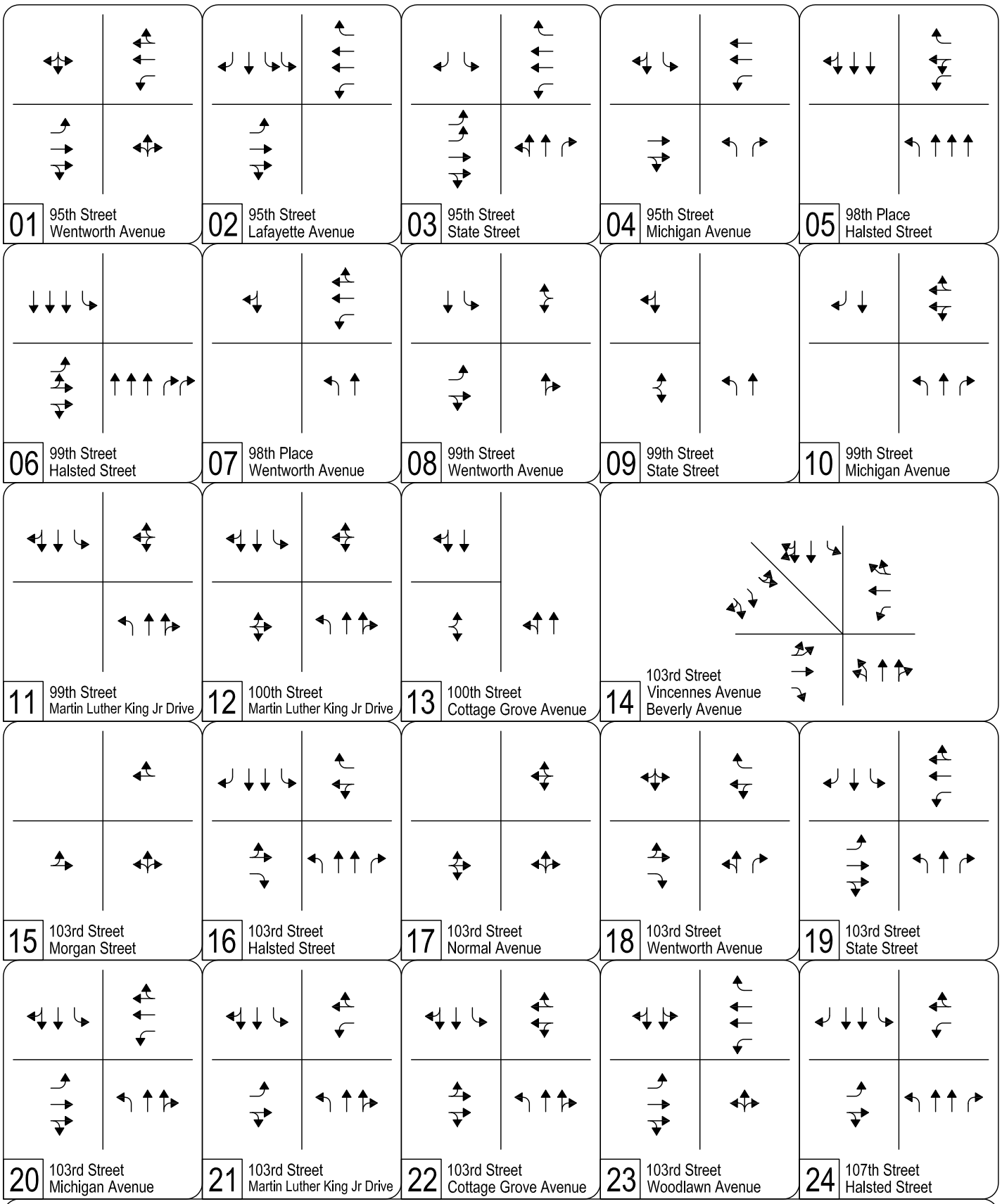
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	58	496	0	1	564	38	3	2	28	192	0	131
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12	12	11	12	11
Total Lost time (s)		4.0			4.0			3.0			3.0	3.0
Lane Util. Factor		1.00			0.95			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			0.94			1.00	0.98
Flpb, ped/bikes		1.00			1.00			1.00			0.99	1.00
Frt		1.00			0.99			0.88			1.00	0.85
Flt Protected		0.99			1.00			1.00			0.95	1.00
Satd. Flow (prot)		1771			3340			1467			1670	1348
Flt Permitted		0.87			0.95			0.93			0.88	1.00
Satd. Flow (perm)		1554			3190			1370			1545	1348
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	64	551	0	1	627	42	3	2	31	213	0	146
RTOR Reduction (vph)	0	0	0	0	6	0	0	28	0	0	0	98
Lane Group Flow (vph)	0	615	0	0	664	0	0	8	0	0	213	48
Confl. Peds. (#/hr)	60		44	44		60	14		10	10		14
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	0%	1%	0%	0%	1%	3%	20%	0%	0%	1%	0%	7%
Turn Type	Perm			Prot			Perm			pm+pt		Perm
Protected Phases		4		3	3 4			1		2	1 2	
Permitted Phases	4				3		1	1		1 2		1 2
Actuated Green, G (s)		31.0			45.0			9.0			25.0	28.0
Effective Green, g (s)		31.0			45.0			9.0			25.0	28.0
Actuated g/C Ratio		0.36			0.53			0.11			0.29	0.33
Clearance Time (s)		4.0						3.0				
Lane Grp Cap (vph)		567			1714			145			478	444
v/s Ratio Prot					c0.06						c0.08	
v/s Ratio Perm		c0.40			0.14			0.01			c0.05	0.04
v/c Ratio		1.08			0.39			0.06			0.45	0.11
Uniform Delay, d1		27.0			11.8			34.2			24.4	19.8
Progression Factor		1.00			1.28			1.00			1.00	1.00
Incremental Delay, d2		62.8			0.1			0.8			3.0	0.5
Delay (s)		89.8			15.2			34.9			27.4	20.3
Level of Service		F			B			C			C	C
Approach Delay (s)		89.8			15.2			34.9			24.5	
Approach LOS		F			B			C			C	

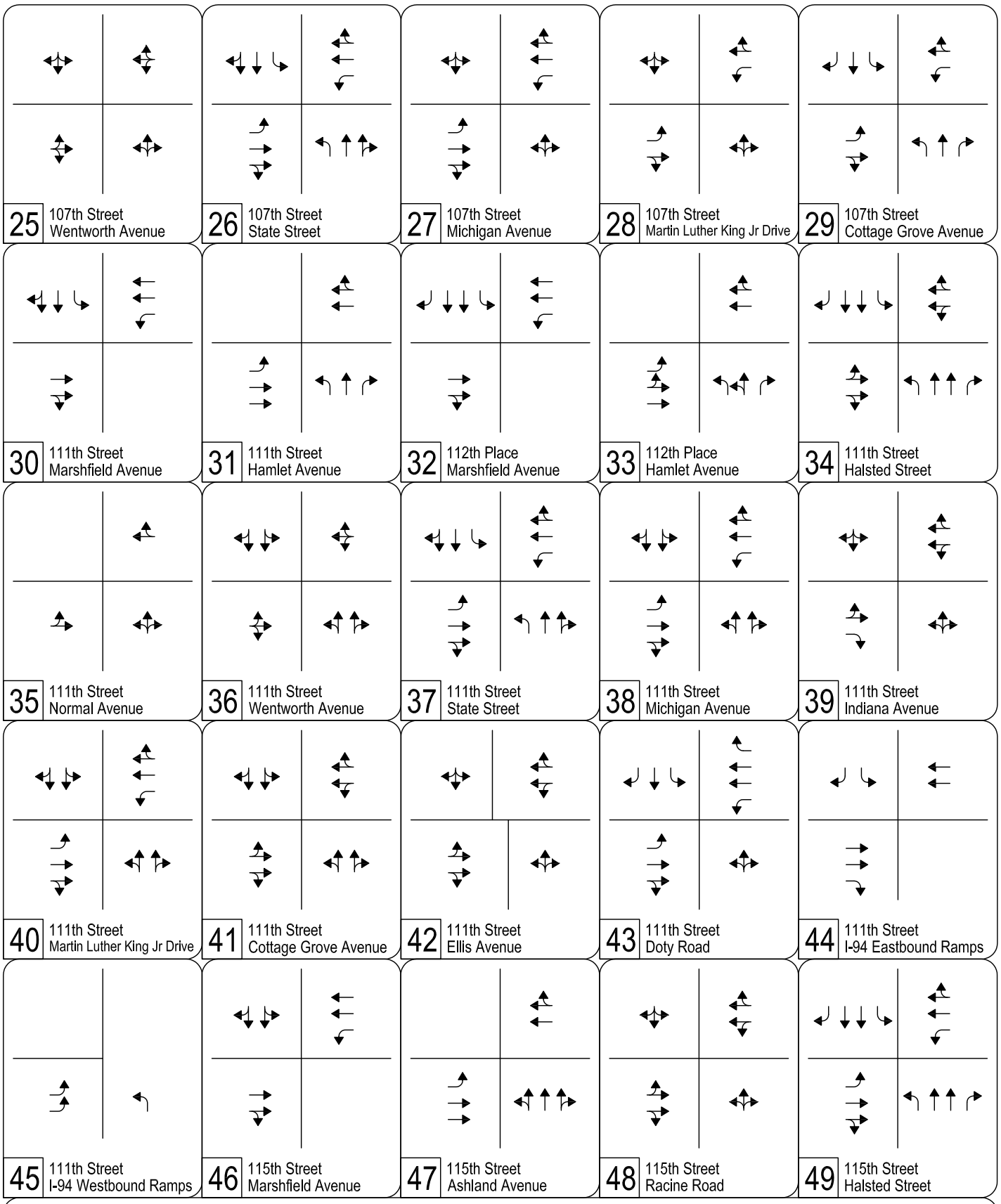
Intersection Summary			
HCM Average Control Delay	44.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	76.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



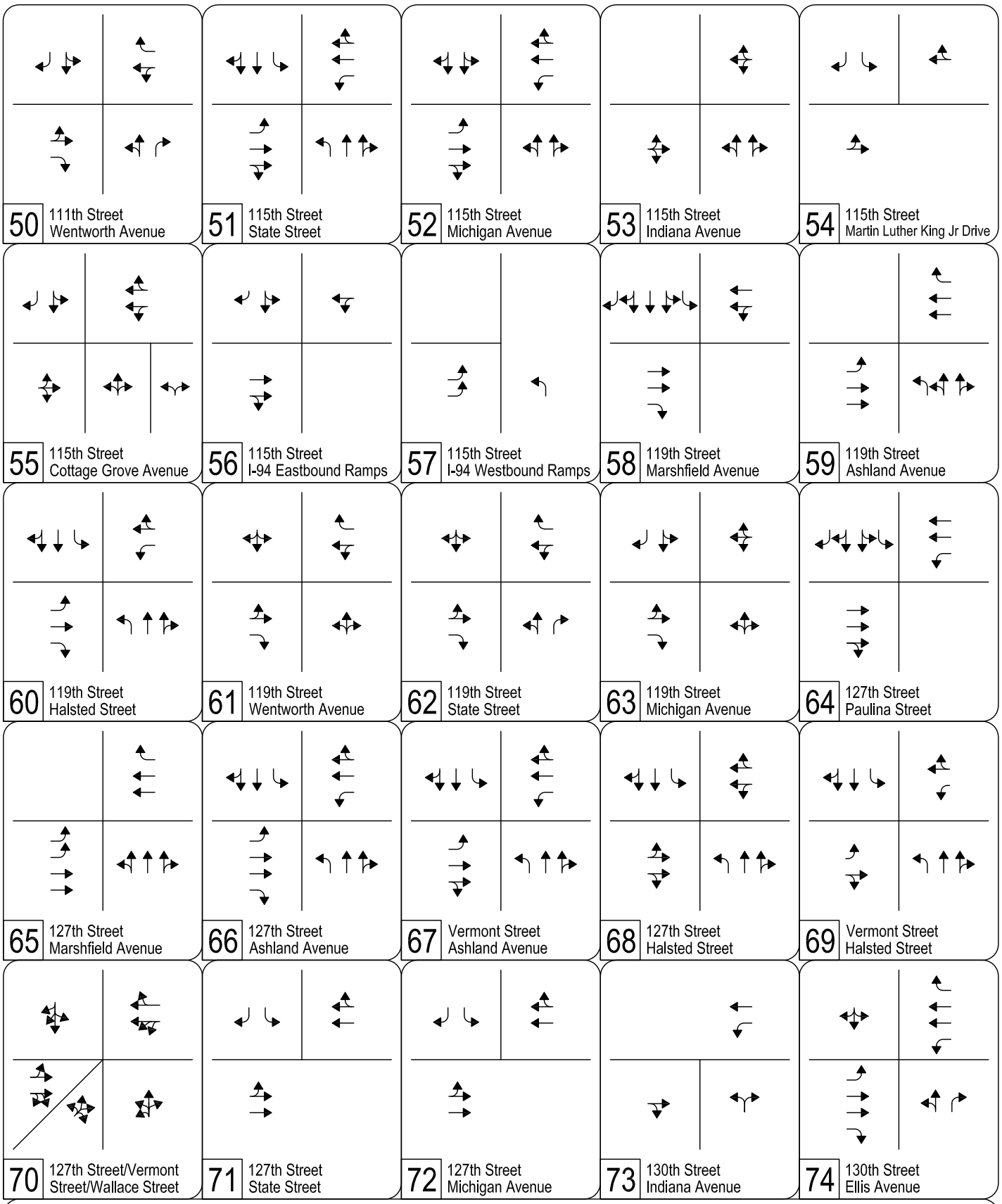
Halsted Rail Alternative (2030) Intersection Lane Geometry

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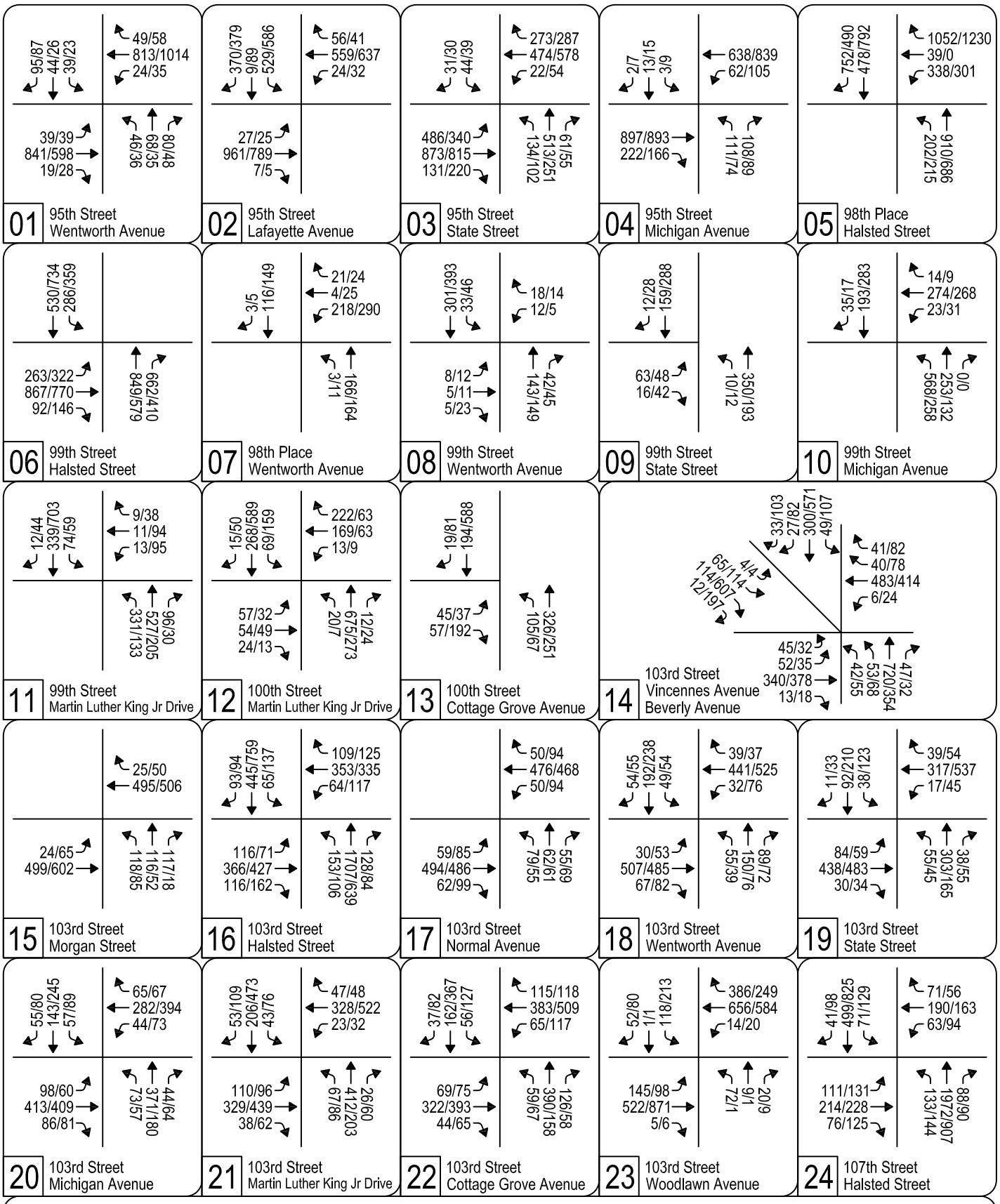
Halsted Rail Alternative (2030) Intersection Lane Geometry

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Halsted Rail Alternative (2030) Intersection Lane Geometry

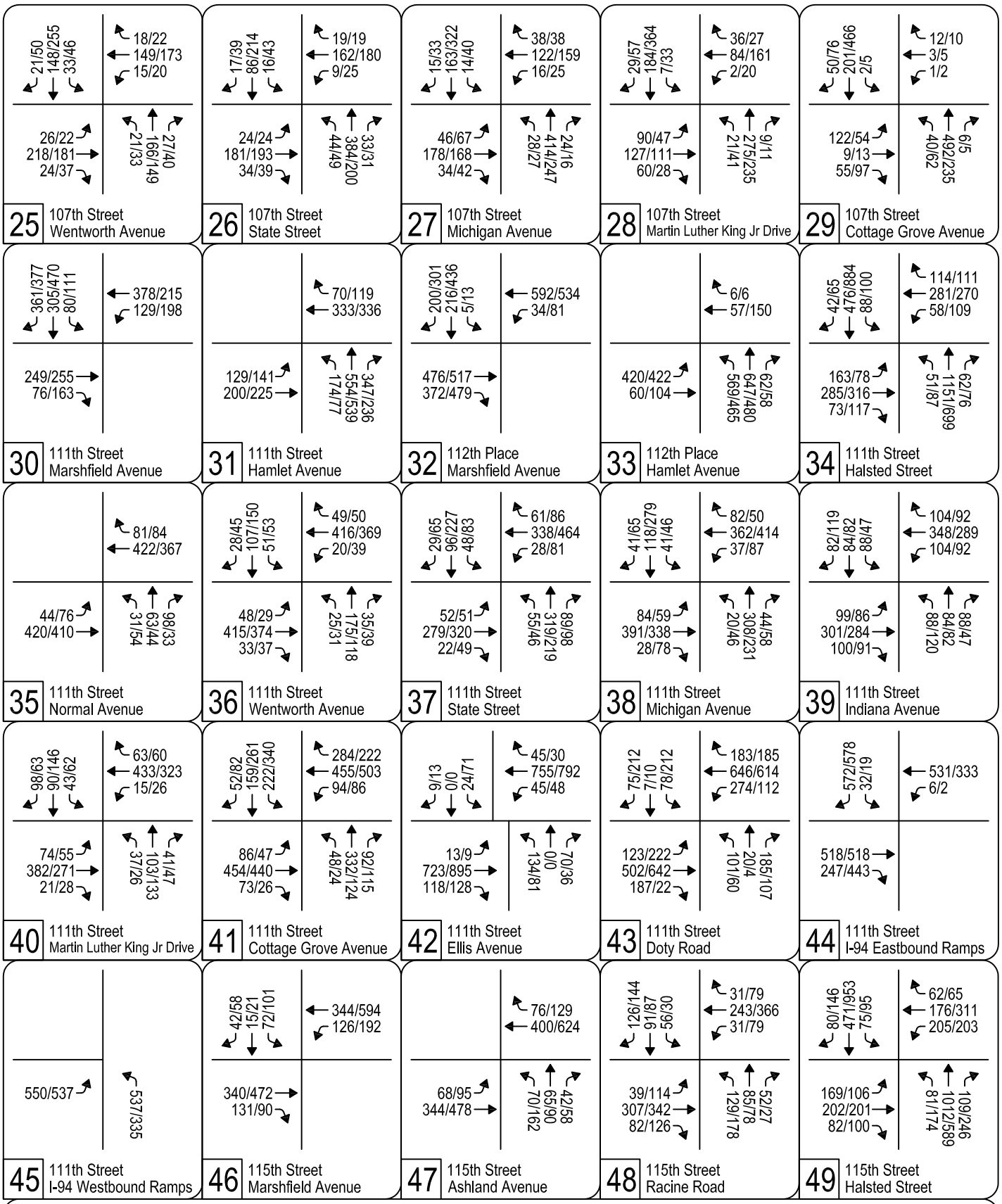
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Halsted Rail Alternative (2030) Intersection Traffic Volumes

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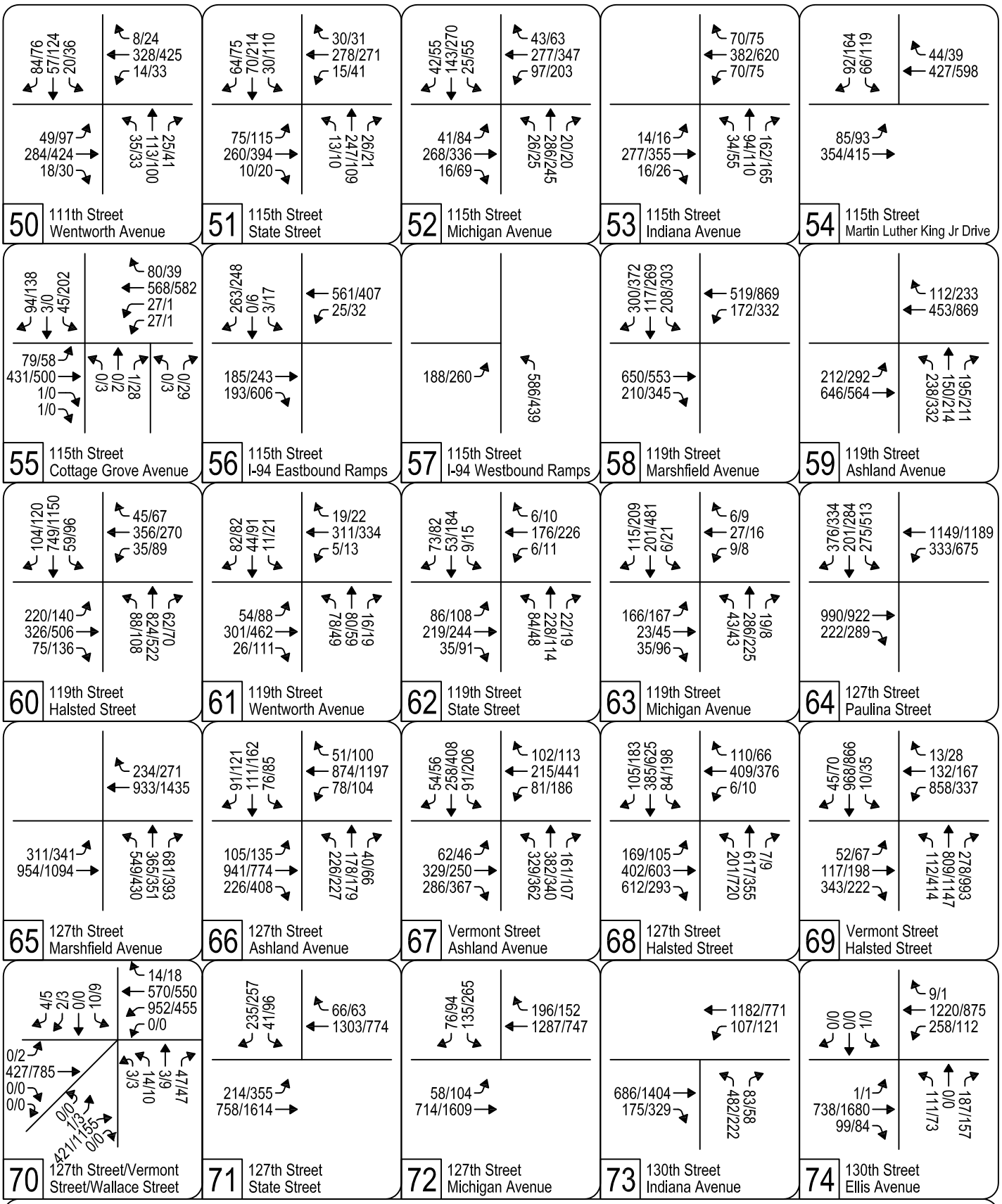
Legend: AM/PM Peak Hour Volumes



Halsted Rail Alternative (2030) Intersection Traffic Volumes

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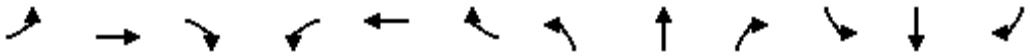
Legend: AM/PM Peak Hour Volumes



Halsted Rail Alternative (2030) Intersection Traffic Volumes

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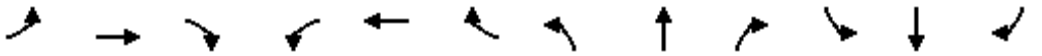
Legend: AM/PM Peak Hour Volumes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	841	19	24	813	49	46	68	80	39	44	95
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	16	10	10	16	8	15	8	8	14	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			0.99			0.99	
Flpb, ped/bikes	0.99	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	0.99			0.94			0.93	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1417	2976		1592	2979			1755			1673	
Flt Permitted	0.25	1.00		0.25	1.00			0.90			0.91	
Satd. Flow (perm)	369	2976		417	2979			1596			1532	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	41	885	20	25	856	52	48	72	84	41	46	100
RTOR Reduction (vph)	0	2	0	0	7	0	0	39	0	0	59	0
Lane Group Flow (vph)	41	903	0	25	901	0	0	165	0	0	128	0
Confl. Peds. (#/hr)	61		11	11		61	3		5	5		3
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	11%	7%	0%	0%	6%	2%	2%	7%	4%	5%	7%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			22.0			22.0	
Effective Green, g (s)	34.0	34.0		34.0	34.0			23.0			23.0	
Actuated g/C Ratio	0.52	0.52		0.52	0.52			0.35			0.35	
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0			5.0	
Lane Grp Cap (vph)	193	1557		218	1558			565			542	
v/s Ratio Prot		c0.30			0.30							
v/s Ratio Perm	0.11			0.06				c0.10			0.08	
v/c Ratio	0.21	0.58		0.11	0.58			0.29			0.24	
Uniform Delay, d1	8.3	10.6		7.9	10.6			15.1			14.8	
Progression Factor	1.00	1.00		0.83	1.16			1.00			1.00	
Incremental Delay, d2	2.5	1.6		0.9	1.4			1.3			1.0	
Delay (s)	10.8	12.2		7.5	13.6			16.4			15.8	
Level of Service	B	B		A	B			B			B	
Approach Delay (s)		12.1			13.5			16.4			15.8	
Approach LOS		B			B			B			B	

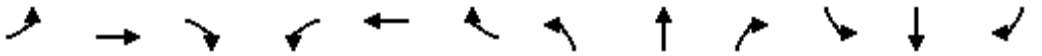
Intersection Summary			
HCM Average Control Delay	13.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	27	961	7	24	559	56	0	0	0	529	9	370
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00				0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.67				1.00	1.00	0.96
Flpb, ped/bikes	0.91	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	778	3285		1710	3138	512				3100	1440	1399
Flt Permitted	0.43	1.00		0.14	1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	352	3285		248	3138	512				3100	1440	1399
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	28	1012	7	25	588	59	0	0	0	557	9	389
RTOR Reduction (vph)	0	1	0	0	0	26	0	0	0	0	0	172
Lane Group Flow (vph)	28	1018	0	25	588	33	0	0	0	557	9	217
Confl. Peds. (#/hr)	354		13	13		354	22		22	22		22
Confl. Bikes (#/hr)	4					4			1	1		
Heavy Vehicles (%)	100%	4%	0%	0%	9%	100%	0%	0%	0%	7%	25%	5%
Turn Type	pm+pt			pm+pt		Perm				Split		Perm
Protected Phases	7	4		3	8					6	6	
Permitted Phases	4			8		8						6
Actuated Green, G (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Effective Green, g (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Actuated g/C Ratio	0.33	0.33		0.56	0.56	0.56				0.23	0.23	0.23
Clearance Time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Grp Cap (vph)	162	1087		634	1762	288				715	332	323
v/s Ratio Prot	0.02	c0.31		0.01	c0.19					c0.18	0.01	
v/s Ratio Perm	0.04			0.01		0.06						0.16
v/c Ratio	0.17	0.94		0.04	0.33	0.12				0.78	0.03	0.67
Uniform Delay, d1	31.6	42.2		15.1	15.4	13.4				46.9	38.7	45.5
Progression Factor	0.80	0.82		0.29	0.63	1.53				1.00	1.00	1.00
Incremental Delay, d2	2.0	14.1		0.1	0.3	0.5				8.2	0.2	10.7
Delay (s)	27.2	48.9		4.5	10.0	20.9				55.1	38.9	56.2
Level of Service	C	D		A	A	C				E	D	E
Approach Delay (s)		48.3			10.7			0.0			55.4	
Approach LOS		D			B			A			E	

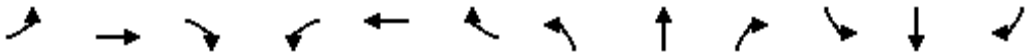
Intersection Summary			
HCM Average Control Delay	41.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	52.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	486	873	131	22	474	273	134	513	61	44	0	31
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.65		1.00	0.94	1.00		0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.98		1.00	1.00	0.85		1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (prot)	3190	3107		1555	2923	944		3300	1417	855		734
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (perm)	3190	3107		1555	2923	944		3300	1417	855		734
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	512	919	138	23	499	287	141	540	64	46	0	33
RTOR Reduction (vph)	0	9	0	0	0	158	0	0	25	0	0	31
Lane Group Flow (vph)	512	1049	0	23	499	129	0	681	39	46	0	2
Confl. Peds. (#/hr)	425		21	21		425	6		34	34		6
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	4%	8%	3%	10%	17%	5%	1%	3%	2%	100%	0%	100%
Turn Type	Prot			Prot		Perm	Split		Perm	Prot		custom
Protected Phases	7	4		3	8		2	2		6		
Permitted Phases						8			2			6
Actuated Green, G (s)	43.0	65.0		9.0	31.0	31.0		30.0	30.0	8.0		8.0
Effective Green, g (s)	43.0	65.0		9.0	31.0	31.0		30.0	30.0	8.0		8.0
Actuated g/C Ratio	0.33	0.50		0.07	0.24	0.24		0.23	0.23	0.06		0.06
Clearance Time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	1055	1554		108	697	225		762	327	53		45
v/s Ratio Prot	0.16	c0.34		0.01	c0.17			c0.21		c0.05		
v/s Ratio Perm						0.14			0.03			0.00
v/c Ratio	0.49	0.67		0.21	0.72	0.57		0.89	0.12	0.87		0.05
Uniform Delay, d1	34.7	24.5		57.2	45.5	43.6		48.5	39.5	60.5		57.4
Progression Factor	0.75	0.20		1.00	1.00	1.00		0.94	0.90	1.00		1.00
Incremental Delay, d2	0.7	1.1		4.5	6.2	10.1		14.9	0.7	76.0		0.4
Delay (s)	26.9	6.0		61.6	51.7	53.8		60.7	36.2	136.5		57.8
Level of Service	C	A		E	D	D		E	D	F		E
Approach Delay (s)		12.8			52.7			58.6			103.6	
Approach LOS		B			D			E			F	

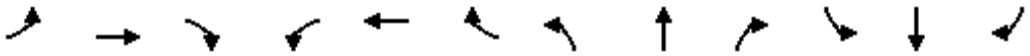
Intersection Summary			
HCM Average Control Delay	35.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	897	222	62	638	0	111	0	108	3	13	2
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	11	11	8	12	12	12	14	15	12
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes		0.99		1.00	1.00		1.00		0.98	1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00		1.00		1.00	0.99	1.00	
Frt		0.97		1.00	1.00		1.00		0.85	1.00	0.98	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		2860		1650	3005		1390		1465	1803	1943	
Flt Permitted		1.00		0.15	1.00		0.75		1.00	0.95	1.00	
Satd. Flow (perm)		2860		267	3005		1093		1465	1803	1943	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	997	247	69	709	0	123	0	120	3	14	2
RTOR Reduction (vph)	0	22	0	0	0	0	0	0	77	0	1	0
Lane Group Flow (vph)	0	1222	0	69	709	0	123	0	43	3	15	0
Confl. Peds. (#/hr)	49		15	15		49			12	12		
Heavy Vehicles (%)	0%	6%	14%	0%	10%	0%	23%	0%	2%	0%	0%	0%
Turn Type				Perm			custom		custom	Perm		
Protected Phases		4			8						6	
Permitted Phases				8			2		2	6		
Actuated Green, G (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Effective Green, g (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Actuated g/C Ratio		0.60		0.60	0.60		0.32		0.32	0.32	0.32	
Clearance Time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)		1716		160	1803		350		469	577	622	
v/s Ratio Prot		c0.43			0.24						0.01	
v/s Ratio Perm				0.26			c0.11		0.03	0.00		
v/c Ratio		0.71		0.43	0.39		0.35		0.09	0.01	0.02	
Uniform Delay, d1		14.0		10.8	10.5		26.0		23.8	23.2	23.3	
Progression Factor		1.00		1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		2.5		8.3	0.6		2.8		0.4	0.0	0.1	
Delay (s)		16.5		19.1	11.1		28.8		24.2	23.2	23.4	
Level of Service		B		B	B		C		C	C	C	
Approach Delay (s)		16.5			11.8			26.5			23.3	
Approach LOS		B			B			C			C	

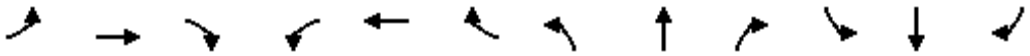
Intersection Summary			
HCM Average Control Delay	16.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	338	39	1052	202	910	0	0	478	752
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	12	10	10	12	12	11	12
Total Lost time (s)				4.0	4.0	5.0	3.0	4.0			4.0	
Lane Util. Factor				0.95	0.95	1.00	1.00	0.91			0.91	
Frpb, ped/bikes				1.00	1.00	0.99	1.00	1.00			0.98	
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00			1.00	
Frt				1.00	1.00	0.85	1.00	1.00			0.91	
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (prot)				1525	1629	1479	1550	4368			3940	
Flt Permitted				0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (perm)				1525	1629	1479	1550	4368			3940	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	345	40	1073	206	929	0	0	488	767
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	345	40	1073	206	929	0	0	1255	0
Confl. Peds. (#/hr)	2					2	12		8	8		12
Heavy Vehicles (%)	0%	0%	0%	3%	5%	2%	3%	5%	0%	0%	5%	8%
Turn Type				Perm		Perm	Prot					
Protected Phases					8		5	2			6	
Permitted Phases				8		8						
Actuated Green, G (s)				30.0	30.0	30.0	32.0	66.0			31.0	
Effective Green, g (s)				31.0	31.0	30.0	32.0	66.0			31.0	
Actuated g/C Ratio				0.30	0.30	0.29	0.30	0.63			0.30	
Clearance Time (s)				5.0	5.0	5.0	3.0	4.0			4.0	
Lane Grp Cap (vph)				450	481	423	472	2746			1163	
v/s Ratio Prot							c0.13	0.21			c0.32	
v/s Ratio Perm				0.23	0.02	c0.73						
v/c Ratio				0.77	0.08	2.54	0.44	0.34			1.91dr	
Uniform Delay, d1				33.7	26.7	37.5	29.3	9.2			37.0	
Progression Factor				1.00	1.00	1.00	0.66	2.38			1.00	
Incremental Delay, d2				11.8	0.3	698.4	2.0	0.2			50.5	
Delay (s)				45.5	27.1	735.9	21.3	22.1			87.5	
Level of Service				D	C	F	C	C			F	
Approach Delay (s)		0.0			553.1			22.0			87.5	
Approach LOS		A			F			C			F	

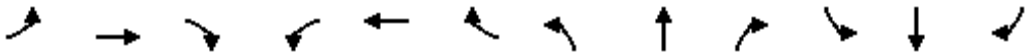
Intersection Summary			
HCM Average Control Delay	244.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.33		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.0%	ICU Level of Service	F
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group



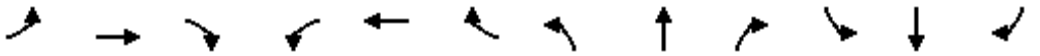
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	263	867	92	0	0	0	0	849	662	286	530	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	13	12	12	12	12	12	10	10	8	12	12	12
Total Lost time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Util. Factor	0.91	0.91						0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00						1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00						1.00	1.00	1.00	1.00	
Frt	1.00	0.99						1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1497	3184						4368	2187	1583	4636	
Flt Permitted	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1497	3184						4368	2187	1583	4636	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	271	894	95	0	0	0	0	875	682	295	546	0
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	244	1009	0	0	0	0	0	875	682	295	546	0
Confl. Peds. (#/hr)	4		14	14		4	4		3	3		4
Heavy Vehicles (%)	7%	1%	0%	0%	0%	0%	0%	5%	4%	8%	6%	0%
Turn Type	Perm								Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Actuated Green, G (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Effective Green, g (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Actuated g/C Ratio	0.32	0.32						0.27	0.27	0.30	0.59	
Clearance Time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Grp Cap (vph)	485	1031						1165	583	467	2737	
v/s Ratio Prot								0.20		c0.19	0.12	
v/s Ratio Perm	0.16	0.32							c0.31			
v/c Ratio	0.50	0.98						0.75	1.17	0.63	0.20	
Uniform Delay, d1	28.7	35.1						35.3	38.5	32.1	10.0	
Progression Factor	1.00	1.00						0.43	0.46	1.06	0.42	
Incremental Delay, d2	3.7	23.4						0.4	78.3	2.2	0.1	
Delay (s)	32.4	58.5						15.7	95.9	36.1	4.3	
Level of Service	C	E						B	F	D	A	
Approach Delay (s)		53.5			0.0			50.8			15.4	
Approach LOS		D			A			D			B	

Intersection Summary			
HCM Average Control Delay	43.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



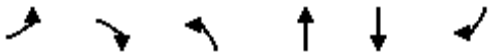
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	218	4	21	3	166	0	0	116	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	14	12	12	16	12
Total Lost time (s)				4.0	4.0		4.0	4.0			-3.0	
Lane Util. Factor				1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes				1.00	0.98		1.00	1.00			1.00	
Flpb, ped/bikes				1.00	1.00		1.00	1.00			1.00	
Frt				1.00	0.87		1.00	1.00			1.00	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1578	2709		1285	1882			1961	
Flt Permitted				0.95	1.00		0.58	1.00			1.00	
Satd. Flow (perm)				1578	2709		781	1882			1961	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	242	4	23	3	184	0	0	129	3
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	242	9	0	3	184	0	0	131	0
Confl. Peds. (#/hr)	2		2	2		2	3					3
Heavy Vehicles (%)	0%	0%	0%	8%	25%	5%	33%	2%	0%	0%	3%	33%
Turn Type				Perm			pm+pt					
Protected Phases					8		7	2			6	
Permitted Phases				8			2					
Actuated Green, G (s)				27.0	27.0		50.0	50.0			40.0	
Effective Green, g (s)				27.0	27.0		50.0	50.0			46.0	
Actuated g/C Ratio				0.32	0.32		0.59	0.59			0.54	
Clearance Time (s)				4.0	4.0		4.0	4.0			3.0	
Lane Grp Cap (vph)				501	861		501	1107			1061	
v/s Ratio Prot					0.00		0.00	c0.10			0.07	
v/s Ratio Perm				c0.15			0.00					
v/c Ratio				0.48	0.01		0.01	0.17			0.12	
Uniform Delay, d1				23.4	19.9		10.0	8.0			9.6	
Progression Factor				1.00	1.00		1.06	1.18			1.00	
Incremental Delay, d2				3.3	0.0		0.0	0.3			0.2	
Delay (s)				26.7	19.9		10.6	9.8			9.8	
Level of Service				C	B		B	A			A	
Approach Delay (s)		0.0			26.0			9.8			9.8	
Approach LOS		A			C			A			A	

Intersection Summary			
HCM Average Control Delay	17.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



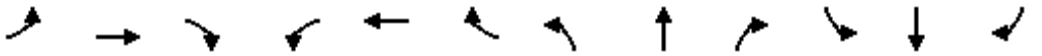
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	8	5	5	12	0	18	0	143	42	33	301	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	16	15	12	8	12	8	12	12	12	10	13	12
Total Lost time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99			1.00			1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00			1.00		1.00	1.00	
Frt	1.00	0.93			0.92			0.97		1.00	1.00	
Flt Protected	0.95	1.00			0.98			1.00		0.95	1.00	
Satd. Flow (prot)	1938	1809			1620			1686		1595	1755	
Flt Permitted	0.74	1.00			0.93			1.00		0.60	1.00	
Satd. Flow (perm)	1502	1809			1543			1686		1005	1755	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	8	5	5	13	0	19	0	151	44	35	317	0
RTOR Reduction (vph)	0	3	0	0	13	0	0	12	0	0	0	0
Lane Group Flow (vph)	8	7	0	0	19	0	0	183	0	35	317	0
Confl. Peds. (#/hr)			3	3			5		2	2		5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	3%	0%	6%	0%
Turn Type	Perm			Perm						pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Effective Green, g (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Actuated g/C Ratio	0.32	0.32			0.32			0.47		0.59	0.59	
Clearance Time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Grp Cap (vph)	477	575			490			793		640	1032	
v/s Ratio Prot		0.00						0.11		0.00	c0.18	
v/s Ratio Perm	0.01				c0.01					0.03		
v/c Ratio	0.02	0.01			0.04			0.23		0.05	0.31	
Uniform Delay, d1	19.9	19.9			20.0			13.4		8.5	8.8	
Progression Factor	1.00	1.00			1.00			1.00		1.01	0.93	
Incremental Delay, d2	0.1	0.0			0.1			0.7		0.2	0.7	
Delay (s)	20.0	19.9			20.2			14.0		8.8	8.9	
Level of Service	B	B			C			B		A	A	
Approach Delay (s)		19.9			20.2			14.0			8.9	
Approach LOS		B			C			B			A	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.21		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	63	16	10	350	159	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	14	12	13	12	10	12
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.97		1.00	1.00	0.99	
Flt Protected	0.96		0.95	1.00	1.00	
Satd. Flow (prot)	1787		1767	1765	1634	
Flt Permitted	0.96		0.64	1.00	1.00	
Satd. Flow (perm)	1787		1187	1765	1634	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	70	18	11	389	177	13
RTOR Reduction (vph)	12	0	0	0	4	0
Lane Group Flow (vph)	76	0	11	389	186	0
Confl. Peds. (#/hr)		2				
Heavy Vehicles (%)	0%	0%	0%	2%	2%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.0		36.0	36.0	36.0	
Effective Green, g (s)	21.0		36.0	36.0	36.0	
Actuated g/C Ratio	0.32		0.55	0.55	0.55	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	577		657	978	905	
v/s Ratio Prot	c0.04			c0.22	0.11	
v/s Ratio Perm			0.01			
v/c Ratio	0.13		0.02	0.40	0.21	
Uniform Delay, d1	15.6		6.5	8.3	7.3	
Progression Factor	1.00		0.32	0.51	1.16	
Incremental Delay, d2	0.5		0.0	1.1	0.4	
Delay (s)	16.0		2.1	5.4	8.9	
Level of Service	B		A	A	A	
Approach Delay (s)	16.0			5.3	8.9	
Approach LOS	B			A	A	

Intersection Summary			
HCM Average Control Delay	7.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	39.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



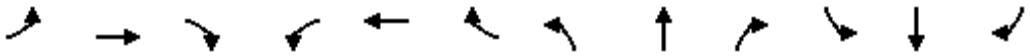
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	23	274	14	568	253	0	0	193	35
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	14	16	12	12	15	12	12	13	10
Total Lost time (s)					4.0		4.0	4.0			3.0	3.0
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Frt					0.99		1.00	1.00			1.00	0.85
Flt Protected					1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3738		1660	1752			1603	1298
Flt Permitted					1.00		0.57	1.00			1.00	1.00
Satd. Flow (perm)					3738		1002	1752			1603	1298
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	26	304	16	631	281	0	0	214	39
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	0	0	0	22
Lane Group Flow (vph)	0	0	0	0	342	0	631	281	0	0	214	17
Confl. Peds. (#/hr)									30	30		
Heavy Vehicles (%)	0%	0%	0%	11%	2%	0%	3%	13%	0%	0%	16%	10%
Turn Type				Split			pm+pt					Perm
Protected Phases				8	8		7	2			6	
Permitted Phases							2					6
Actuated Green, G (s)					26.0		51.0	51.0			38.0	38.0
Effective Green, g (s)					26.0		51.0	51.0			38.0	38.0
Actuated g/C Ratio					0.31		0.60	0.60			0.45	0.45
Clearance Time (s)					4.0		4.0	4.0			3.0	3.0
Lane Grp Cap (vph)					1143		679	1051			717	580
v/s Ratio Prot					c0.09		c0.11	0.16			0.13	
v/s Ratio Perm							c0.45					0.01
v/c Ratio					0.30		0.93	0.27			0.30	0.03
Uniform Delay, d1					22.5		17.0	8.1			15.0	13.2
Progression Factor					1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2					0.7		21.0	0.6			1.1	0.1
Delay (s)					23.2		38.0	8.7			16.1	13.3
Level of Service					C		D	A			B	B
Approach Delay (s)		0.0			23.2			29.0			15.6	
Approach LOS		A			C			C			B	

Intersection Summary			
HCM Average Control Delay	25.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	13	11	9	331	527	96	74	339	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	15	12	12	12	12	12	13	12
Total Lost time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.96		1.00	0.98		1.00	0.99	
Flt Protected					0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1796		1692	3237		1707	3352	
Flt Permitted					0.98		0.50	1.00		0.31	1.00	
Satd. Flow (perm)					1796		894	3237		566	3352	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	14	12	10	368	586	107	82	377	13
RTOR Reduction (vph)	0	0	0	0	7	0	0	20	0	0	3	0
Lane Group Flow (vph)	0	0	0	0	29	0	368	673	0	82	387	0
Confl. Peds. (#/hr)	2					2	6		20	20		6
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	0%	0%	0%	11%	0%	1%	3%	0%	0%	5%	0%
Turn Type				Split			pm+pt			pm+pt		
Protected Phases				8	8		5	2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)					23.0		41.0	34.0		41.0	34.0	
Effective Green, g (s)					23.0		41.0	34.0		41.0	34.0	
Actuated g/C Ratio					0.31		0.55	0.45		0.55	0.45	
Clearance Time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Grp Cap (vph)					551		563	1467		416	1520	
v/s Ratio Prot					c0.02		c0.06	0.21		0.02	0.12	
v/s Ratio Perm							c0.30			0.09		
v/c Ratio					0.05		0.65	0.46		0.20	0.25	
Uniform Delay, d1					18.3		13.7	14.2		12.3	12.7	
Progression Factor					1.00		0.69	0.74		1.00	1.00	
Incremental Delay, d2					0.2		5.3	0.9		1.1	0.4	
Delay (s)					18.5		14.8	11.4		13.4	13.1	
Level of Service					B		B	B		B	B	
Approach Delay (s)		0.0			18.5			12.6			13.1	
Approach LOS		A			B			B			B	

Intersection Summary			
HCM Average Control Delay	12.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	15		

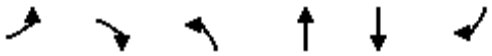
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	57	54	24	13	169	222	20	675	12	69	268	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	16	12	12	10	11	12	12	11	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.93		1.00	1.00		1.00	0.99	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1946			1626		1596	3232		1641	3131	
Flt Permitted		0.68			0.99		0.57	1.00		0.33	1.00	
Satd. Flow (perm)		1354			1613		957	3232		575	3131	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	60	57	25	14	178	234	21	711	13	73	282	16
RTOR Reduction (vph)	0	10	0	0	59	0	0	2	0	0	5	0
Lane Group Flow (vph)	0	132	0	0	367	0	21	722	0	73	293	0
Confl. Peds. (#/hr)									6	6		
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	0%	0%	12%	2%	2%	0%	2%	0%	4%	5%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Effective Green, g (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Actuated g/C Ratio		0.33			0.33		0.56	0.56		0.56	0.56	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		451			538		536	1810		322	1753	
v/s Ratio Prot								c0.22			0.09	
v/s Ratio Perm		0.10			c0.23		0.02			0.13		
v/c Ratio		0.29			0.68		0.04	0.40		0.23	0.17	
Uniform Delay, d1		18.5			21.6		7.4	9.3		8.3	8.0	
Progression Factor		1.00			1.00		1.00	1.00		0.17	0.06	
Incremental Delay, d2		1.6			6.9		0.1	0.7		1.6	0.2	
Delay (s)		20.1			28.4		7.6	10.0		3.0	0.7	
Level of Service		C			C		A	B		A	A	
Approach Delay (s)		20.1			28.4			9.9			1.1	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM Average Control Delay	13.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.8%	ICU Level of Service	C
Analysis Period (min)	15		

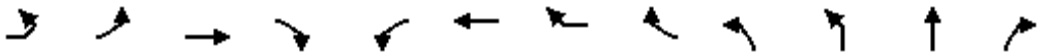
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	45	57	105	326	194	19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	50	63	117	362	216	21

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	113	237	241	144	93
Volume Left (vph)	50	117	0	0	0
Volume Right (vph)	63	0	0	0	21
Hadj (s)	-0.16	0.33	0.08	0.09	-0.07
Departure Headway (s)	5.3	5.4	5.1	5.4	5.2
Degree Utilization, x	0.17	0.36	0.35	0.22	0.14
Capacity (veh/h)	628	654	684	641	660
Control Delay (s)	9.3	10.1	9.6	8.7	7.9
Approach Delay (s)	9.3	9.9		8.4	
Approach LOS	A	A		A	

Intersection Summary			
Delay	9.4		
HCM Level of Service	A		
Intersection Capacity Utilization	35.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	45	52	340	13	6	483	40	41	42	53	720	47
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	0.95	
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.97			1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Frt		1.00	1.00	0.85	1.00	1.00	0.85			1.00	0.99	
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	
Satd. Flow (prot)		1575	1731	1530	1710	1731	1487			1710	3289	
Flt Permitted		0.11	1.00	1.00	0.54	1.00	1.00			0.39	1.00	
Satd. Flow (perm)		187	1731	1530	967	1731	1487			700	3289	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	50	58	378	14	7	537	44	46	47	59	800	52
RTOR Reduction (vph)	0	0	0	7	0	0	32	0	0	0	5	0
Lane Group Flow (vph)	0	108	378	7	7	537	58	0	0	106	847	0
Confl. Peds. (#/hr)		5					5					6
Heavy Vehicles (%)	8%	9%	4%	0%	0%	4%	0%	0%	0%	0%	3%	0%
Turn Type	Perm	pm+pt		Perm	Perm		Perm		Perm	Perm		
Protected Phases		7	4			8					2	
Permitted Phases	4	4		4	8		8		2	2		
Actuated Green, G (s)		50.0	50.0	50.0	32.0	32.0	32.0			25.0	25.0	
Effective Green, g (s)		50.0	50.0	50.0	32.0	32.0	32.0			25.0	25.0	
Actuated g/C Ratio		0.48	0.48	0.48	0.30	0.30	0.30			0.24	0.24	
Clearance Time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Grp Cap (vph)		281	824	729	295	528	453			167	783	
v/s Ratio Prot		0.05	c0.22			c0.31					c0.26	
v/s Ratio Perm		0.13		0.00	0.01		0.04			0.15		
v/c Ratio		0.38	0.46	0.01	0.02	1.02	0.13			0.63	1.08	
Uniform Delay, d1		20.3	18.4	14.5	25.6	36.5	26.4			35.9	40.0	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Incremental Delay, d2		3.9	1.8	0.0	0.1	43.5	0.6			17.0	56.8	
Delay (s)		24.2	20.3	14.5	25.7	80.0	27.0			52.9	96.8	
Level of Service		C	C	B	C	F	C			D	F	
Approach Delay (s)			21.0			71.9					91.9	
Approach LOS			C			E					F	

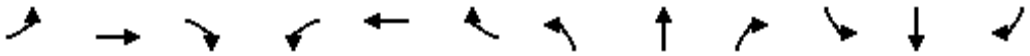
Intersection Summary			
HCM Average Control Delay	62.7	HCM Level of Service	E
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	80.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations								
Volume (vph)	49	300	27	33	4	65	114	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5				4.5	4.5	
Lane Util. Factor	1.00	0.95				1.00	0.88	
Frpb, ped/bikes	1.00	1.00				1.00	1.00	
Flpb, ped/bikes	1.00	1.00				1.00	1.00	
Frt	1.00	0.97				1.00	0.85	
Flt Protected	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1706	3279				1710	2621	
Flt Permitted	0.16	1.00				0.95	1.00	
Satd. Flow (perm)	293	3279				1710	2621	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	54	333	30	37	4	72	127	13
RTOR Reduction (vph)	0	8	0	0	0	0	7	0
Lane Group Flow (vph)	54	392	0	0	0	76	133	0
Confl. Peds. (#/hr)	6							
Heavy Vehicles (%)	0%	2%	0%	0%	0%	0%	3%	0%
Turn Type	Perm				Split		Perm	
Protected Phases		6			9	9		
Permitted Phases	6						9	
Actuated Green, G (s)	24.5	24.5				17.5	17.5	
Effective Green, g (s)	24.5	24.5				17.5	17.5	
Actuated g/C Ratio	0.23	0.23				0.17	0.17	
Clearance Time (s)	4.5	4.5				4.5	4.5	
Lane Grp Cap (vph)	68	765				285	437	
v/s Ratio Prot		0.12				0.04		
v/s Ratio Perm	0.18						c0.05	
v/c Ratio	0.79	0.51				0.27	0.31	
Uniform Delay, d1	37.9	35.1				38.2	38.4	
Progression Factor	1.00	1.00				1.00	1.00	
Incremental Delay, d2	61.4	2.4				2.3	1.8	
Delay (s)	99.3	37.5				40.4	40.2	
Level of Service	F	D				D	D	
Approach Delay (s)		44.9				40.3		
Approach LOS		D				D		

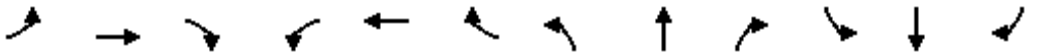
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	499	0	0	495	25	118	116	117	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	11	11	16	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.99			0.95				
Flt Protected		1.00			1.00			0.98				
Satd. Flow (prot)		1653			1930			1771				
Flt Permitted		0.96			1.00			0.98				
Satd. Flow (perm)		1598			1930			1771				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	554	0	0	550	28	131	129	130	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	581	0	0	578	0	0	390	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		31.0			31.0			26.0				
Effective Green, g (s)		31.0			31.0			26.0				
Actuated g/C Ratio		0.48			0.48			0.40				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		762			920			708				
v/s Ratio Prot					0.30							
v/s Ratio Perm		c0.36						0.22				
v/c Ratio		0.76			0.63			0.55				
Uniform Delay, d1		14.0			12.7			15.0				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		7.1			3.2			3.1				
Delay (s)		21.1			15.9			18.1				
Level of Service		C			B			B				
Approach Delay (s)		21.1			15.9			18.1			0.0	
Approach LOS		C			B			B			A	

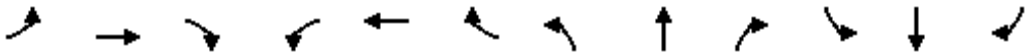
Intersection Summary			
HCM Average Control Delay	18.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	75.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	116	366	116	64	353	109	153	1707	128	65	445	93
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	9	9	10	9
Total Lost time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.96	1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1923	1426		1923	1396	1500	3099	1284	1425	2956	1265
Flt Permitted		0.55	1.00		0.62	1.00	0.40	1.00	1.00	0.09	1.00	1.00
Satd. Flow (perm)		1062	1426		1194	1396	625	3099	1284	142	2956	1265
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	122	385	122	67	372	115	161	1797	135	68	468	98
RTOR Reduction (vph)	0	0	72	0	0	68	0	0	29	0	0	59
Lane Group Flow (vph)	0	507	50	0	439	47	161	1797	106	68	468	39
Confl. Peds. (#/hr)	42		39	39		42	20		8	8		20
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	6%	4%	3%	0%	6%	5%	6%	3%	4%	8%	8%	4%
Turn Type	pm+pt		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		43.0	43.0		43.0	43.0	53.1	44.4	44.4	48.9	42.3	42.3
Effective Green, g (s)		43.0	43.0		43.0	43.0	53.1	44.4	44.4	48.9	42.3	42.3
Actuated g/C Ratio		0.41	0.41		0.41	0.41	0.51	0.42	0.42	0.47	0.40	0.40
Clearance Time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		435	584		489	572	389	1310	543	147	1191	510
v/s Ratio Prot							c0.03	c0.58		c0.03	0.16	
v/s Ratio Perm		c0.48	0.04		0.37	0.03	0.18		0.08	0.19		0.03
v/c Ratio		1.17	0.09		0.90	0.08	0.41	1.37	0.19	0.46	0.39	0.08
Uniform Delay, d1		31.0	19.0		28.9	18.9	14.8	30.3	19.1	23.1	22.2	19.3
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.11	0.75	0.39
Incremental Delay, d2		96.9	0.3		21.9	0.3	0.7	172.2	0.8	2.2	0.9	0.3
Delay (s)		127.9	19.3		50.8	19.2	15.5	202.5	19.9	27.9	17.5	7.7
Level of Service		F	B		D	B	B	F	B	C	B	A
Approach Delay (s)		106.8			44.3			176.3			17.1	
Approach LOS		F			D			F			B	

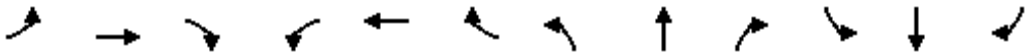
Intersection Summary			
HCM Average Control Delay	120.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.21		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	117.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	494	62	50	476	50	79	62	55	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		0.99			0.99			0.96				
Flt Protected		1.00			1.00			0.98				
Satd. Flow (prot)		1627			1630			1779				
Flt Permitted		0.90			0.91			0.98				
Satd. Flow (perm)		1473			1489			1779				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	66	549	69	56	529	56	88	69	61	0	0	0
RTOR Reduction (vph)	0	6	0	0	5	0	0	21	0	0	0	0
Lane Group Flow (vph)	0	678	0	0	636	0	0	197	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		38.0			38.0			19.0				
Effective Green, g (s)		38.0			38.0			19.0				
Actuated g/C Ratio		0.58			0.58			0.29				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		861			870			520				
v/s Ratio Prot												
v/s Ratio Perm		c0.46			0.43			0.11				
v/c Ratio		0.79			0.73			0.38				
Uniform Delay, d1		10.4			9.8			18.3				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		7.2			5.4			2.1				
Delay (s)		17.6			15.2			20.4				
Level of Service		B			B			C				
Approach Delay (s)		17.6			15.2			20.4			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM Average Control Delay	17.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	65.3%	ICU Level of Service	C
Analysis Period (min)	15		

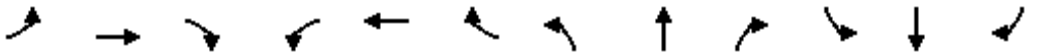
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	507	67	32	441	39	55	150	89	49	192	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	11	12	12	15	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.97		1.00	0.95		1.00	0.98		0.98	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		0.99	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.98	
Flt Protected		1.00	1.00		1.00	1.00		0.99	1.00		0.99	
Satd. Flow (prot)		1656	1255		1636	1288		1658	1490		1737	
Flt Permitted		0.96	1.00		0.95	1.00		0.84	1.00		0.92	
Satd. Flow (perm)		1595	1255		1554	1288		1416	1490		1607	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	32	534	71	34	464	41	58	158	94	52	202	57
RTOR Reduction (vph)	0	0	30	0	0	16	0	0	64	0	11	0
Lane Group Flow (vph)	0	566	41	0	498	25	0	216	30	0	300	0
Confl. Peds. (#/hr)	33		15	15		33	68		5	5		68
Confl. Bikes (#/hr)	4					4						
Heavy Vehicles (%)	0%	5%	14%	19%	5%	9%	2%	2%	1%	10%	7%	8%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Effective Green, g (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.32	0.32		0.32	
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Grp Cap (vph)		914	720		891	738		453	477		514	
v/s Ratio Prot												
v/s Ratio Perm		c0.35	0.03		0.32	0.02		0.15	0.02		c0.19	
v/c Ratio		0.62	0.06		0.56	0.03		0.48	0.06		0.58	
Uniform Delay, d1		10.6	7.1		10.0	7.0		20.5	17.7		21.3	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		3.1	0.1		2.5	0.1		3.6	0.3		4.8	
Delay (s)		13.7	7.2		12.6	7.0		24.0	18.0		26.1	
Level of Service		B	A		B	A		C	B		C	
Approach Delay (s)		13.0			12.2			22.2			26.1	
Approach LOS		B			B			C			C	

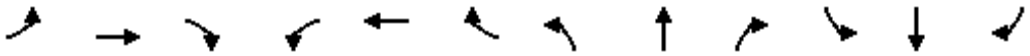
Intersection Summary			
HCM Average Control Delay	16.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	95.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	84	438	30	17	317	39	55	303	38	38	92	11
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	11	16	8	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.98	1.00	1.00	0.99
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1464	2990		1459	3534		1534	1647	1301	1517	1541	1156
Flt Permitted	0.51	1.00		0.43	1.00		0.69	1.00	1.00	0.45	1.00	1.00
Satd. Flow (perm)	788	2990		658	3534		1116	1647	1301	720	1541	1156
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	93	487	33	19	352	43	61	337	42	42	102	12
RTOR Reduction (vph)	0	7	0	0	15	0	0	0	22	0	0	7
Lane Group Flow (vph)	93	513	0	19	380	0	61	337	20	42	102	5
Confl. Peds. (#/hr)	16		9	9		16	1		5	5		1
Heavy Vehicles (%)	8%	6%	0%	13%	8%	3%	4%	2%	8%	5%	9%	22%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Effective Green, g (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	376	1426		314	1685		446	659	520	288	616	462
v/s Ratio Prot		c0.17			0.11			c0.20			0.07	
v/s Ratio Perm	0.12			0.03			0.05		0.02	0.06		0.00
v/c Ratio	0.25	0.36		0.06	0.23		0.14	0.51	0.04	0.15	0.17	0.01
Uniform Delay, d1	10.1	10.7		9.2	10.0		12.4	14.7	11.9	12.4	12.5	11.7
Progression Factor	1.00	1.00		1.00	1.00		0.60	0.74	0.31	0.53	0.54	0.28
Incremental Delay, d2	1.6	0.7		0.4	0.3		0.6	2.8	0.1	1.1	0.6	0.0
Delay (s)	11.6	11.4		9.5	10.3		8.0	13.6	3.8	7.7	7.3	3.4
Level of Service	B	B		A	B		A	B	A	A	A	A
Approach Delay (s)		11.5			10.2			11.9			7.1	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	10.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

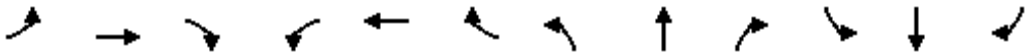


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	98	413	86	44	282	65	73	371	44	57	143	55
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	11	10	11	11	10	11	11	10	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.96	1.00		1.00	1.00		0.98	1.00		0.97	1.00	
Frt	1.00	0.97		1.00	0.97		1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1464	3056		1588	3009		1541	3022		1403	2767	
Flt Permitted	0.52	1.00		0.42	1.00		0.62	1.00		0.46	1.00	
Satd. Flow (perm)	808	3056		698	3009		1007	3022		678	2767	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	103	435	91	46	297	68	77	391	46	60	151	58
RTOR Reduction (vph)	0	0	0	0	0	0	0	12	0	0	34	0
Lane Group Flow (vph)	103	526	0	46	365	0	77	425	0	60	175	0
Confl. Peds. (#/hr)	98		10	10		98	28		52	52		28
Heavy Vehicles (%)	5%	5%	4%	0%	5%	7%	2%	6%	13%	10%	11%	20%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.41	0.41		0.41	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	388	1467		335	1444		416	1249		280	1144	
v/s Ratio Prot		c0.17			0.12			c0.14			0.06	
v/s Ratio Perm	0.13			0.07			0.08			0.09		
v/c Ratio	0.27	0.36		0.14	0.25		0.19	0.34		0.21	0.15	
Uniform Delay, d1	11.6	12.2		10.9	11.5		14.0	15.0		14.2	13.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.7	0.7		0.9	0.4		1.0	0.7		1.7	0.3	
Delay (s)	13.3	12.9		11.7	12.0		15.0	15.8		15.9	14.1	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		13.0			11.9			15.6			14.5	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	110	329	38	23	328	47	67	412	26	43	206	53
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	8	16	12	9	10	10	9	10	10
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1533	1576		1474	1841		1533	3073		1372	2881	
Flt Permitted	0.45	1.00		0.46	1.00		0.58	1.00		0.41	1.00	
Satd. Flow (perm)	720	1576		713	1841		942	3073		597	2881	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	116	346	40	24	345	49	71	434	27	45	217	56
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	116	386	0	24	394	0	71	461	0	45	273	0
Confl. Peds. (#/hr)	7		23	23		7	10		8	8		10
Confl. Bikes (#/hr)	1		2	2		1	1		1	1		1
Heavy Vehicles (%)	4%	8%	10%	0%	9%	5%	0%	3%	0%	12%	7%	6%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	47.0	41.8		40.6	38.6		26.8	22.2		23.6	20.6	
Effective Green, g (s)	47.0	39.8		40.6	36.6		26.8	20.2		23.6	18.6	
Actuated g/C Ratio	0.55	0.47		0.48	0.43		0.32	0.24		0.28	0.22	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	448	738		358	793		329	730		193	630	
v/s Ratio Prot	c0.02	c0.24		0.00	0.21		c0.01	c0.15		0.01	0.09	
v/s Ratio Perm	0.13			0.03			0.06			0.06		
v/c Ratio	0.26	0.52		0.07	0.50		0.22	0.63		0.23	0.43	
Uniform Delay, d1	13.5	15.9		15.0	17.5		21.5	29.1		26.1	28.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	2.6		0.1	2.2		0.3	4.1		0.6	2.2	
Delay (s)	13.8	18.6		15.1	19.7		21.9	33.2		26.8	30.8	
Level of Service	B	B		B	B		C	C		C	C	
Approach Delay (s)		17.5			19.5			31.7			30.2	
Approach LOS		B			B			C			C	

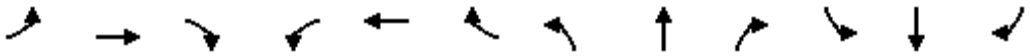
Intersection Summary			
HCM Average Control Delay	24.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	63.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	69	322	44	65	383	115	59	390	126	56	162	37
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	11	11	11	11	12	12	10	10	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		0.99	1.00	
Frt		0.98			0.97		1.00	0.96		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3493			2913		1614	3156		1581	2921	
Flt Permitted		0.78			0.84		0.61	1.00		0.38	1.00	
Satd. Flow (perm)		2748			2465		1042	3156		628	2921	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	77	358	49	72	426	128	66	433	140	62	180	41
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	484	0	0	626	0	66	573	0	62	221	0
Confl. Peds. (#/hr)	20		16	16		20	5		33	33		5
Confl. Bikes (#/hr)	2					2			2	2		
Heavy Vehicles (%)	9%	9%	0%	24%	7%	6%	2%	4%	2%	0%	5%	9%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.0			33.0		32.0	32.0		32.0	32.0	
Effective Green, g (s)		34.0			34.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio		0.45			0.45		0.44	0.44		0.44	0.44	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		1246			1117		458	1389		276	1285	
v/s Ratio Prot								c0.18			0.08	
v/s Ratio Perm		0.18			c0.25		0.06			0.10		
v/c Ratio		0.39			0.56		0.14	0.41		0.22	0.17	
Uniform Delay, d1		13.6			15.0		12.6	14.4		13.0	12.7	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.9			2.0		0.7	0.9		1.9	0.3	
Delay (s)		14.5			17.1		13.2	15.3		14.9	13.0	
Level of Service		B			B		B	B		B	B	
Approach Delay (s)		14.5			17.1			15.1			13.4	
Approach LOS		B			B			B			B	

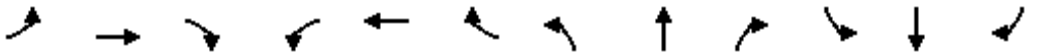
Intersection Summary			
HCM Average Control Delay	15.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	145	522	5	14	656	386	72	9	20	118	1	52
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	12	12	12	12	12	13	13	13
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	1.00		1.00	1.00	0.85		0.97			0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97			0.97	
Satd. Flow (prot)	1574	3144		1629	3257	1457		1611			3105	
Flt Permitted	0.35	1.00		0.42	1.00	1.00		0.69			0.75	
Satd. Flow (perm)	585	3144		721	3257	1457		1158			2398	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	161	580	6	16	729	429	80	10	22	131	1	58
RTOR Reduction (vph)	0	1	0	0	0	150	0	12	0	0	44	0
Lane Group Flow (vph)	161	585	0	16	729	279	0	100	0	0	146	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	46.0	46.0		46.0	46.0	46.0		16.7			16.7	
Effective Green, g (s)	46.0	46.0		46.0	46.0	46.0		16.7			16.7	
Actuated g/C Ratio	0.65	0.65		0.65	0.65	0.65		0.24			0.24	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		8.0			8.0	
Lane Grp Cap (vph)	381	2046		469	2119	948		274			566	
v/s Ratio Prot		0.19			0.22							
v/s Ratio Perm	c0.28			0.02		0.19		c0.09			0.06	
v/c Ratio	0.42	0.29		0.03	0.34	0.29		0.36			0.26	
Uniform Delay, d1	6.0	5.3		4.4	5.6	5.3		22.6			22.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	3.4	0.4		0.1	0.4	0.8		3.5			1.0	
Delay (s)	9.4	5.7		4.5	6.0	6.1		26.1			23.0	
Level of Service	A	A		A	A	A		C			C	
Approach Delay (s)		6.5			6.0			26.1			23.0	
Approach LOS		A			A			C			C	

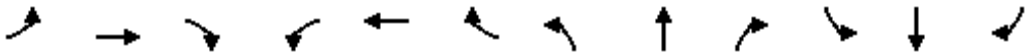
Intersection Summary			
HCM Average Control Delay	8.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	70.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	111	214	76	63	190	71	133	1972	88	71	499	41
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	9	12	10	10	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.96	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.96		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1548	1498		1547	1584		1493	3069	1271	1452	2983	1301
Flt Permitted	0.37	1.00		0.32	1.00		0.39	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	608	1498		521	1584		612	3069	1271	180	2983	1301
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	117	225	80	66	200	75	140	2076	93	75	525	43
RTOR Reduction (vph)	0	15	0	0	16	0	0	0	18	0	0	25
Lane Group Flow (vph)	117	290	0	66	259	0	140	2076	75	75	525	18
Confl. Peds. (#/hr)	4		9	9		4	6		16	16		6
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	3%	3%	4%	3%	1%	2%	3%	4%	4%	6%	7%	3%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	28.0	21.0		28.0	21.0		42.0	35.0	35.0	42.0	35.0	35.0
Effective Green, g (s)	26.0	22.0		26.0	22.0		40.0	35.0	35.0	40.0	35.0	35.0
Actuated g/C Ratio	0.31	0.26		0.31	0.26		0.47	0.41	0.41	0.47	0.41	0.41
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	252	388		232	410		350	1264	523	174	1228	536
v/s Ratio Prot	c0.03	c0.19		0.02	0.16		0.03	c0.68		c0.03	0.18	
v/s Ratio Perm	0.11			0.07			0.16		0.06	0.17		0.01
v/c Ratio	0.46	0.75		0.28	0.63		0.40	1.64	0.14	0.43	0.43	0.03
Uniform Delay, d1	22.5	29.0		21.9	27.9		13.3	25.0	15.6	18.1	17.8	14.9
Progression Factor	1.00	1.00		1.00	1.00		0.62	0.71	0.50	1.00	1.00	1.00
Incremental Delay, d2	6.0	12.4		3.1	7.2		2.7	292.0	0.5	7.6	1.1	0.1
Delay (s)	28.6	41.4		24.9	35.2		11.0	309.8	8.2	25.7	18.9	15.0
Level of Service	C	D		C	D		B	F	A	C	B	B
Approach Delay (s)		37.8			33.2			279.5			19.5	
Approach LOS		D			C			F			B	

Intersection Summary			
HCM Average Control Delay	184.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	96.8%	ICU Level of Service	F
Analysis Period (min)	15		

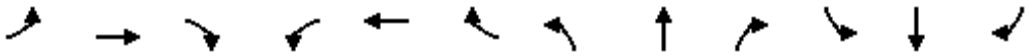
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	26	218	24	15	149	18	21	166	27	33	148	21
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	14	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.99			0.98			0.99	
Flt Protected		1.00			1.00			1.00			0.99	
Satd. Flow (prot)		1843			1836			1900			1931	
Flt Permitted		0.96			0.97			0.97			0.94	
Satd. Flow (perm)		1787			1790			1844			1822	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	27	225	25	15	154	19	22	171	28	34	153	22
RTOR Reduction (vph)	0	5	0	0	6	0	0	8	0	0	6	0
Lane Group Flow (vph)	0	272	0	0	182	0	0	213	0	0	203	0
Confl. Peds. (#/hr)	5		11	11		5	7		34	34		7
Confl. Bikes (#/hr)			3	3								
Heavy Vehicles (%)	4%	2%	0%	20%	1%	0%	12%	3%	8%	0%	3%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.42			0.42			0.46			0.46	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		742			744			851			841	
v/s Ratio Prot												
v/s Ratio Perm		c0.15			0.10			c0.12			0.11	
v/c Ratio		0.37			0.24			0.25			0.24	
Uniform Delay, d1		13.1			12.4			10.7			10.6	
Progression Factor		1.00			0.64			1.08			1.00	
Incremental Delay, d2		1.4			0.8			0.7			0.7	
Delay (s)		14.5			8.6			12.2			11.3	
Level of Service		B			A			B			B	
Approach Delay (s)		14.5			8.6			12.2			11.3	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	11.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.8%	ICU Level of Service	A
Analysis Period (min)	15		

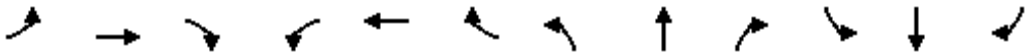
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	181	34	9	162	19	44	384	33	16	86	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.95	1.00		1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1465	2994		1302	3037		1529	3093		1492	2868	
Flt Permitted	0.63	1.00		0.60	1.00		0.68	1.00		0.48	1.00	
Satd. Flow (perm)	965	2994		827	3037		1093	3093		757	2868	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	201	38	10	180	21	49	427	37	18	96	19
RTOR Reduction (vph)	0	24	0	0	13	0	0	10	0	0	8	0
Lane Group Flow (vph)	27	215	0	10	188	0	49	454	0	18	107	0
Confl. Peds. (#/hr)	35		6	6		35	18					18
Confl. Bikes (#/hr)	14		32	32		14	23		7	7		23
Heavy Vehicles (%)	4%	4%	0%	22%	2%	6%	3%	2%	0%	7%	8%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0		39.0	39.0		39.0	39.0	
Effective Green, g (s)	19.0	19.0		19.0	19.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.58	0.58		0.58	0.58	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	282	875		242	888		639	1808		443	1677	
v/s Ratio Prot		c0.07			0.06			c0.15			0.04	
v/s Ratio Perm	0.03			0.01			0.04			0.02		
v/c Ratio	0.10	0.25		0.04	0.21		0.08	0.25		0.04	0.06	
Uniform Delay, d1	16.7	17.5		16.5	17.3		5.9	6.6		5.7	5.8	
Progression Factor	0.73	0.73		0.76	0.74		0.93	0.96		0.49	0.44	
Incremental Delay, d2	0.6	0.6		0.3	0.5		0.2	0.3		0.2	0.1	
Delay (s)	12.9	13.5		12.8	13.4		5.7	6.6		3.0	2.6	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		13.5			13.3			6.5			2.7	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	9.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.7%	ICU Level of Service	A
Analysis Period (min)	15		

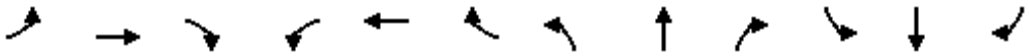
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	46	178	34	16	122	38	28	414	24	14	163	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	9	9	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.98		1.00	0.96			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1556	2952		1515	2868			1878			1808	
Flt Permitted	0.64	1.00		0.60	1.00			0.98			0.96	
Satd. Flow (perm)	1047	2952		965	2868			1838			1739	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	51	198	38	18	136	42	31	460	27	16	181	17
RTOR Reduction (vph)	0	23	0	0	25	0	0	3	0	0	5	0
Lane Group Flow (vph)	51	213	0	18	153	0	0	515	0	0	209	0
Confl. Peds. (#/hr)	10		29	29		10	17		10	10		17
Confl. Bikes (#/hr)									2	2		
Heavy Vehicles (%)	2%	4%	10%	0%	4%	0%	0%	8%	4%	0%	13%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Effective Green, g (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40			0.48			0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	419	1181		386	1147			877			829	
v/s Ratio Prot		c0.07			0.05							
v/s Ratio Perm	0.05			0.02				c0.28			0.12	
v/c Ratio	0.12	0.18		0.05	0.13			0.59			0.25	
Uniform Delay, d1	12.3	12.6		11.9	12.4			12.4			10.1	
Progression Factor	1.01	0.92		0.86	0.88			1.02			1.00	
Incremental Delay, d2	0.6	0.3		0.2	0.2			2.8			0.7	
Delay (s)	13.1	12.0		10.5	11.1			15.4			10.8	
Level of Service	B	B		B	B			B			B	
Approach Delay (s)		12.2			11.0			15.4			10.8	
Approach LOS		B			B			B			B	

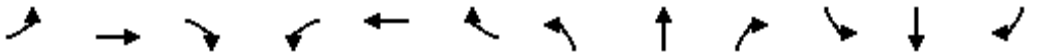
Intersection Summary			
HCM Average Control Delay	13.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



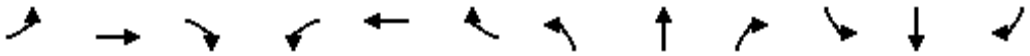
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	90	127	60	2	84	36	21	275	9	7	184	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	16	12	10	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.95		1.00	0.95			1.00			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1605	1879		1587	1870			1971			1933	
Flt Permitted	0.67	1.00		0.57	1.00			0.98			0.99	
Satd. Flow (perm)	1135	1879		950	1870			1928			1916	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	100	141	67	2	93	40	23	306	10	8	204	32
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	100	208	0	2	133	0	0	339	0	0	244	0
Confl. Peds. (#/hr)			8	8			1		8	8		1
Heavy Vehicles (%)	3%	3%	2%	0%	6%	0%	0%	3%	0%	0%	4%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Effective Green, g (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Actuated g/C Ratio	0.31	0.31		0.31	0.31			0.57			0.57	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	349	578		292	575			1097			1091	
v/s Ratio Prot		c0.11			0.07							
v/s Ratio Perm	0.09			0.00				c0.18			0.13	
v/c Ratio	0.29	0.36		0.01	0.23			0.31			0.22	
Uniform Delay, d1	17.1	17.5		15.6	16.8			7.3			6.9	
Progression Factor	0.90	0.89		0.89	0.92			0.94			1.00	
Incremental Delay, d2	2.0	1.7		0.0	0.9			0.7			0.5	
Delay (s)	17.5	17.4		14.0	16.3			7.6			7.4	
Level of Service	B	B		B	B			A			A	
Approach Delay (s)		17.4			16.3			7.6			7.4	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	122	9	55	1	3	12	40	492	6	2	201	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	10	11	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.97		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	0.98	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.87		1.00	0.88		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1603	1672		1710	1422		1491	1631	1392	1649	1907	1427
Flt Permitted	0.75	1.00		0.71	1.00		0.62	1.00	1.00	0.37	1.00	1.00
Satd. Flow (perm)	1260	1672		1279	1422		971	1631	1392	648	1907	1427
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	136	10	61	1	3	13	44	547	7	2	223	56
RTOR Reduction (vph)	0	44	0	0	9	0	0	0	3	0	0	22
Lane Group Flow (vph)	136	27	0	1	7	0	44	547	4	2	223	34
Confl. Peds. (#/hr)	9					9	1		6	6		1
Heavy Vehicles (%)	5%	14%	5%	0%	67%	12%	7%	3%	0%	0%	7%	5%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	17.0	17.0		17.0	17.0		39.0	39.0	39.0	39.0	39.0	39.0
Effective Green, g (s)	18.0	18.0		18.0	18.0		39.0	39.0	39.0	39.0	39.0	39.0
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.60	0.60	0.60	0.60	0.60	0.60
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	349	463		354	394		583	979	835	389	1144	856
v/s Ratio Prot		0.02			0.00			c0.34			0.12	
v/s Ratio Perm	c0.11			0.00			0.05		0.00	0.00		0.02
v/c Ratio	0.39	0.06		0.00	0.02		0.08	0.56	0.01	0.01	0.19	0.04
Uniform Delay, d1	19.0	17.3		17.0	17.1		5.4	7.8	5.2	5.2	5.9	5.3
Progression Factor	1.47	2.41		1.00	1.00		1.17	1.10	1.32	1.00	1.00	1.00
Incremental Delay, d2	3.2	0.2		0.0	0.1		0.2	1.7	0.0	0.0	0.4	0.1
Delay (s)	31.1	41.9		17.0	17.1		6.5	10.3	6.9	5.2	6.3	5.4
Level of Service	C	D		B	B		A	B	A	A	A	A
Approach Delay (s)		34.8			17.1			10.0			6.1	
Approach LOS		C			B			A			A	

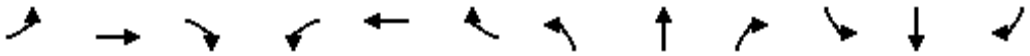
Intersection Summary			
HCM Average Control Delay	13.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	249	76	129	378	0	0	0	0	80	305	361
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)		4.0		3.0	3.0					5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	
Frpb, ped/bikes		0.99		1.00	1.00					1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Frt		0.96		1.00	1.00					1.00	0.92	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		2829		1621	3288					1574	2907	
Flt Permitted		1.00		0.49	1.00					0.95	1.00	
Satd. Flow (perm)		2829		835	3288					1574	2907	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	262	80	136	398	0	0	0	0	84	321	380
RTOR Reduction (vph)	0	29	0	0	0	0	0	0	0	0	214	0
Lane Group Flow (vph)	0	313	0	136	398	0	0	0	0	84	487	0
Confl. Peds. (#/hr)	14		32	32		14	14					14
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	9%	4%	5%	4%	0%	0%	0%	0%	5%	2%	4%
Turn Type				D.P+P						custom		
Protected Phases		8		7	7 8					6	6	
Permitted Phases				8						6		
Actuated Green, G (s)		33.0		56.0	59.0					32.0	32.0	
Effective Green, g (s)		33.0		56.0	59.0					32.0	32.0	
Actuated g/C Ratio		0.33		0.56	0.59					0.32	0.32	
Clearance Time (s)		4.0		3.0						5.0	5.0	
Lane Grp Cap (vph)		934		648	1940					504	930	
v/s Ratio Prot		c0.11		c0.05	0.12					0.05	c0.17	
v/s Ratio Perm				0.07								
v/c Ratio		0.34		0.21	0.21					0.17	0.52	
Uniform Delay, d1		25.2		10.6	9.6					24.4	27.8	
Progression Factor		1.00		1.97	2.07					1.00	1.00	
Incremental Delay, d2		1.0		0.6	0.2					0.7	2.1	
Delay (s)		26.2		21.5	19.9					25.1	29.9	
Level of Service		C		C	B					C	C	
Approach Delay (s)		26.2			20.4			0.0			29.4	
Approach LOS		C			C			A			C	

Intersection Summary			
HCM Average Control Delay	25.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

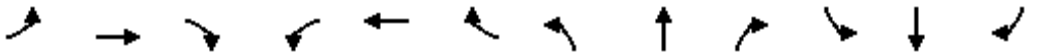
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	129	200	0	0	333	70	174	554	347	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	9	12	13	12	13	12	12	12
Total Lost time (s)	4.0	4.0			4.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.97		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1673	3054			2833		1750	1782	1514			
Flt Permitted	0.33	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	583	3054			2833		1750	1782	1514			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	136	211	0	0	351	74	183	583	365	0	0	0
RTOR Reduction (vph)	0	0	0	0	17	0	0	0	245	0	0	0
Lane Group Flow (vph)	136	211	0	0	408	0	183	583	120	0	0	0
Confl. Peds. (#/hr)	14		16	16		14			1	1		
Confl. Bikes (#/hr)	1					1			1	1		
Heavy Vehicles (%)	2%	12%	0%	0%	5%	4%	1%	1%	3%	0%	0%	0%
Turn Type	pm+pt						custom		Perm			
Protected Phases	4	1 4			1		2	2				
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	54.0	58.0			21.0		33.0	33.0	33.0			
Effective Green, g (s)	54.0	58.0			21.0		33.0	33.0	33.0			
Actuated g/C Ratio	0.54	0.58			0.21		0.33	0.33	0.33			
Clearance Time (s)	4.0				4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	675	1771			595		578	588	500			
v/s Ratio Prot	c0.07	0.07			c0.14		0.10	c0.33				
v/s Ratio Perm	0.04								0.08			
v/c Ratio	0.20	0.12			0.69		0.32	0.99	0.24			
Uniform Delay, d1	11.8	9.5			36.4		25.1	33.4	24.4			
Progression Factor	0.24	0.25			1.00		0.76	0.79	1.91			
Incremental Delay, d2	0.6	0.1			6.3		0.9	27.9	0.7			
Delay (s)	3.5	2.5			42.7		19.9	54.1	47.3			
Level of Service	A	A			D		B	D	D			
Approach Delay (s)		2.9			42.7			46.4			0.0	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM Average Control Delay	37.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

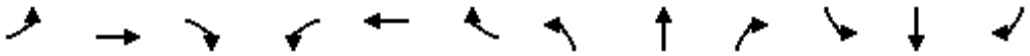
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	476	372	34	592	0	0	0	0	5	216	200
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	11	12	12	12	12	10	10	12
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	1.00
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.93		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3112		1613	3273					1596	3160	1443
Flt Permitted		1.00		0.16	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3112		268	3273					1596	3160	1443
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	496	388	35	617	0	0	0	0	5	225	208
RTOR Reduction (vph)	0	141	0	0	0	0	0	0	0	0	0	137
Lane Group Flow (vph)	0	743	0	35	617	0	0	0	0	5	225	71
Confl. Peds. (#/hr)	22		3	3		22						
Confl. Bikes (#/hr)	4					4			32	32		
Heavy Vehicles (%)	0%	2%	2%	6%	1%	0%	0%	0%	0%	0%	1%	6%
Turn Type				pm+pt						Split		Prot
Protected Phases		8		7	7 8					6	6	6
Permitted Phases				7 8								
Actuated Green, G (s)		36.0		54.0	58.0					34.0	34.0	34.0
Effective Green, g (s)		36.0		54.0	58.0					34.0	34.0	34.0
Actuated g/C Ratio		0.36		0.54	0.58					0.34	0.34	0.34
Clearance Time (s)		4.0		4.0						4.0	4.0	4.0
Lane Grp Cap (vph)		1120		387	1898					543	1074	491
v/s Ratio Prot		c0.24		0.02	c0.19					0.00	c0.07	0.05
v/s Ratio Perm				0.03								
v/c Ratio		0.66		0.09	0.33					0.01	0.21	0.14
Uniform Delay, d1		26.9		12.6	10.9					21.8	23.5	22.9
Progression Factor		1.00		0.54	0.68					0.73	0.78	0.90
Incremental Delay, d2		3.1		0.2	0.2					0.0	0.4	0.6
Delay (s)		30.0		7.0	7.6					16.0	18.7	21.3
Level of Service		C		A	A					B	B	C
Approach Delay (s)		30.0			7.5			0.0			19.9	
Approach LOS		C			A			A			B	

Intersection Summary			
HCM Average Control Delay	20.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	89.3%	ICU Level of Service	E
Analysis Period (min)	15		

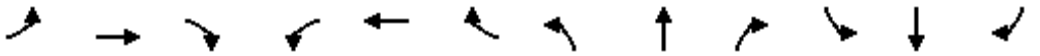
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	420	60	0	0	57	6	569	647	62	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	10	12	11	11	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	0.91	0.91			0.95		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	1.00			
Flpb, ped/bikes	0.99	0.99			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.99		1.00	1.00	0.85			
Flt Protected	0.95	0.96			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1444	3040			3070		1555	1637	1500			
Flt Permitted	0.71	0.74			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	1083	2333			3070		1555	1637	1500			
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	433	62	0	0	59	6	587	667	64	0	0	0
RTOR Reduction (vph)	0	0	0	0	5	0	0	0	38	0	0	0
Lane Group Flow (vph)	216	279	0	0	60	0	587	667	26	0	0	0
Confl. Peds. (#/hr)	30		2	2		30			4	4		
Confl. Bikes (#/hr)	3					3			2	2		
Heavy Vehicles (%)	3%	2%	0%	0%	2%	0%	1%	1%	2%	0%	0%	0%
Turn Type	pm+pt						custom		custom			
Protected Phases	4	1 4			1		2	2	2			
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Effective Green, g (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Actuated g/C Ratio	0.51	0.51			0.15		0.37	0.37	0.37			
Clearance Time (s)	4.0				4.0		4.0	4.0	4.0			
Lane Grp Cap (vph)	682	1444			461		575	606	555			
v/s Ratio Prot	c0.11	0.07			0.02		0.38	c0.41	0.02			
v/s Ratio Perm	c0.05	0.03										
v/c Ratio	0.32	0.19			0.13		1.02	1.10	0.05			
Uniform Delay, d1	14.1	13.3			36.8		31.5	31.5	20.2			
Progression Factor	0.22	0.24			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.9	0.2			0.6		42.9	67.2	0.2			
Delay (s)	4.0	3.4			37.4		74.4	98.7	20.4			
Level of Service	A	A			D		E	F	C			
Approach Delay (s)		3.6			37.4			84.1			0.0	
Approach LOS		A			D			F			A	

Intersection Summary			
HCM Average Control Delay	61.3	HCM Level of Service	E
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	89.3%	ICU Level of Service	E
Analysis Period (min)	15		

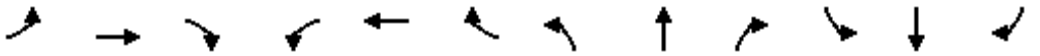
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	163	285	73	58	281	114	51	1151	62	88	476	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	9	10	9	9	10	9
Total Lost time (s)		4.0			4.0		4.0	3.5	4.0	4.0	3.5	4.0
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00			0.99		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.98			0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.98			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		2843			2815		1447	3069	1336	1494	2956	1270
Flt Permitted		0.62			0.82		0.39	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)		1801			2328		600	3069	1336	197	2956	1270
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	170	297	76	60	293	119	53	1199	65	92	496	44
RTOR Reduction (vph)	0	16	0	0	39	0	0	0	24	0	0	27
Lane Group Flow (vph)	0	527	0	0	433	0	53	1199	41	92	496	17
Confl. Peds. (#/hr)	49		20	20		49	26		8	8		26
Confl. Bikes (#/hr)	2					2						
Heavy Vehicles (%)	10%	7%	4%	9%	7%	5%	6%	4%	0%	3%	8%	5%
Turn Type	pm+pt			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		35.0			27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)		36.0			28.0		36.0	33.5	33.0	36.0	33.5	33.0
Actuated g/C Ratio		0.42			0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)		5.0			5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)		836			767		294	1210	519	144	1165	493
v/s Ratio Prot		c0.04					0.01	c0.39		c0.03	0.17	
v/s Ratio Perm		0.22			c0.19		0.07		0.03	0.24		0.01
v/c Ratio		0.63			0.56		0.18	0.99	0.08	0.64	0.43	0.03
Uniform Delay, d1		19.3			23.5		14.8	25.6	16.4	19.0	18.7	16.1
Progression Factor		1.00			1.00		1.34	0.87	1.43	1.82	1.64	3.14
Incremental Delay, d2		3.6			3.0		0.8	17.5	0.2	18.1	1.0	0.1
Delay (s)		22.9			26.5		20.6	39.8	23.6	52.5	31.8	50.8
Level of Service		C			C		C	D	C	D	C	D
Approach Delay (s)		22.9			26.5			38.2			36.1	
Approach LOS		C			C			D			D	

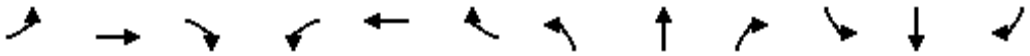
Intersection Summary			
HCM Average Control Delay	33.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	82.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	44	420	0	0	422	81	31	63	98	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.98			0.93				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		1706			1677			1583				
Flt Permitted		0.92			1.00			0.99				
Satd. Flow (perm)		1577			1677			1583				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	49	467	0	0	469	90	34	70	109	0	0	0
RTOR Reduction (vph)	0	0	0	0	10	0	0	58	0	0	0	0
Lane Group Flow (vph)	0	516	0	0	549	0	0	155	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		34.0			34.0			23.0				
Effective Green, g (s)		34.0			34.0			23.0				
Actuated g/C Ratio		0.52			0.52			0.35				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		825			877			560				
v/s Ratio Prot					0.33							
v/s Ratio Perm		c0.33						0.10				
v/c Ratio		0.63			0.63			0.28				
Uniform Delay, d1		11.0			11.0			15.0				
Progression Factor		1.00			0.63			1.00				
Incremental Delay, d2		3.6			2.8			1.2				
Delay (s)		14.6			9.7			16.3				
Level of Service		B			A			B				
Approach Delay (s)		14.6			9.7			16.3			0.0	
Approach LOS		B			A			B			A	

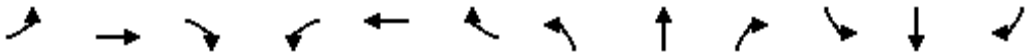
Intersection Summary			
HCM Average Control Delay	12.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	76.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	48	415	33	20	416	49	25	175	35	51	107	28
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.99			0.98			0.98	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1886			1842			3185			3126	
Flt Permitted		0.92			0.97			0.92			0.83	
Satd. Flow (perm)		1753			1794			2930			2630	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	53	461	37	22	462	54	28	194	39	57	119	31
RTOR Reduction (vph)	0	4	0	0	6	0	0	22	0	0	18	0
Lane Group Flow (vph)	0	547	0	0	532	0	0	239	0	0	189	0
Confl. Peds. (#/hr)	29		16	16		29	28		14	14		28
Confl. Bikes (#/hr)	1					1	1					1
Heavy Vehicles (%)	3%	7%	4%	12%	8%	13%	0%	4%	4%	4%	4%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0			27.0			27.0	
Effective Green, g (s)		30.0			30.0			27.0			27.0	
Actuated g/C Ratio		0.46			0.46			0.42			0.42	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		809			828			1217			1092	
v/s Ratio Prot												
v/s Ratio Perm		c0.31			0.30			c0.08			0.07	
v/c Ratio		0.68			0.64			0.20			0.17	
Uniform Delay, d1		13.7			13.4			12.1			12.0	
Progression Factor		0.63			0.56			0.98			0.61	
Incremental Delay, d2		3.7			3.7			0.4			0.3	
Delay (s)		12.4			11.1			12.2			7.6	
Level of Service		B			B			B			A	
Approach Delay (s)		12.4			11.1			12.2			7.6	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	11.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.0%	ICU Level of Service	E
Analysis Period (min)	15		

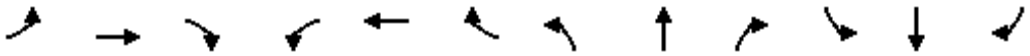
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	52	279	22	28	338	61	55	319	89	48	96	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	9	10	10	9	10	10	12	10	10	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.98		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1503	2936		1584	2944		1497	3034		1594	2899	
Flt Permitted	0.44	1.00		0.53	1.00		0.66	1.00		0.48	1.00	
Satd. Flow (perm)	697	2936		890	2944		1046	3034		809	2899	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	58	310	24	31	376	68	61	354	99	53	107	32
RTOR Reduction (vph)	0	9	0	0	22	0	0	39	0	0	15	0
Lane Group Flow (vph)	58	325	0	31	422	0	61	414	0	53	124	0
Confl. Peds. (#/hr)	25		14	14		25	12		4	4		12
Confl. Bikes (#/hr)	1					1			1	1		
Heavy Vehicles (%)	5%	7%	12%	0%	6%	2%	6%	1%	3%	0%	4%	12%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	236	994		301	996		563	1634		436	1561	
v/s Ratio Prot		0.11			c0.14			c0.14			0.04	
v/s Ratio Perm	0.08			0.03			0.06			0.07		
v/c Ratio	0.25	0.33		0.10	0.42		0.11	0.25		0.12	0.08	
Uniform Delay, d1	15.5	16.0		14.7	16.6		7.4	8.0		7.4	7.2	
Progression Factor	0.57	0.55		0.78	0.80		0.63	0.62		1.30	1.35	
Incremental Delay, d2	2.0	0.7		0.7	1.3		0.4	0.4		0.6	0.1	
Delay (s)	10.9	9.6		12.1	14.6		5.0	5.4		10.2	9.8	
Level of Service	B	A		B	B		A	A		B	A	
Approach Delay (s)		9.8			14.4			5.3			9.9	
Approach LOS		A			B			A			A	

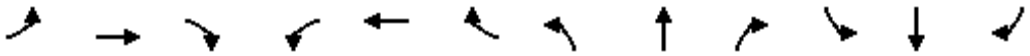
Intersection Summary			
HCM Average Control Delay	9.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	84	391	28	37	362	82	20	308	44	41	118	41
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	9	10	9	9	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00			0.99	
Flpb, ped/bikes	0.97	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.97			0.98			0.97	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1385	3013		1335	3538			3438			3303	
Flt Permitted	0.46	1.00		0.48	1.00			0.94			0.84	
Satd. Flow (perm)	674	3013		674	3538			3226			2808	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	88	412	29	39	381	86	21	324	46	43	124	43
RTOR Reduction (vph)	0	8	0	0	30	0	0	16	0	0	26	0
Lane Group Flow (vph)	88	433	0	39	437	0	0	375	0	0	184	0
Confl. Peds. (#/hr)	53		34	34		53	67		28	28		67
Heavy Vehicles (%)	8%	5%	0%	14%	6%	1%	0%	9%	20%	5%	15%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Effective Green, g (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48			0.40			0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	321	1437		321	1687			1290			1123	
v/s Ratio Prot		c0.14			0.12							
v/s Ratio Perm	0.13			0.06				c0.12			0.07	
v/c Ratio	0.27	0.30		0.12	0.26			0.29			0.16	
Uniform Delay, d1	10.2	10.4		9.4	10.1			13.2			12.5	
Progression Factor	1.60	1.64		0.79	0.78			0.51			0.64	
Incremental Delay, d2	2.1	0.5		0.7	0.3			0.6			0.3	
Delay (s)	18.4	17.6		8.2	8.2			7.3			8.3	
Level of Service	B	B		A	A			A			A	
Approach Delay (s)		17.7			8.2			7.3			8.3	
Approach LOS		B			A			A			A	

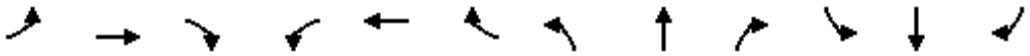
Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	99	301	100	104	348	104	88	84	88	88	84	82
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	16	12	12	16	12
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		0.95			1.00			1.00	
Frt		1.00	0.85		0.97			0.95			0.96	
Flt Protected		0.99	1.00		0.99			0.98			0.98	
Satd. Flow (prot)		1637	1409		3032			1823			1826	
Flt Permitted		0.74	1.00		0.76			0.79			0.78	
Satd. Flow (perm)		1230	1409		2324			1456			1442	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	110	334	111	116	387	116	98	93	98	98	93	91
RTOR Reduction (vph)	0	0	53	0	31	0	0	28	0	0	26	0
Lane Group Flow (vph)	0	444	58	0	588	0	0	261	0	0	256	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		34.0	34.0		34.0			21.0			21.0	
Effective Green, g (s)		34.0	34.0		34.0			21.0			21.0	
Actuated g/C Ratio		0.52	0.52		0.52			0.32			0.32	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Grp Cap (vph)		643	737		1216			470			466	
v/s Ratio Prot												
v/s Ratio Perm		c0.36	0.04		0.25			c0.18			0.18	
v/c Ratio		0.69	0.08		0.48			0.55			0.55	
Uniform Delay, d1		11.6	7.7		9.9			18.1			18.1	
Progression Factor		2.01	5.68		0.42			1.00			1.00	
Incremental Delay, d2		5.9	0.2		1.3			4.7			4.6	
Delay (s)		29.1	44.0		5.5			22.8			22.7	
Level of Service		C	D		A			C			C	
Approach Delay (s)		32.1			5.5			22.8			22.7	
Approach LOS		C			A			C			C	

Intersection Summary			
HCM Average Control Delay	19.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	72.0%	ICU Level of Service	C
Analysis Period (min)	15		

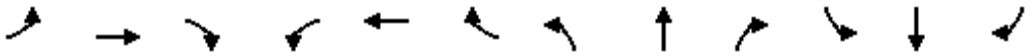
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	74	382	21	15	433	63	37	103	41	43	90	98
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	15	8	16	8	8	16	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00			0.99	
Flpb, ped/bikes	0.99	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.98			0.97			0.94	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1475	3018		1573	3001			3454			3403	
Flt Permitted	0.40	1.00		0.47	1.00			0.87			0.88	
Satd. Flow (perm)	616	3018		771	3001			3030			3014	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	82	424	23	17	481	70	41	114	46	48	100	109
RTOR Reduction (vph)	0	6	0	0	18	0	0	25	0	0	60	0
Lane Group Flow (vph)	82	441	0	17	533	0	0	176	0	0	197	0
Confl. Peds. (#/hr)	22		40	40		22	18		3	3		18
Confl. Bikes (#/hr)			2	2			1					1
Heavy Vehicles (%)	7%	5%	0%	0%	4%	2%	0%	3%	22%	0%	3%	8%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	28.0	28.0		28.0	28.0			29.0			29.0	
Effective Green, g (s)	28.0	28.0		28.0	28.0			29.0			29.0	
Actuated g/C Ratio	0.43	0.43		0.43	0.43			0.45			0.45	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	265	1300		332	1293			1352			1345	
v/s Ratio Prot		0.15			c0.18							
v/s Ratio Perm	0.13			0.02				0.06			c0.07	
v/c Ratio	0.31	0.34		0.05	0.41			0.13			0.15	
Uniform Delay, d1	12.2	12.3		10.8	12.8			10.6			10.7	
Progression Factor	0.98	1.00		1.14	0.99			0.99			0.80	
Incremental Delay, d2	2.3	0.5		0.1	0.5			0.2			0.2	
Delay (s)	14.1	12.9		12.4	13.1			10.7			8.8	
Level of Service	B	B		B	B			B			A	
Approach Delay (s)		13.1			13.1			10.7			8.8	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	12.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

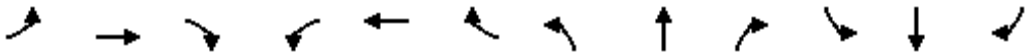


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	86	454	73	94	455	284	48	332	92	222	159	52
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.98			0.95			0.97			0.98	
Flt Protected		0.99			0.99			0.99			0.98	
Satd. Flow (prot)		3177			3073			3146			3118	
Flt Permitted		0.63			0.74			0.88			0.63	
Satd. Flow (perm)		2028			2280			2771			2008	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	96	504	81	104	506	316	53	369	102	247	177	58
RTOR Reduction (vph)	0	16	0	0	103	0	0	33	0	0	17	0
Lane Group Flow (vph)	0	665	0	0	823	0	0	491	0	0	465	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		26.0			26.0			29.0			20.0	
Effective Green, g (s)		26.0			26.0			29.0			20.0	
Actuated g/C Ratio		0.40			0.40			0.45			0.31	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		811			912			1271			618	
v/s Ratio Prot								c0.04				
v/s Ratio Perm		0.33			c0.36			0.14			c0.23	
v/c Ratio		0.82			0.90			0.39			0.96dl	
Uniform Delay, d1		17.4			18.3			12.0			20.3	
Progression Factor		1.73			1.00			1.00			0.89	
Incremental Delay, d2		8.9			13.9			0.9			8.3	
Delay (s)		39.1			32.2			12.9			26.3	
Level of Service		D			C			B			C	
Approach Delay (s)		39.1			32.2			12.9			26.3	
Approach LOS		D			C			B			C	

Intersection Summary			
HCM Average Control Delay	29.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	88.2%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

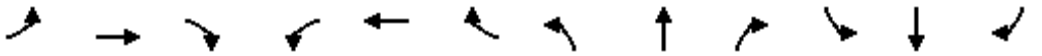
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	723	118	45	755	0	134	0	70	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	10	10	12	12	12	12	10	10	10
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			1.00				
Frt		0.98			1.00			0.95				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		2976			3031			1583				
Flt Permitted		1.00			0.84			0.80				
Satd. Flow (perm)		2976			2543			1311				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	803	131	50	839	0	149	0	78	0	0	0
RTOR Reduction (vph)	0	18	0	0	0	0	0	21	0	0	0	0
Lane Group Flow (vph)	0	916	0	0	889	0	0	206	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	custom			Perm			Perm			Perm		
Protected Phases		4 5 6 11			8			2			2	
Permitted Phases	4 6 11			8			2			2		
Actuated Green, G (s)		65.0			33.0			16.0				
Effective Green, g (s)		58.0			33.0			16.0				
Actuated g/C Ratio		0.64			0.37			0.18				
Clearance Time (s)					5.0			5.0				
Lane Grp Cap (vph)		1918			932			233				
v/s Ratio Prot		c0.31										
v/s Ratio Perm					c0.35			c0.16				
v/c Ratio		0.48			0.95			0.89				
Uniform Delay, d1		8.2			27.8			36.1				
Progression Factor		0.04			1.57			1.00				
Incremental Delay, d2		0.4			18.2			35.5				
Delay (s)		0.7			61.8			71.6				
Level of Service		A			E			E				
Approach Delay (s)		0.7			61.8			71.6			0.0	
Approach LOS		A			E			E			A	

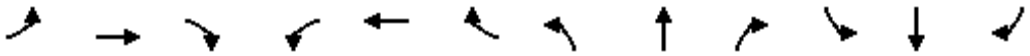
Intersection Summary			
HCM Average Control Delay	35.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	73.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	123	502	187	274	646	183	101	20	185	78	7	75
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	10	12	12	12	12	16	12	12	12	12
Total Lost time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	1.00
Frt	1.00	0.96		1.00	1.00	0.85		0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (prot)	1520	3020		1629	3257	1457		1755		1629	1714	1457
Flt Permitted	0.32	1.00		0.20	1.00	1.00		0.89		0.40	1.00	1.00
Satd. Flow (perm)	511	3020		342	3257	1457		1582		685	1714	1457
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	137	558	208	304	718	203	112	22	206	87	8	83
RTOR Reduction (vph)	0	42	0	0	0	104	0	75	0	0	0	45
Lane Group Flow (vph)	137	724	0	304	718	99	0	265	0	87	8	38
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	40.1	30.7		47.8	35.4	44.0		20.6		32.2	32.2	41.6
Effective Green, g (s)	40.1	30.7		47.8	35.4	44.0		20.6		32.2	32.2	41.6
Actuated g/C Ratio	0.45	0.34		0.53	0.39	0.49		0.23		0.36	0.36	0.46
Clearance Time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Vehicle Extension (s)	4.0	3.0		4.0	3.0	3.0		4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	333	1030		383	1281	712		362		335	613	673
v/s Ratio Prot	0.04	0.24		c0.12	0.22	0.01				c0.02	0.00	0.01
v/s Ratio Perm	0.14			c0.30		0.05		c0.17		0.07		0.02
v/c Ratio	0.41	0.70		0.79	0.56	0.14		0.73		0.26	0.01	0.06
Uniform Delay, d1	15.4	25.7		14.7	21.2	12.6		32.1		21.3	18.6	13.4
Progression Factor	1.90	1.58		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	1.0	3.6		11.4	1.8	0.1		7.9		0.4	0.0	0.0
Delay (s)	30.2	44.3		26.0	23.0	12.7		40.1		21.7	18.7	13.4
Level of Service	C	D		C	C	B		D		C	B	B
Approach Delay (s)		42.1			22.1			40.1			17.7	
Approach LOS		D			C			D			B	

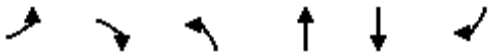
Intersection Summary			
HCM Average Control Delay	30.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	74.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	518	247	6	531	0	0	0	0	32	0	572
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	576	274	7	590	0	0	0	0	36	0	636
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		498										
pX, platoon unblocked												
vC, conflicting volume	590			576			884	1179	288	891	1179	295
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	590			576			884	1179	288	891	1179	295
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	100	100	85	100	8
cM capacity (veh/h)	961			973			19	184	700	231	184	692

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	288	288	274	203	393	36	636
Volume Left	0	0	0	7	0	36	0
Volume Right	0	0	274	0	0	0	636
cSH	1700	1700	1700	973	1700	231	692
Volume to Capacity	0.17	0.17	0.16	0.01	0.23	0.15	0.92
Queue Length 95th (ft)	0	0	0	1	0	13	307
Control Delay (s)	0.0	0.0	0.0	0.4	0.0	23.4	41.6
Lane LOS				A		C	E
Approach Delay (s)	0.0			0.1		40.6	
Approach LOS						E	

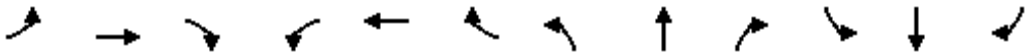
Intersection Summary				
Average Delay	12.9			
Intersection Capacity Utilization	59.7%	ICU Level of Service		B
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	550	0	537	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	611	0	597	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	306	306	597
Volume Left (vph)	306	306	597
Volume Right (vph)	0	0	0
Hadj (s)	0.58	0.58	0.29
Departure Headway (s)	7.0	7.0	5.8
Degree Utilization, x	0.59	0.59	0.95
Capacity (veh/h)	513	513	618
Control Delay (s)	18.3	18.3	49.2
Approach Delay (s)	18.3		49.2
Approach LOS	C		E

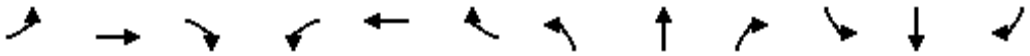
Intersection Summary			
Delay	33.5		
HCM Level of Service	D		
Intersection Capacity Utilization	54.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	340	131	126	344	0	0	0	0	72	15	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)		3.0		4.0	4.0						5.0	
Lane Util. Factor		0.95		1.00	0.95						0.95	
Frt		0.96		1.00	1.00						0.95	
Flt Protected		1.00		0.95	1.00						0.97	
Satd. Flow (prot)		3017		1574	3149						3014	
Flt Permitted		1.00		0.39	1.00						0.97	
Satd. Flow (perm)		3017		645	3149						3014	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	378	146	140	382	0	0	0	0	80	17	47
RTOR Reduction (vph)	0	48	0	0	0	0	0	0	0	0	32	0
Lane Group Flow (vph)	0	476	0	140	382	0	0	0	0	0	112	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type				pm+pt						Split		
Protected Phases		4		3	8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		36.0		49.0	49.0						27.0	
Effective Green, g (s)		36.0		49.0	49.0						27.0	
Actuated g/C Ratio		0.42		0.58	0.58						0.32	
Clearance Time (s)		3.0		4.0	4.0						5.0	
Lane Grp Cap (vph)		1278		481	1815						957	
v/s Ratio Prot		c0.16		c0.03	0.12						c0.04	
v/s Ratio Perm				0.13								
v/c Ratio		0.37		0.29	0.21						0.12	
Uniform Delay, d1		16.8		12.6	8.7						20.6	
Progression Factor		1.00		0.37	0.33						1.00	
Incremental Delay, d2		0.8		1.4	0.2						0.2	
Delay (s)		17.6		6.2	3.1						20.8	
Level of Service		B		A	A						C	
Approach Delay (s)		17.6			3.9			0.0			20.8	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	12.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	36.6%	ICU Level of Service	A
Analysis Period (min)	15		

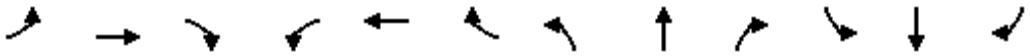
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	68	344	0	0	400	76	70	65	42	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	11	11	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0			3.0			5.0				
Lane Util. Factor	1.00	0.95			0.95			0.91				
Frt	1.00	1.00			0.98			0.96				
Flt Protected	0.95	1.00			1.00			0.98				
Satd. Flow (prot)	1629	3257			3073			4425				
Flt Permitted	0.38	1.00			1.00			0.98				
Satd. Flow (perm)	656	3257			3073			4425				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	76	382	0	0	444	84	78	72	47	0	0	0
RTOR Reduction (vph)	0	0	0	0	18	0	0	32	0	0	0	0
Lane Group Flow (vph)	76	382	0	0	510	0	0	165	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	pm+pt						Split					
Protected Phases	7	4			8		2	2				
Permitted Phases	4											
Actuated Green, G (s)	48.0	48.0			35.0			27.0				
Effective Green, g (s)	48.0	48.0			35.0			27.0				
Actuated g/C Ratio	0.56	0.56			0.41			0.32				
Clearance Time (s)	5.0	5.0			3.0			5.0				
Lane Grp Cap (vph)	485	1839			1265			1406				
v/s Ratio Prot	0.02	c0.12			c0.17			c0.04				
v/s Ratio Perm	0.07											
v/c Ratio	0.16	0.21			0.40			0.12				
Uniform Delay, d1	12.1	9.1			17.6			20.6				
Progression Factor	0.41	0.42			1.00			1.00				
Incremental Delay, d2	0.7	0.2			1.0			0.2				
Delay (s)	5.7	4.1			18.6			20.7				
Level of Service	A	A			B			C				
Approach Delay (s)		4.3			18.6			20.7			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM Average Control Delay	13.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	36.6%	ICU Level of Service	A
Analysis Period (min)	15		

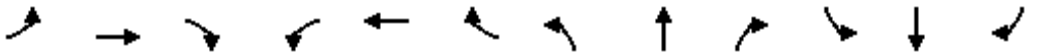
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	307	82	31	243	31	129	85	52	56	91	126
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	12	15	12	12	15	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		0.97			0.98			0.97			0.94	
Flt Protected		1.00			0.99			0.98			0.99	
Satd. Flow (prot)		2939			2979			1792			1750	
Flt Permitted		0.89			0.88			0.73			0.89	
Satd. Flow (perm)		2639			2628			1347			1565	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	43	341	91	34	270	34	143	94	58	62	101	140
RTOR Reduction (vph)	0	32	0	0	13	0	0	14	0	0	48	0
Lane Group Flow (vph)	0	443	0	0	325	0	0	281	0	0	255	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		23.0			23.0			32.0			32.0	
Effective Green, g (s)		23.0			23.0			32.0			32.0	
Actuated g/C Ratio		0.35			0.35			0.49			0.49	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		934			930			663			770	
v/s Ratio Prot												
v/s Ratio Perm		c0.17			0.12			c0.21			0.16	
v/c Ratio		0.47			0.35			0.42			0.33	
Uniform Delay, d1		16.3			15.5			10.6			10.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.7			1.0			2.0			1.2	
Delay (s)		18.0			16.5			12.6			11.2	
Level of Service		B			B			B			B	
Approach Delay (s)		18.0			16.5			12.6			11.2	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	15.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	66.8%	ICU Level of Service	C
Analysis Period (min)	15		

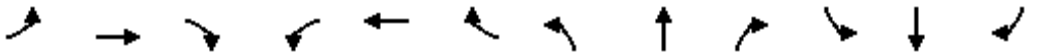
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	169	202	82	205	176	62	81	1012	109	75	471	80
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	12	10	16	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.96
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.96		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1548	2954		1593	3512		1487	3040	1347	1494	3011	1271
Flt Permitted	0.59	1.00		0.54	1.00		0.40	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	954	2954		901	3512		626	3040	1347	197	3011	1271
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	178	213	86	216	185	65	85	1065	115	79	496	84
RTOR Reduction (vph)	0	52	0	0	41	0	0	0	68	0	0	51
Lane Group Flow (vph)	178	247	0	216	209	0	85	1065	47	79	496	33
Confl. Peds. (#/hr)	31		7	7		31	37		12	12		37
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	2%	4%	0%	0%	6%	2%	3%	5%	0%	3%	6%	4%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	32.0	27.0		32.0	27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)	30.0	28.0		30.0	28.0		36.0	33.0	33.0	36.0	33.0	33.0
Actuated g/C Ratio	0.35	0.33		0.35	0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	365	973		351	1157		306	1180	523	144	1169	493
v/s Ratio Prot	0.02	0.08		c0.03	0.06		0.01	c0.35		c0.03	0.16	
v/s Ratio Perm	0.15			c0.19			0.10		0.03	0.21		0.03
v/c Ratio	0.49	0.25		0.62	0.18		0.28	0.90	0.09	0.55	0.42	0.07
Uniform Delay, d1	20.6	20.9		22.0	20.3		15.1	24.5	16.5	17.6	19.0	16.3
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.94	0.61	0.78
Incremental Delay, d2	4.6	0.6		7.8	0.3		2.2	11.2	0.3	13.0	1.0	0.2
Delay (s)	25.2	21.5		29.8	20.7		17.4	35.7	16.8	47.0	12.6	13.0
Level of Service	C	C		C	C		B	D	B	D	B	B
Approach Delay (s)		22.9			24.9			32.8			16.8	
Approach LOS		C			C			C			B	

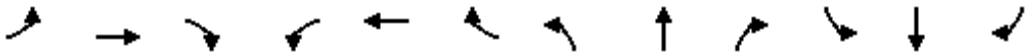
Intersection Summary			
HCM Average Control Delay	26.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	72.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	49	284	18	14	328	8	35	113	25	20	57	84
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	16	12	12	16	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00	0.99		1.00	0.98
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		0.99	1.00
Satd. Flow (prot)		1928	1382		1954	1331		1970	1452		1928	1430
Flt Permitted		0.91	1.00		0.98	1.00		0.93	1.00		0.93	1.00
Satd. Flow (perm)		1768	1382		1924	1331		1860	1452		1811	1430
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	52	299	19	15	345	8	37	119	26	21	60	88
RTOR Reduction (vph)	0	0	10	0	0	4	0	0	15	0	0	51
Lane Group Flow (vph)	0	351	9	0	360	4	0	156	11	0	81	37
Confl. Peds. (#/hr)	5		21	21		5	9		1	1		9
Heavy Vehicles (%)	5%	5%	6%	7%	4%	12%	6%	1%	4%	0%	6%	5%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Effective Green, g (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Actuated g/C Ratio		0.46	0.46		0.46	0.46		0.42	0.42		0.42	0.42
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		816	638		888	614		773	603		752	594
v/s Ratio Prot												
v/s Ratio Perm		c0.20	0.01		0.19	0.00		c0.08	0.01		0.04	0.03
v/c Ratio		0.43	0.01		0.41	0.01		0.20	0.02		0.11	0.06
Uniform Delay, d1		11.8	9.5		11.6	9.4		12.1	11.2		11.6	11.4
Progression Factor		1.00	1.00		0.47	0.45		1.33	1.73		0.96	0.93
Incremental Delay, d2		1.7	0.0		1.3	0.0		0.6	0.1		0.3	0.2
Delay (s)		13.4	9.5		6.7	4.2		16.7	19.4		11.4	10.8
Level of Service		B	A		A	A		B	B		B	B
Approach Delay (s)		13.2			6.7			17.1			11.1	
Approach LOS		B			A			B			B	

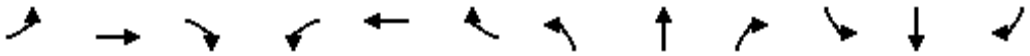
Intersection Summary			
HCM Average Control Delay	11.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	75	260	10	15	278	30	13	247	26	30	70	64
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1520	3023		1520	2996		1520	2996		1520	2823	
Flt Permitted	0.95	1.00		0.57	1.00		0.66	1.00		0.55	1.00	
Satd. Flow (perm)	1520	3023		910	2996		1052	2996		884	2823	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	83	289	11	17	309	33	14	274	29	33	78	71
RTOR Reduction (vph)	0	4	0	0	13	0	0	12	0	0	42	0
Lane Group Flow (vph)	83	296	0	17	329	0	14	291	0	33	107	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Prot			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Effective Green, g (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.11	0.49		0.34	0.34		0.42	0.42		0.42	0.42	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	164	1488		308	1014		437	1244		367	1173	
v/s Ratio Prot	c0.05	0.10			c0.11			c0.10			0.04	
v/s Ratio Perm				0.02			0.01			0.04		
v/c Ratio	0.51	0.20		0.06	0.32		0.03	0.23		0.09	0.09	
Uniform Delay, d1	27.4	9.3		14.5	16.0		11.3	12.3		11.5	11.5	
Progression Factor	0.90	0.38		0.81	0.74		0.61	0.65		1.10	1.20	
Incremental Delay, d2	10.3	0.3		0.3	0.8		0.1	0.4		0.5	0.2	
Delay (s)	34.9	3.8		12.1	12.7		6.9	8.4		13.2	14.0	
Level of Service	C	A		B	B		A	A		B	B	
Approach Delay (s)		10.5			12.6			8.3			13.8	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	38.3%	ICU Level of Service	A
Analysis Period (min)	15		

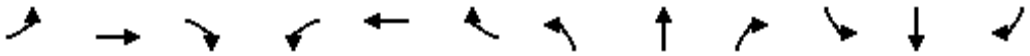
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	41	268	16	97	277	43	26	286	20	25	143	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.99		1.00	0.98			0.99			0.97	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1520	3014		1520	2979			3215			3140	
Flt Permitted	0.54	1.00		0.95	1.00			0.92			0.89	
Satd. Flow (perm)	862	3014		1520	2979			2975			2822	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	46	298	18	108	308	48	29	318	22	28	159	47
RTOR Reduction (vph)	0	7	0	0	19	0	0	7	0	0	29	0
Lane Group Flow (vph)	46	309	0	108	337	0	0	362	0	0	205	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Prot			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4						2			6		
Actuated Green, G (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Effective Green, g (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Actuated g/C Ratio	0.31	0.31		0.09	0.45			0.38			0.38	
Clearance Time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	265	927		140	1329			1144			1085	
v/s Ratio Prot		c0.10		c0.07	0.11							
v/s Ratio Perm	0.05							c0.12			0.07	
v/c Ratio	0.17	0.33		0.77	0.25			0.32			0.19	
Uniform Delay, d1	16.5	17.4		28.8	11.2			14.0			13.3	
Progression Factor	0.59	0.58		1.31	1.02			0.72			0.75	
Incremental Delay, d2	1.4	1.0		27.7	0.4			0.7			0.4	
Delay (s)	11.1	11.0		65.5	11.8			10.8			10.3	
Level of Service	B	B		E	B			B			B	
Approach Delay (s)		11.0			24.3			10.8			10.3	
Approach LOS		B			C			B			B	

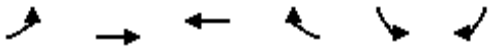
Intersection Summary			
HCM Average Control Delay	15.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	43.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	14	277	16	70	382	70	34	94	162	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	14	12	10	15	10
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			0.95				
Frt		0.99			0.98			0.92				
Flt Protected		1.00			0.99			0.99				
Satd. Flow (prot)		1585			1560			3164				
Flt Permitted		0.97			0.91			0.99				
Satd. Flow (perm)		1545			1436			3164				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	16	308	18	78	424	78	38	104	180	0	0	0
RTOR Reduction (vph)	0	2	0	0	7	0	0	138	0	0	0	0
Lane Group Flow (vph)	0	340	0	0	573	0	0	184	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		41.9			41.9			15.1				
Effective Green, g (s)		41.9			41.9			15.1				
Actuated g/C Ratio		0.64			0.64			0.23				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		3.0			3.0			8.0				
Lane Grp Cap (vph)		996			926			735				
v/s Ratio Prot												
v/s Ratio Perm		0.22			c0.40			0.06				
v/c Ratio		0.34			0.62			0.25				
Uniform Delay, d1		5.3			6.8			20.3				
Progression Factor		2.02			1.00			1.00				
Incremental Delay, d2		0.9			3.1			0.8				
Delay (s)		11.5			9.9			21.1				
Level of Service		B			A			C				
Approach Delay (s)		11.5			9.9			21.1			0.0	
Approach LOS		B			A			C			A	

Intersection Summary			
HCM Average Control Delay	13.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	85	354	427	44	66	92
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	89	373	449	46	69	97
Pedestrians		3	5		21	
Lane Width (ft)		16.0	16.0		10.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1319	491			
pX, platoon unblocked	0.86				0.86	0.86
vC, conflicting volume	517				1050	497
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	353				975	329
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	91				67	84
cM capacity (veh/h)	973				213	599

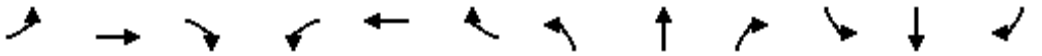
Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	462	496	69	97
Volume Left	89	0	69	0
Volume Right	0	46	0	97
cSH	973	1700	213	599
Volume to Capacity	0.09	0.29	0.33	0.16
Queue Length 95th (ft)	8	0	34	14
Control Delay (s)	2.6	0.0	29.9	12.2
Lane LOS	A		D	B
Approach Delay (s)	2.6	0.0	19.6	
Approach LOS			C	

Intersection Summary			
Average Delay	4.0		
Intersection Capacity Utilization	66.1%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	473	1	27	675	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0			4.0		
Lane Util. Factor	1.00			1.00		
Frt	1.00			1.00		
Flt Protected	1.00			1.00		
Satd. Flow (prot)	1714			1711		
Flt Permitted	1.00			0.97		
Satd. Flow (perm)	1714			1661		
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	526	1	30	750	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	527	0	0	780	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type			Perm			
Protected Phases	1 2 4			4	3	
Permitted Phases			4			
Actuated Green, G (s)	63.0			31.0		
Effective Green, g (s)	59.0			31.0		
Actuated g/C Ratio	0.69			0.36		
Clearance Time (s)				4.0		
Lane Grp Cap (vph)	1190			606		
v/s Ratio Prot	c0.31					
v/s Ratio Perm				c0.47		
v/c Ratio	0.44			1.29		
Uniform Delay, d1	5.7			27.0		
Progression Factor	0.06			1.00		
Incremental Delay, d2	0.1			141.4		
Delay (s)	0.5			168.4		
Level of Service	A			F		
Approach Delay (s)	0.5			168.4	0.0	
Approach LOS	A			F	A	

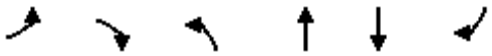
Intersection Summary			
HCM Average Control Delay	100.7	HCM Level of Service	F
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	63.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	185	193	25	561	0	0	0	0	3	0	263
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	206	214	28	623	0	0	0	0	3	0	292
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	623			206			992	992	210	782	884	623
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	623			206			992	992	210	782	884	623
tC, single (s)	4.1			5.5			7.5	6.5	6.9	7.5	6.5	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.9			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			100	100	100	99	100	31
cM capacity (veh/h)	968			984			62	241	802	282	278	424

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	137	283	651	3	292
Volume Left	0	0	28	3	0
Volume Right	0	214	0	0	292
cSH	1700	1700	984	282	424
Volume to Capacity	0.08	0.17	0.03	0.01	0.69
Queue Length 95th (ft)	0	0	2	1	127
Control Delay (s)	0.0	0.0	0.7	17.9	30.3
Lane LOS			A	C	D
Approach Delay (s)	0.0		0.7	30.2	
Approach LOS				D	

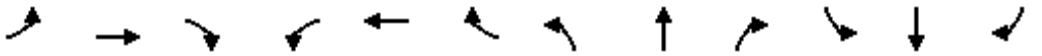
Intersection Summary				
Average Delay	6.9			
Intersection Capacity Utilization	57.9%	ICU Level of Service		B
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	188	0	586	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	209	0	651	0	0	0

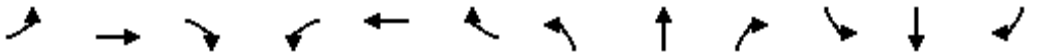
Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	104	104	651
Volume Left (vph)	104	104	651
Volume Right (vph)	0	0	0
Hadj (s)	0.58	0.58	0.29
Departure Headway (s)	6.8	6.8	4.9
Degree Utilization, x	0.20	0.20	0.88
Capacity (veh/h)	511	512	734
Control Delay (s)	10.3	10.3	32.2
Approach Delay (s)	10.3		32.2
Approach LOS	B		D

Intersection Summary			
Delay	26.9		
HCM Level of Service	D		
Intersection Capacity Utilization	46.6%	ICU Level of Service	A
Analysis Period (min)	15		



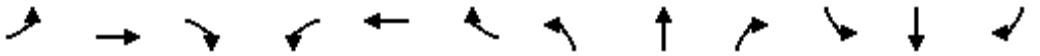
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	650	210	172	519	0	0	0	0	208	117	300
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	13	12	12	12	12	10	10	11
Total Lost time (s)		6.0	6.0		6.0					6.0	6.0	6.0
Lane Util. Factor		0.95	1.00		0.95					0.86	0.81	0.86
Frpb, ped/bikes		1.00	0.98		1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	0.94	0.85
Flt Protected		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (prot)		2978	1202		3372					1346	3704	1122
Flt Permitted		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (perm)		2978	1202		3372					1346	3704	1122
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	684	221	181	546	0	0	0	0	219	123	316
RTOR Reduction (vph)	0	0	107	0	0	0	0	0	0	0	81	92
Lane Group Flow (vph)	0	684	114	0	727	0	0	0	0	120	299	66
Confl. Peds. (#/hr)	5		3	3		5						
Heavy Vehicles (%)	0%	11%	9%	2%	4%	0%	0%	0%	0%	2%	2%	2%
Parking (#/hr)			0									0
Turn Type			Perm	Split						Split		custom
Protected Phases		2		10 12 14	10 12 14					4	4	
Permitted Phases			2									4 2
Actuated Green, G (s)		39.1	39.1		68.1					22.1	22.1	67.2
Effective Green, g (s)		39.1	39.1		68.1					22.1	22.1	67.2
Actuated g/C Ratio		0.24	0.24		0.43					0.14	0.14	0.42
Clearance Time (s)		6.0	6.0							6.0	6.0	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		728	294		1435					186	512	471
v/s Ratio Prot		c0.23			c0.22					c0.09	0.08	
v/s Ratio Perm			0.09									0.06
v/c Ratio		0.94	0.39		0.51					0.65	0.58	0.14
Uniform Delay, d1		59.3	50.4		33.6					65.2	64.6	28.6
Progression Factor		1.00	1.00		0.02					1.00	1.00	1.00
Incremental Delay, d2		21.5	3.8		0.1					7.5	1.7	0.1
Delay (s)		80.8	54.3		0.7					72.7	66.3	28.7
Level of Service		F	D		A					E	E	C
Approach Delay (s)		74.3			0.7			0.0			58.5	
Approach LOS		E			A			A			E	

Intersection Summary			
HCM Average Control Delay	46.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	32.7
Intersection Capacity Utilization	61.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



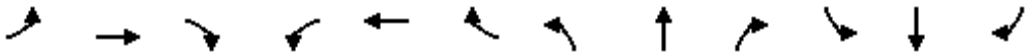
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	212	646	0	0	453	112	238	150	195	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	13	12	12	11	12	13	13	14	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0				
Lane Util. Factor	1.00	0.95			0.95	1.00	0.91	0.91				
Frt	1.00	1.00			1.00	0.85	1.00	0.92				
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00				
Satd. Flow (prot)	1574	3366			3149	1457	1531	2963				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	1.00				
Satd. Flow (perm)	1574	3366			3149	1457	1531	2963				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	236	718	0	0	503	124	264	167	217	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	88	0	117	0	0	0	0
Lane Group Flow (vph)	236	718	0	0	503	36	222	309	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Split					Perm	Split					
Protected Phases	2 4 8	2 4 8			10		12	12				
Permitted Phases						10						
Actuated Green, G (s)	83.9	83.9			33.7	33.7	15.5	15.5				
Effective Green, g (s)	83.9	83.9			33.7	33.7	15.5	15.5				
Actuated g/C Ratio	0.52	0.52			0.21	0.21	0.10	0.10				
Clearance Time (s)					6.0	6.0	6.0	6.0				
Vehicle Extension (s)					3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	825	1765			663	307	148	287				
v/s Ratio Prot	0.15	c0.21			c0.16		c0.14	0.10				
v/s Ratio Perm						0.02						
v/c Ratio	0.29	0.41			0.76	0.12	1.50	1.08				
Uniform Delay, d1	21.3	23.0			59.3	51.1	72.2	72.2				
Progression Factor	0.07	0.06			1.00	1.00	1.00	1.00				
Incremental Delay, d2	0.1	0.1			5.0	0.2	256.9	75.6				
Delay (s)	1.6	1.5			64.3	51.3	329.2	147.8				
Level of Service	A	A			E	D	F	F				
Approach Delay (s)		1.5			61.7			209.9			0.0	
Approach LOS		A			E			F			A	

Intersection Summary			
HCM Average Control Delay	79.1	HCM Level of Service	E
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	28.9
Intersection Capacity Utilization	52.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	220	326	75	35	356	45	88	824	62	59	749	104
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	14	12	10	10	12	9	10	12
Total Lost time (s)	4.0	4.0	5.0	4.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1546	1556	1328	1595	1760		1532	2990		1509	2919	
Flt Permitted	0.23	1.00	1.00	0.42	1.00		0.17	1.00		0.15	1.00	
Satd. Flow (perm)	374	1556	1328	703	1760		267	2990		238	2919	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	232	343	79	37	375	47	93	867	65	62	788	109
RTOR Reduction (vph)	0	0	52	0	5	0	0	6	0	0	12	0
Lane Group Flow (vph)	232	343	27	37	417	0	93	926	0	62	885	0
Confl. Peds. (#/hr)	33		3	3		33	42		8	8		42
Confl. Bikes (#/hr)							1					1
Heavy Vehicles (%)	3%	8%	6%	0%	7%	5%	4%	5%	11%	2%	6%	9%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	38.2	31.2	31.2	32.4	28.3		39.6	34.1		39.6	34.1	
Effective Green, g (s)	36.2	32.2	31.2	30.4	28.3		37.6	34.1		37.6	34.1	
Actuated g/C Ratio	0.40	0.36	0.35	0.34	0.31		0.42	0.38		0.42	0.38	
Clearance Time (s)	3.0	5.0	5.0	3.0	5.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	229	557	461	268	554		175	1134		163	1107	
v/s Ratio Prot	c0.07	0.22		0.00	0.24		c0.03	c0.31		0.02	0.30	
v/s Ratio Perm	c0.34		0.02	0.04			0.20			0.14		
v/c Ratio	1.01	0.62	0.06	0.14	0.75		0.53	0.82		0.38	0.80	
Uniform Delay, d1	26.3	23.8	19.6	20.4	27.7		17.9	25.1		17.7	24.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	62.9	5.0	0.2	0.2	9.2		3.1	6.5		1.5	6.1	
Delay (s)	89.2	28.8	19.8	20.7	36.8		21.0	31.6		19.2	30.9	
Level of Service	F	C	B	C	D		C	C		B	C	
Approach Delay (s)		49.1			35.5			30.7			30.2	
Approach LOS		D			D			C			C	

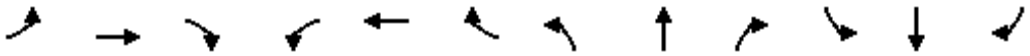
Intersection Summary			
HCM Average Control Delay	35.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	89.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	82.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	54	301	26	5	311	19	78	80	16	11	44	82
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	10	10	10	12	15	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Frpb, ped/bikes		1.00	0.97		1.00	0.97		1.00			0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.99			0.92	
Flt Protected		0.99	1.00		1.00	1.00		0.98			1.00	
Satd. Flow (prot)		1910	1482		1600	1198		1904			1792	
Flt Permitted		0.91	1.00		1.00	1.00		0.83			0.98	
Satd. Flow (perm)		1761	1482		1595	1198		1624			1762	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	57	317	27	5	327	20	82	84	17	12	46	86
RTOR Reduction (vph)	0	0	14	0	0	10	0	6	0	0	50	0
Lane Group Flow (vph)	0	374	13	0	332	10	0	177	0	0	94	0
Confl. Peds. (#/hr)	6		11	11		6	4		8	8		4
Confl. Bikes (#/hr)	1		1	1		1			1	1		
Heavy Vehicles (%)	0%	7%	0%	0%	5%	16%	0%	0%	0%	10%	0%	3%
Turn Type	Perm		Perm	Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Effective Green, g (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Actuated g/C Ratio		0.49	0.49		0.49	0.49		0.42			0.42	
Clearance Time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		867	730		785	590		675			732	
v/s Ratio Prot												
v/s Ratio Perm		c0.21	0.01		0.21	0.01		c0.11			0.05	
v/c Ratio		0.43	0.02		0.42	0.02		0.26			0.13	
Uniform Delay, d1		10.6	8.5		10.6	8.4		12.5			11.7	
Progression Factor		1.00	1.00		1.67	2.20		1.00			1.51	
Incremental Delay, d2		1.6	0.0		1.6	0.0		0.9			0.4	
Delay (s)		12.2	8.5		19.2	18.6		13.4			18.1	
Level of Service		B	A		B	B		B			B	
Approach Delay (s)		12.0			19.2			13.4			18.1	
Approach LOS		B			B			B			B	

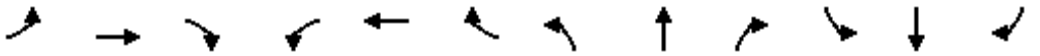
Intersection Summary			
HCM Average Control Delay	15.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	77.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	86	219	35	6	176	6	84	228	22	9	53	73
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.98		1.00	0.96		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.93	
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		1.00	
Satd. Flow (prot)		1664	1392		1608	1497		1734	1390		1571	
Flt Permitted		0.85	1.00		0.99	1.00		0.88	1.00		0.98	
Satd. Flow (perm)		1439	1392		1592	1497		1553	1390		1541	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	91	231	37	6	185	6	88	240	23	9	56	77
RTOR Reduction (vph)	0	0	24	0	0	4	0	0	12	0	39	0
Lane Group Flow (vph)	0	322	13	0	191	2	0	328	11	0	103	0
Confl. Peds. (#/hr)	11		17	17		11	4		17	17		4
Confl. Bikes (#/hr)	1		1	1		1	1					1
Heavy Vehicles (%)	0%	9%	5%	33%	11%	0%	6%	1%	6%	0%	0%	8%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Effective Green, g (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Actuated g/C Ratio		0.35	0.35		0.35	0.35		0.49	0.49		0.49	
Clearance Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Grp Cap (vph)		509	493		563	530		765	684		759	
v/s Ratio Prot												
v/s Ratio Perm		c0.22	0.01		0.12	0.00		c0.21	0.01		0.07	
v/c Ratio		0.63	0.03		0.34	0.00		0.43	0.02		0.14	
Uniform Delay, d1		17.5	13.7		15.4	13.6		10.6	8.4		9.0	
Progression Factor		1.87	3.33		0.95	0.97		0.27	0.18		1.14	
Incremental Delay, d2		5.5	0.1		1.6	0.0		0.8	0.0		0.4	
Delay (s)		38.3	45.7		16.3	13.2		3.7	1.6		10.6	
Level of Service		D	D		B	B		A	A		B	
Approach Delay (s)		39.0			16.2			3.6			10.6	
Approach LOS		D			B			A			B	

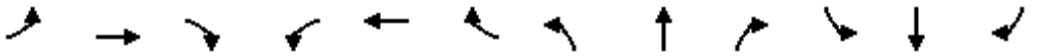
Intersection Summary			
HCM Average Control Delay	19.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	78.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	166	23	35	9	27	6	43	286	19	6	201	115
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.97		0.99			1.00			1.00	0.95
Flpb, ped/bikes		0.98	1.00		1.00			1.00			1.00	1.00
Frt		1.00	0.85		0.98			0.99			1.00	0.85
Flt Protected		0.96	1.00		0.99			0.99			1.00	1.00
Satd. Flow (prot)		1772	1390		1835			1970			1873	1328
Flt Permitted		0.79	1.00		0.94			0.95			0.99	1.00
Satd. Flow (perm)		1466	1390		1749			1874			1858	1328
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	184	26	39	10	30	7	48	318	21	7	223	128
RTOR Reduction (vph)	0	0	23	0	5	0	0	3	0	0	0	65
Lane Group Flow (vph)	0	210	16	0	42	0	0	384	0	0	230	63
Confl. Peds. (#/hr)	49		22	22		49	34		17	17		34
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	9%	0%	7%	0%	0%	0%	0%	2%	0%	0%	9%	9%
Turn Type	pm+pt		Perm	Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		27.0	27.0		17.0			32.0			32.0	32.0
Effective Green, g (s)		27.0	27.0		17.0			32.0			32.0	32.0
Actuated g/C Ratio		0.42	0.42		0.26			0.49			0.49	0.49
Clearance Time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		647	577		457			923			915	654
v/s Ratio Prot		c0.04										
v/s Ratio Perm		0.09	0.01		0.02			c0.20			0.12	0.05
v/c Ratio		0.32	0.03		0.09			0.42			0.25	0.10
Uniform Delay, d1		12.8	11.2		18.2			10.5			9.6	8.8
Progression Factor		0.85	1.52		1.00			0.43			0.53	0.31
Incremental Delay, d2		1.1	0.1		0.4			1.1			0.6	0.3
Delay (s)		12.1	17.1		18.6			5.6			5.7	3.0
Level of Service		B	B		B			A			A	A
Approach Delay (s)		12.9			18.6			5.6			4.7	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	7.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	60.7%	ICU Level of Service	B
Analysis Period (min)	15		

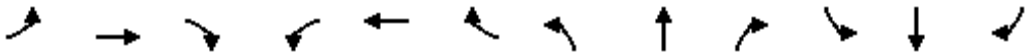
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	990	222	333	1149	0	0	0	0	275	201	376
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	11	8	8	8	11	12	14
Total Lost time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Lane Util. Factor		0.91		1.00	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00		1.00	1.00					1.00	0.99	0.99
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.97		1.00	1.00					1.00	0.94	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.99	1.00
Satd. Flow (prot)		4322		1589	3226					1419	2711	1355
Flt Permitted		1.00		0.12	1.00					0.95	0.99	1.00
Satd. Flow (perm)		4322		204	3226					1419	2711	1355
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1042	234	351	1209	0	0	0	0	289	212	396
RTOR Reduction (vph)	0	32	0	0	0	0	0	0	0	0	59	59
Lane Group Flow (vph)	0	1244	0	351	1209	0	0	0	0	234	394	151
Confl. Peds. (#/hr)	6		4	4		6	2					2
Heavy Vehicles (%)	0%	11%	7%	4%	6%	0%	0%	0%	0%	6%	4%	8%
Turn Type				pm+pt						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Actuated Green, G (s)		44.3		69.3	69.3					23.7	23.7	23.7
Effective Green, g (s)		44.3		69.3	69.3					23.7	23.7	23.7
Actuated g/C Ratio		0.42		0.66	0.66					0.23	0.23	0.23
Clearance Time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Vehicle Extension (s)		7.0		3.5	7.0					3.5	3.5	3.5
Lane Grp Cap (vph)		1823		405	2129					320	612	306
v/s Ratio Prot		0.29		c0.17	0.37							
v/s Ratio Perm				c0.40						c0.16	0.15	0.11
v/c Ratio		0.68		0.87	0.57					0.73	0.64	0.49
Uniform Delay, d1		24.6		24.7	9.7					37.7	36.8	35.4
Progression Factor		1.00		0.90	1.67					1.00	1.00	1.00
Incremental Delay, d2		2.1		9.0	0.5					8.6	2.4	1.5
Delay (s)		26.7		31.1	16.7					46.3	39.3	36.9
Level of Service		C		C	B					D	D	D
Approach Delay (s)		26.7			19.9			0.0			40.5	
Approach LOS		C			B			A			D	

Intersection Summary			
HCM Average Control Delay	27.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	109.9%	ICU Level of Service	H
Analysis Period (min)	15		

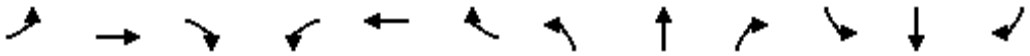
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	311	954	0	0	933	234	549	365	681	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	11	12	12	12	12	12	12	12
Total Lost time (s)	6.0	6.0			6.0			6.0				
Lane Util. Factor	0.97	0.95			0.91			0.91				
Frpb, ped/bikes	1.00	1.00			1.00			1.00				
Flpb, ped/bikes	1.00	1.00			1.00			1.00				
Frt	1.00	1.00			0.97			0.94				
Flt Protected	0.95	1.00			1.00			0.98				
Satd. Flow (prot)	2915	3138			4350			4339				
Flt Permitted	0.13	1.00			1.00			0.98				
Satd. Flow (perm)	407	3138			4350			4339				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	327	1004	0	0	982	246	578	384	717	0	0	0
RTOR Reduction (vph)	0	0	0	0	36	0	0	89	0	0	0	0
Lane Group Flow (vph)	327	1004	0	0	1192	0	0	1590	0	0	0	0
Confl. Peds. (#/hr)	4					4						
Heavy Vehicles (%)	10%	9%	0%	0%	6%	4%	4%	3%	5%	0%	0%	0%
Turn Type	pm+pt						Perm					
Protected Phases	5	2			6			8				
Permitted Phases	2						8					
Actuated Green, G (s)	63.6	63.6			45.4			29.4				
Effective Green, g (s)	63.6	63.6			45.4			29.4				
Actuated g/C Ratio	0.61	0.61			0.43			0.28				
Clearance Time (s)	6.0	6.0			6.0			6.0				
Vehicle Extension (s)	3.5	7.0			7.0			5.0				
Lane Grp Cap (vph)	538	1901			1881			1215				
v/s Ratio Prot	0.07	c0.32			0.27							
v/s Ratio Perm	c0.30							0.37				
v/c Ratio	0.61	0.53			0.63			1.42dr				
Uniform Delay, d1	12.9	12.0			23.3			37.8				
Progression Factor	0.60	0.60			1.02			1.00				
Incremental Delay, d2	1.5	0.8			0.9			144.8				
Delay (s)	9.3	8.0			24.6			182.6				
Level of Service	A	A			C			F				
Approach Delay (s)		8.3			24.6			182.6			0.0	
Approach LOS		A			C			F			A	

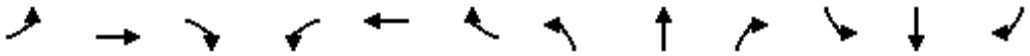
Intersection Summary			
HCM Average Control Delay	82.1	HCM Level of Service	F
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	109.9%	ICU Level of Service	H
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	105	941	226	78	874	51	226	178	40	76	111	91
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	11	12	12	10	10	13	10	10	10
Total Lost time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.97		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1565	3061	1291	1604	3231		1446	3007		1544	2782	
Flt Permitted	0.11	1.00	1.00	0.29	1.00		0.55	1.00		0.61	1.00	
Satd. Flow (perm)	175	3061	1291	488	3231		841	3007		990	2782	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	111	991	238	82	920	54	238	187	42	80	117	96
RTOR Reduction (vph)	0	0	98	0	4	0	0	21	0	0	80	0
Lane Group Flow (vph)	111	991	140	82	970	0	238	208	0	80	133	0
Confl. Peds. (#/hr)	3		12	12		3	9		6	6		9
Heavy Vehicles (%)	2%	8%	5%	3%	5%	3%	10%	3%	2%	3%	7%	4%
Parking (#/hr)			0									
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	62.7	52.6	61.7	40.8	34.2		28.9	19.8		24.7	17.7	
Effective Green, g (s)	62.7	52.6	61.7	40.8	34.2		28.9	19.8		24.7	17.7	
Actuated g/C Ratio	0.60	0.50	0.59	0.39	0.33		0.28	0.19		0.24	0.17	
Clearance Time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0		3.0	7.0		3.0	7.0	
Lane Grp Cap (vph)	435	1533	759	260	1052		284	567		270	469	
v/s Ratio Prot	0.06	c0.32	0.02	c0.02	c0.30		c0.07	0.07		0.02	0.05	
v/s Ratio Perm	0.09		0.09	0.10			c0.16			0.05		
v/c Ratio	0.26	0.65	0.18	0.32	0.92		0.84	0.37		0.30	0.28	
Uniform Delay, d1	13.1	19.3	10.0	20.7	34.1		34.4	37.1		32.4	38.1	
Progression Factor	1.04	1.20	2.56	1.00	1.00		0.96	0.90		1.00	1.00	
Incremental Delay, d2	0.7	1.1	0.1	0.7	14.4		18.0	1.3		0.6	1.2	
Delay (s)	14.3	24.2	25.7	21.4	48.5		51.0	34.9		33.0	39.3	
Level of Service	B	C	C	C	D		D	C		C	D	
Approach Delay (s)		23.6			46.4			43.1			37.6	
Approach LOS		C			D			D			D	

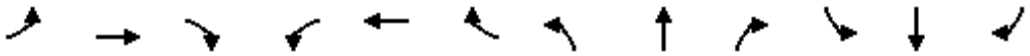
Intersection Summary			
HCM Average Control Delay	35.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	22.5
Intersection Capacity Utilization	76.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	62	329	286	81	215	102	329	382	161	91	258	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	12	11	12	12	11	13	12	10	11	12
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.93		1.00	0.95		1.00	0.96		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1635	2916		1463	3047		1589	3174		1549	3135	
Flt Permitted	0.52	1.00		0.23	1.00		0.46	1.00		0.44	1.00	
Satd. Flow (perm)	888	2916		359	3047		772	3174		713	3135	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	65	346	301	85	226	107	346	402	169	96	272	57
RTOR Reduction (vph)	0	144	0	0	52	0	0	43	0	0	17	0
Lane Group Flow (vph)	65	503	0	85	281	0	346	528	0	96	312	0
Confl. Peds. (#/hr)	20					20	1		2	2		1
Heavy Vehicles (%)	4%	5%	6%	13%	6%	5%	4%	6%	5%	3%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	35.4	28.4		36.2	28.8		53.2	41.9		38.6	31.3	
Effective Green, g (s)	35.4	28.4		36.2	28.8		53.2	41.9		38.6	31.3	
Actuated g/C Ratio	0.34	0.27		0.34	0.27		0.51	0.40		0.37	0.30	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.5	7.0		3.5	7.0		3.5	7.0		3.5	7.0	
Lane Grp Cap (vph)	349	789		202	836		530	1267		320	935	
v/s Ratio Prot	0.01	c0.17		c0.03	0.09		c0.11	0.17		0.02	0.10	
v/s Ratio Perm	0.05			0.12			c0.22			0.09		
v/c Ratio	0.19	0.64		0.42	0.34		0.65	0.42		0.30	0.33	
Uniform Delay, d1	24.0	33.8		24.8	30.5		16.6	22.7		22.4	28.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.04	0.90	
Incremental Delay, d2	0.3	3.9		1.7	1.1		3.0	1.0		0.6	0.9	
Delay (s)	24.3	37.7		26.4	31.6		19.6	23.8		23.8	26.8	
Level of Service	C	D		C	C		B	C		C	C	
Approach Delay (s)		36.4			30.5			22.2			26.2	
Approach LOS		D			C			C			C	

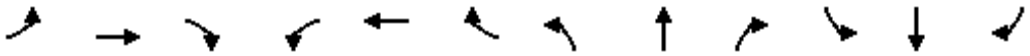
Intersection Summary			
HCM Average Control Delay	28.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	73.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	169	402	612	6	409	110	201	617	7	84	385	105
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	9	11	12	9	9	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.99			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.92			0.97		1.00	1.00		1.00	0.97	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		2588			2888		1437	3187		1451	2799	
Flt Permitted		0.62			0.93		0.36	1.00		0.27	1.00	
Satd. Flow (perm)		1620			2690		550	3187		405	2799	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	188	447	680	7	454	122	223	686	8	93	428	117
RTOR Reduction (vph)	0	193	0	0	37	0	0	1	0	0	38	0
Lane Group Flow (vph)	0	1122	0	0	546	0	223	693	0	93	507	0
Confl. Peds. (#/hr)	9		11	11		9	11		14	14		11
Heavy Vehicles (%)	3%	6%	18%	50%	6%	6%	7%	3%	50%	6%	7%	2%
Turn Type	pm+pt			Perm			pm+pt			pm+pt		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			19.0		26.0	22.0		26.0	22.0	
Effective Green, g (s)		27.0			19.0		26.0	22.0		26.0	22.0	
Actuated g/C Ratio		0.42			0.29		0.40	0.34		0.40	0.34	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		732			786		275	1079		226	947	
v/s Ratio Prot		c0.09					c0.05	0.22		0.03	0.18	
v/s Ratio Perm		c0.54			0.20		c0.27			0.14		
v/c Ratio		1.53			0.69		0.81	0.64		0.41	0.53	
Uniform Delay, d1		19.0			20.4		16.4	18.2		12.9	17.4	
Progression Factor		1.00			1.51		1.14	1.01		1.00	1.00	
Incremental Delay, d2		246.7			0.5		17.1	2.2		5.5	2.2	
Delay (s)		265.7			31.3		35.7	20.5		18.4	19.5	
Level of Service		F			C		D	C		B	B	
Approach Delay (s)		265.7			31.3			24.2			19.4	
Approach LOS		F			C			C			B	

Intersection Summary			
HCM Average Control Delay	116.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	52	117	343	858	132	13	112	809	278	10	968	45
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.89		1.00	0.99		1.00	0.96		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1665	1695		1620	1939		1659	3110		1139	3232	
Flt Permitted	0.66	1.00		0.29	1.00		0.19	1.00		0.16	1.00	
Satd. Flow (perm)	1161	1695		499	1939		326	3110		191	3232	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	54	121	354	885	136	13	115	834	287	10	998	46
RTOR Reduction (vph)	0	41	0	0	5	0	0	52	0	0	5	0
Lane Group Flow (vph)	54	434	0	885	144	0	115	1069	0	10	1039	0
Confl. Peds. (#/hr)	10		16	16		10	4		6	6		4
Confl. Bikes (#/hr)			4	4								
Heavy Vehicles (%)	2%	4%	5%	5%	4%	0%	3%	4%	8%	50%	5%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.48	0.48		0.48	0.48	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	429	626		184	716		155	1483		91	1541	
v/s Ratio Prot		0.26			0.07			0.34			0.32	
v/s Ratio Perm	0.05			c1.77			c0.35			0.05		
v/c Ratio	0.13	0.69		4.81	0.20		0.74	0.72		0.11	0.67	
Uniform Delay, d1	13.6	17.4		20.5	14.0		13.8	13.5		9.4	13.1	
Progression Factor	1.00	1.00		1.73	1.92		1.00	1.00		0.98	0.96	
Incremental Delay, d2	0.6	6.2		1715.5	0.1		27.1	3.1		0.2	0.2	
Delay (s)	14.2	23.6		1751.0	26.8		40.8	16.6		9.5	12.8	
Level of Service	B	C		F	C		D	B		A	B	
Approach Delay (s)		22.6			1502.5			18.9			12.7	
Approach LOS		C			F			B			B	

Intersection Summary			
HCM Average Control Delay	415.9	HCM Level of Service	F
HCM Volume to Capacity ratio	2.51		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	133.3%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR	SBR2
Lane Configurations												
Volume (vph)	427	952	570	14	3	14	3	47	10	0	2	4
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	12	12	16	12	12	16	12	12
Total Lost time (s)	5.0		5.0				4.0			4.0		
Lane Util. Factor	0.95		0.95				1.00			1.00		
Frpb, ped/bikes	1.00		1.00				1.00			0.99		
Flpb, ped/bikes	1.00		1.00				1.00			1.00		
Frt	1.00		1.00				0.91			0.95		
Flt Protected	1.00		0.97				0.99			0.97		
Satd. Flow (prot)	2956		2880				1732			1864		
Flt Permitted	1.00		0.59				0.94			0.87		
Satd. Flow (perm)	2956		1742				1650			1671		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	449	1002	600	15	3	15	3	49	11	0	2	4
RTOR Reduction (vph)	0	0	1	0	0	0	38	0	0	3	0	0
Lane Group Flow (vph)	449	0	1616	0	0	0	32	0	0	14	0	0
Confl. Peds. (#/hr)		7		6		3					3	
Confl. Bikes (#/hr)		1										
Heavy Vehicles (%)	8%	8%	6%	0%	0%	8%	0%	5%	0%	0%	0%	0%
Turn Type		custom				Perm			Perm			
Protected Phases	8	7	4				2			6		
Permitted Phases		4 7				2			6			
Actuated Green, G (s)	18.0		27.0				14.0			14.0		
Effective Green, g (s)	18.0		27.0				14.0			14.0		
Actuated g/C Ratio	0.28		0.42				0.22			0.22		
Clearance Time (s)	5.0		5.0				4.0			4.0		
Lane Grp Cap (vph)	819		829				355			360		
v/s Ratio Prot	0.15		c0.18									
v/s Ratio Perm			c0.63				c0.02			0.01		
v/c Ratio	0.55		3.37dl				0.09			0.04		
Uniform Delay, d1	20.0		19.0				20.4			20.2		
Progression Factor	1.22		0.66				1.00			1.00		
Incremental Delay, d2	0.2		430.0				0.5			0.2		
Delay (s)	24.8		442.6				20.9			20.4		
Level of Service	C		F				C			C		
Approach Delay (s)	24.8		442.6				20.9			20.4		
Approach LOS	C		F				C			C		

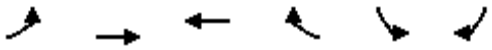
Intersection Summary			
HCM Average Control Delay	366.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	125.7%	ICU Level of Service	H
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group



Movement	NEL	NER
Lane Configurations		
Volume (vph)	1	421
Ideal Flow (vphpl)	1800	1800
Lane Width	12	12
Total Lost time (s)	5.0	
Lane Util. Factor	1.00	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Frt	0.87	
Flt Protected	1.00	
Satd. Flow (prot)	1429	
Flt Permitted	1.00	
Satd. Flow (perm)	1429	
Peak-hour factor, PHF	0.95	0.95
Adj. Flow (vph)	1	443
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	444	0
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Heavy Vehicles (%)	0%	9%
Turn Type		
Protected Phases	3	
Permitted Phases		
Actuated Green, G (s)	10.0	
Effective Green, g (s)	10.0	
Actuated g/C Ratio	0.15	
Clearance Time (s)	5.0	
Lane Grp Cap (vph)	220	
v/s Ratio Prot	c0.31	
v/s Ratio Perm		
v/c Ratio	2.02	
Uniform Delay, d1	27.5	
Progression Factor	1.24	
Incremental Delay, d2	469.8	
Delay (s)	503.8	
Level of Service	F	
Approach Delay (s)	503.8	
Approach LOS	F	

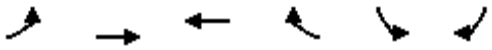
Intersection Summary



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	214	758	1303	66	41	235
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frt		1.00	0.99		1.00	0.85
Flt Protected		0.99	1.00		0.95	1.00
Satd. Flow (prot)		3222	3234		1629	1457
Flt Permitted		0.51	1.00		0.95	1.00
Satd. Flow (perm)		1673	3234		1629	1457
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	238	842	1448	73	46	261
RTOR Reduction (vph)	0	0	5	0	0	34
Lane Group Flow (vph)	0	1080	1516	0	46	227
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		40.0	40.0		17.0	17.0
Effective Green, g (s)		40.0	40.0		17.0	17.0
Actuated g/C Ratio		0.62	0.62		0.26	0.26
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1030	1990		426	381
v/s Ratio Prot			0.47		0.03	
v/s Ratio Perm		c0.65				c0.16
v/c Ratio		2.20dl	0.76		0.11	0.60
Uniform Delay, d1		12.5	9.0		18.2	21.0
Progression Factor		1.77	0.87		0.99	0.97
Incremental Delay, d2		24.8	1.6		0.5	6.7
Delay (s)		46.9	9.5		18.6	27.1
Level of Service		D	A		B	C
Approach Delay (s)		46.9	9.5		25.8	
Approach LOS		D	A		C	

Intersection Summary			
HCM Average Control Delay	25.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.2%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	58	714	1287	196	135	76
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	12	10	11	12	10	10
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frpb, ped/bikes		1.00	1.00		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.98		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2928	2977		1464	1373
Flt Permitted		0.70	1.00		0.95	1.00
Satd. Flow (perm)		2068	2977		1464	1373
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	61	752	1355	206	142	80
RTOR Reduction (vph)	0	0	19	0	0	34
Lane Group Flow (vph)	0	813	1542	0	142	46
Confl. Peds. (#/hr)	1			1		
Confl. Bikes (#/hr)	1			1		
Heavy Vehicles (%)	4%	9%	8%	12%	9%	4%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		38.0	38.0		19.0	19.0
Effective Green, g (s)		38.0	38.0		19.0	19.0
Actuated g/C Ratio		0.58	0.58		0.29	0.29
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1209	1740		428	401
v/s Ratio Prot			c0.52		c0.10	
v/s Ratio Perm		0.39				0.03
v/c Ratio		0.67	0.89		0.33	0.11
Uniform Delay, d1		9.2	11.6		18.0	16.8
Progression Factor		0.92	1.02		0.96	1.05
Incremental Delay, d2		0.3	2.0		2.0	0.6
Delay (s)		8.7	13.9		19.3	18.2
Level of Service		A	B		B	B
Approach Delay (s)		8.7	13.9		18.9	
Approach LOS		A	B		B	

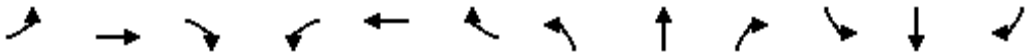
Intersection Summary			
HCM Average Control Delay	12.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.2%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



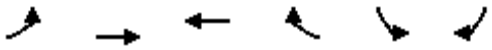
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	686	175	107	1182	482	83
Ideal Flow (vphpl)	2300	1800	1800	2300	1800	1800
Lane Width	15	12	14	16	15	12
Total Lost time (s)	5.0		5.0	5.0	5.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.97		1.00	1.00	0.98	
Flt Protected	1.00		0.95	1.00	0.96	
Satd. Flow (prot)	2222		1770	2436	1820	
Flt Permitted	1.00		0.13	1.00	0.96	
Satd. Flow (perm)	2222		240	2436	1820	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	700	179	109	1206	492	85
RTOR Reduction (vph)	14	0	0	0	9	0
Lane Group Flow (vph)	865	0	109	1206	568	0
Confl. Peds. (#/hr)		4	4			8
Heavy Vehicles (%)	11%	7%	3%	7%	2%	2%
Turn Type			Perm			
Protected Phases	4			8	2	
Permitted Phases			8			
Actuated Green, G (s)	31.0		31.0	31.0	24.0	
Effective Green, g (s)	31.0		31.0	31.0	24.0	
Actuated g/C Ratio	0.48		0.48	0.48	0.37	
Clearance Time (s)	5.0		5.0	5.0	5.0	
Lane Grp Cap (vph)	1060		114	1162	672	
v/s Ratio Prot	0.39			c0.50	c0.31	
v/s Ratio Perm			0.45			
v/c Ratio	0.82		0.96	1.04	0.84	
Uniform Delay, d1	14.6		16.3	17.0	18.8	
Progression Factor	1.51		1.00	1.00	1.00	
Incremental Delay, d2	5.5		73.1	36.7	12.4	
Delay (s)	27.6		89.5	53.7	31.2	
Level of Service	C		F	D	C	
Approach Delay (s)	27.6			56.7	31.2	
Approach LOS	C			E	C	

Intersection Summary			
HCM Average Control Delay	42.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	93.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	738	99	258	1220	9	111	0	187	1	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	15	13	11	11	12	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0	4.0	3.0	3.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00		0.95	
Satd. Flow (prot)	1881	3213	1422	1589	3138	1366		1642	1443		969	
Flt Permitted	0.20	1.00	1.00	0.26	1.00	1.00		0.76	1.00		0.61	
Satd. Flow (perm)	397	3213	1422	430	3138	1366		1309	1443		626	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	820	110	287	1356	10	123	0	208	1	0	0
RTOR Reduction (vph)	0	0	53	0	0	3	0	0	175	0	0	0
Lane Group Flow (vph)	1	820	57	287	1356	7	0	123	33	0	1	0
Heavy Vehicles (%)	0%	10%	4%	4%	9%	12%	18%	0%	6%	100%	0%	0%
Turn Type	Perm		Perm	custom		custom	Perm		Perm	Perm		
Protected Phases		4		3	3 8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)	44.4	44.4	44.4	63.7	63.7	63.7		13.3	13.3		13.3	
Effective Green, g (s)	44.4	44.4	44.4	63.7	63.7	63.7		13.3	13.3		13.3	
Actuated g/C Ratio	0.52	0.52	0.52	0.75	0.75	0.75		0.16	0.16		0.16	
Clearance Time (s)	4.0	4.0	4.0	3.0		4.0		4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0		3.0	
Lane Grp Cap (vph)	207	1678	743	545	2352	1024		205	226		98	
v/s Ratio Prot		0.26		0.10	c0.43							
v/s Ratio Perm	0.00		0.04	0.29		0.01		c0.09	0.02		0.00	
v/c Ratio	0.00	0.49	0.08	0.53	0.58	0.01		0.60	0.14		0.01	
Uniform Delay, d1	9.7	13.0	10.1	4.9	4.7	2.7		33.4	30.9		30.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	0.0	1.0	0.2	0.9	0.3	0.0		4.7	0.3		0.0	
Delay (s)	9.8	14.0	10.3	5.8	5.0	2.7		38.0	31.2		30.3	
Level of Service	A	B	B	A	A	A		D	C		C	
Approach Delay (s)		13.6			5.2			33.8			30.3	
Approach LOS		B			A			C			C	

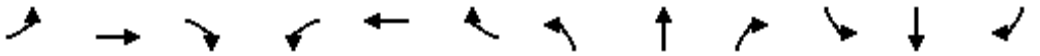
Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	55.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	13	817	844	45	24	9
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	12	10	10
Total Lost time (s)		5.0	5.0		3.0	
Lane Util. Factor		0.95	0.95		1.00	
Frt		1.00	0.99		0.96	
Flt Protected		1.00	1.00		0.96	
Satd. Flow (prot)		3038	3017		1487	
Flt Permitted		0.93	1.00		0.96	
Satd. Flow (perm)		2835	3017		1487	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	14	908	938	50	27	10
RTOR Reduction (vph)	0	0	4	0	9	0
Lane Group Flow (vph)	0	922	984	0	28	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type	Perm					
Protected Phases		4	8 2 11		5	
Permitted Phases	4					
Actuated Green, G (s)		33.0	64.0		7.0	
Effective Green, g (s)		33.0	64.0		7.0	
Actuated g/C Ratio		0.37	0.71		0.08	
Clearance Time (s)		5.0			3.0	
Lane Grp Cap (vph)		1040	2145		116	
v/s Ratio Prot			c0.33		c0.02	
v/s Ratio Perm		c0.33				
v/c Ratio		0.89	0.46		0.24	
Uniform Delay, d1		26.7	5.6		39.0	
Progression Factor		1.00	0.00		1.00	
Incremental Delay, d2		11.1	0.2		4.8	
Delay (s)		37.9	0.3		43.8	
Level of Service		D	A		D	
Approach Delay (s)		37.9	0.3		43.8	
Approach LOS		D	A		D	

Intersection Summary			
HCM Average Control Delay	18.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	44.4%	ICU Level of Service	A
Analysis Period (min)	15		

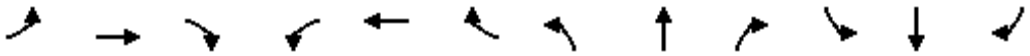
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	79	431	1	27	568	80	0	0	1	45	3	94
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12	12	11	12	11
Total Lost time (s)		4.0			4.0			3.0			3.0	3.0
Lane Util. Factor		1.00			0.95			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			0.92			1.00	0.96
Flpb, ped/bikes		1.00			1.00			1.00			0.98	1.00
Frt		1.00			0.98			0.86			1.00	0.85
Flt Protected		0.99			1.00			1.00			0.95	1.00
Satd. Flow (prot)		1729			3231			1432			1610	1282
Flt Permitted		0.79			0.93			1.00			0.93	1.00
Satd. Flow (perm)		1375			3021			1432			1569	1282
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	88	479	1	30	631	89	0	0	1	50	3	104
RTOR Reduction (vph)	0	0	0	0	12	0	0	1	0	0	0	70
Lane Group Flow (vph)	0	568	0	0	738	0	0	0	0	0	53	34
Confl. Peds. (#/hr)	33		13	13		33	29		13	13		29
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	4%	3%	0%	0%	4%	0%	0%	0%	0%	5%	0%	11%
Turn Type	Perm			Prot			Perm			pm+pt		Perm
Protected Phases		4		3	3 4			1		2	1 2	
Permitted Phases	4				3		1	1		1 2		1 2
Actuated Green, G (s)		31.0			45.0			9.0			25.0	28.0
Effective Green, g (s)		31.0			45.0			9.0			25.0	28.0
Actuated g/C Ratio		0.36			0.53			0.11			0.29	0.33
Clearance Time (s)		4.0						3.0				
Lane Grp Cap (vph)		501			1634			152			469	422
v/s Ratio Prot					c0.07			0.00			c0.02	
v/s Ratio Perm		c0.41			0.16						c0.01	0.03
v/c Ratio		1.13			0.45			0.00			0.11	0.08
Uniform Delay, d1		27.0			12.4			34.0			21.9	19.6
Progression Factor		1.00			1.83			1.00			1.00	1.00
Incremental Delay, d2		82.4			0.1			0.0			0.5	0.4
Delay (s)		109.4			22.7			34.0			22.4	20.0
Level of Service		F			C			C			C	C
Approach Delay (s)		109.4			22.7			34.0			20.8	
Approach LOS		F			C			C			C	

Intersection Summary			
HCM Average Control Delay	55.9	HCM Level of Service	E
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	72.4%	ICU Level of Service	C
Analysis Period (min)	15		

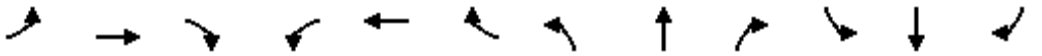
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	598	28	35	1014	58	36	35	48	23	26	87
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	16	10	10	16	8	15	8	8	14	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			0.98	
Flpb, ped/bikes	0.98	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.99			0.95			0.91	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1557	3022		1587	3021			1816			1706	
Flt Permitted	0.17	1.00		0.36	1.00			0.89			0.95	
Satd. Flow (perm)	277	3022		604	3021			1649			1630	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	41	629	29	37	1067	61	38	37	51	24	27	92
RTOR Reduction (vph)	0	5	0	0	6	0	0	33	0	0	21	0
Lane Group Flow (vph)	41	653	0	37	1122	0	0	93	0	0	122	0
Confl. Peds. (#/hr)	145		16	16		145	17		19	19		17
Confl. Bikes (#/hr)	5					5			2	2		
Heavy Vehicles (%)	0%	5%	0%	0%	4%	2%	0%	0%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			22.0			22.0	
Effective Green, g (s)	34.0	34.0		34.0	34.0			23.0			23.0	
Actuated g/C Ratio	0.52	0.52		0.52	0.52			0.35			0.35	
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0			5.0	
Lane Grp Cap (vph)	145	1581		316	1580			583			577	
v/s Ratio Prot		0.22			c0.37							
v/s Ratio Perm	0.15			0.06				0.06			c0.07	
v/c Ratio	0.28	0.41		0.12	0.71			0.16			0.21	
Uniform Delay, d1	8.7	9.4		7.9	11.8			14.4			14.7	
Progression Factor	1.00	1.00		0.70	1.41			1.00			1.00	
Incremental Delay, d2	4.8	0.8		0.7	2.4			0.6			0.8	
Delay (s)	13.5	10.2		6.2	19.1			15.0			15.5	
Level of Service	B	B		A	B			B			B	
Approach Delay (s)		10.4			18.6			15.0			15.5	
Approach LOS		B			B			B			B	

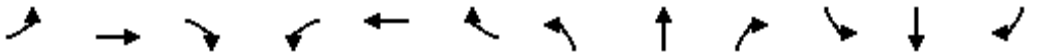
Intersection Summary			
HCM Average Control Delay	15.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	789	5	32	637	41	0	0	0	586	89	379
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00				0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.67				1.00	1.00	0.98
Flpb, ped/bikes	0.93	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	793	3379		1710	3226	514				3285	1731	1481
Flt Permitted	0.40	1.00		0.14	1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	331	3379		248	3226	514				3285	1731	1481
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	26	831	5	34	671	43	0	0	0	617	94	399
RTOR Reduction (vph)	0	0	0	0	0	19	0	0	0	0	0	166
Lane Group Flow (vph)	26	836	0	34	671	24	0	0	0	617	94	233
Confl. Peds. (#/hr)	350		4	4		350	8		6	6		8
Confl. Bikes (#/hr)	7		1	1		7						
Heavy Vehicles (%)	100%	1%	20%	0%	6%	100%	0%	0%	0%	1%	4%	1%
Turn Type	pm+pt			pm+pt		Perm				Split		Perm
Protected Phases	7	4		3	8					6	6	
Permitted Phases	4			8		8						6
Actuated Green, G (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Effective Green, g (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Actuated g/C Ratio	0.33	0.33		0.56	0.56	0.56				0.23	0.23	0.23
Clearance Time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Grp Cap (vph)	159	1118		634	1812	289				758	399	342
v/s Ratio Prot	0.02	c0.25		0.02	c0.21					c0.19	0.05	
v/s Ratio Perm	0.04			0.01		0.05						0.16
v/c Ratio	0.16	0.75		0.05	0.37	0.08				0.81	0.24	0.68
Uniform Delay, d1	31.6	38.7		15.2	15.8	13.1				47.4	40.7	45.6
Progression Factor	0.85	0.86		0.33	0.75	1.24				1.00	1.00	1.00
Incremental Delay, d2	2.1	4.4		0.1	0.4	0.4				9.3	1.4	10.5
Delay (s)	28.9	37.6		5.1	12.2	16.6				56.7	42.1	56.1
Level of Service	C	D		A	B	B				E	D	E
Approach Delay (s)		37.3			12.2			0.0			55.2	
Approach LOS		D			B			A			E	

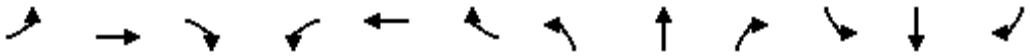
Intersection Summary			
HCM Average Control Delay	37.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	53.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	340	815	220	54	578	287	102	251	55	39	0	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.67		1.00	0.91	1.00		0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.97		1.00	1.00	0.85		1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (prot)	3285	3262		1710	3138	1018		3301	1359	855		734
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (perm)	3285	3262		1710	3138	1018		3301	1359	855		734
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	358	858	232	57	608	302	107	264	58	41	0	32
RTOR Reduction (vph)	0	18	0	0	0	228	0	0	42	0	0	30
Lane Group Flow (vph)	358	1072	0	57	608	74	0	371	16	41	0	2
Confl. Peds. (#/hr)	327		13	13		327	6		60	60		6
Confl. Bikes (#/hr)	6					6						
Heavy Vehicles (%)	1%	1%	0%	0%	9%	1%	0%	3%	2%	100%	0%	100%
Turn Type	Prot			Prot		Perm	Split		Perm	Prot		custom
Protected Phases	7	4		3	8		2	2		6		
Permitted Phases						8			2			6
Actuated Green, G (s)	44.0	68.0		8.0	32.0	32.0		28.0	28.0	8.0		8.0
Effective Green, g (s)	44.0	68.0		8.0	32.0	32.0		28.0	28.0	8.0		8.0
Actuated g/C Ratio	0.34	0.52		0.06	0.25	0.25		0.22	0.22	0.06		0.06
Clearance Time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	1112	1706		105	772	251		711	293	53		45
v/s Ratio Prot	0.11	c0.33		0.03	c0.19			c0.11		c0.05		
v/s Ratio Perm						0.07			0.01			0.00
v/c Ratio	0.32	0.63		0.54	0.79	0.30		0.52	0.06	0.77		0.04
Uniform Delay, d1	31.9	22.0		59.2	45.8	39.8		45.1	40.5	60.1		57.4
Progression Factor	0.95	0.16		1.00	1.00	1.00		0.94	0.99	1.00		1.00
Incremental Delay, d2	0.5	1.1		18.7	8.0	3.0		2.7	0.4	49.7		0.4
Delay (s)	30.7	4.7		77.9	53.8	42.8		45.3	40.6	109.9		57.8
Level of Service	C	A		E	D	D		D	D	F		E
Approach Delay (s)		11.1			51.8			44.7			87.0	
Approach LOS		B			D			D			F	

Intersection Summary			
HCM Average Control Delay	31.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	68.3%	ICU Level of Service	C
Analysis Period (min)	15		

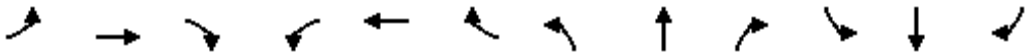
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	893	166	105	839	0	74	0	89	9	15	7
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	11	11	8	12	12	12	14	15	12
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes		0.99		1.00	1.00		1.00		0.98	1.00	0.98	
Flpb, ped/bikes		1.00		1.00	1.00		0.97		1.00	0.99	1.00	
Frt		0.98		1.00	1.00		1.00		0.85	1.00	0.95	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		2997		1649	3149		1388		1451	1803	1857	
Flt Permitted		1.00		0.17	1.00		0.74		1.00	0.95	1.00	
Satd. Flow (perm)		2997		299	3149		1082		1451	1803	1857	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	992	184	117	932	0	82	0	99	10	17	8
RTOR Reduction (vph)	0	15	0	0	0	0	0	0	67	0	5	0
Lane Group Flow (vph)	0	1161	0	117	932	0	82	0	32	10	20	0
Confl. Peds. (#/hr)	67		19	19		67	38		12	12		38
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	2%	11%	0%	5%	0%	19%	0%	3%	0%	0%	0%
Turn Type				Perm			custom		custom	Perm		
Protected Phases		4			8						6	
Permitted Phases				8			2		2	6		
Actuated Green, G (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Effective Green, g (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Actuated g/C Ratio		0.60		0.60	0.60		0.32		0.32	0.32	0.32	
Clearance Time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)		1798		179	1889		346		464	577	594	
v/s Ratio Prot		0.39			0.30						0.01	
v/s Ratio Perm				c0.39			c0.08		0.02	0.01		
v/c Ratio		0.65		0.65	0.49		0.24		0.07	0.02	0.03	
Uniform Delay, d1		13.1		13.2	11.4		25.0		23.6	23.2	23.4	
Progression Factor		1.00		1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		1.8		17.1	0.9		1.6		0.3	0.1	0.1	
Delay (s)		14.9		30.3	12.3		26.6		23.9	23.3	23.5	
Level of Service		B		C	B		C		C	C	C	
Approach Delay (s)		14.9			14.3			25.1			23.4	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	15.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.4%	ICU Level of Service	B
Analysis Period (min)	15		

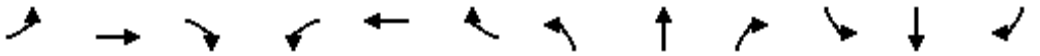
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	301	0	1230	215	686	0	0	792	490
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	12	10	10	12	12	11	12
Total Lost time (s)				4.0		5.0	3.0	4.0			4.0	
Lane Util. Factor				0.95		1.00	1.00	0.91			0.91	
Frpb, ped/bikes				1.00		1.00	1.00	1.00			0.98	
Flpb, ped/bikes				1.00		1.00	1.00	1.00			1.00	
Frt				1.00		0.85	1.00	1.00			0.94	
Flt Protected				0.95		1.00	0.95	1.00			1.00	
Satd. Flow (prot)				1540		1530	1535	4327			4271	
Flt Permitted				0.95		1.00	0.95	1.00			1.00	
Satd. Flow (perm)				1540		1530	1535	4327			4271	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	307	0	1255	219	700	0	0	808	500
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	307	0	1255	219	700	0	0	1308	0
Confl. Peds. (#/hr)	2					2	18		3	3		18
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%	4%	6%	0%	0%	4%	1%
Turn Type				Split		Prot	Prot					
Protected Phases				8	8	8	5	2			6	
Permitted Phases												
Actuated Green, G (s)				30.0		30.0	32.0	66.0			31.0	
Effective Green, g (s)				31.0		30.0	32.0	66.0			31.0	
Actuated g/C Ratio				0.30		0.29	0.30	0.63			0.30	
Clearance Time (s)				5.0		5.0	3.0	4.0			4.0	
Lane Grp Cap (vph)				455		437	468	2720			1261	
v/s Ratio Prot				0.20		c0.82	c0.14	0.16			c0.31	
v/s Ratio Perm												
v/c Ratio				0.67		2.87	0.47	0.26			1.16dr	
Uniform Delay, d1				32.6		37.5	29.6	8.6			37.0	
Progression Factor				1.00		1.00	0.64	2.11			1.00	
Incremental Delay, d2				7.8		848.6	2.8	0.2			35.5	
Delay (s)				40.4		886.1	21.8	18.4			72.5	
Level of Service				D		F	C	B			E	
Approach Delay (s)		0.0			719.9			19.2			72.5	
Approach LOS		A			F			B			E	

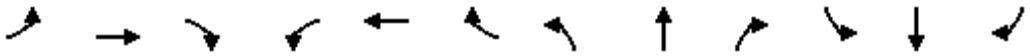
Intersection Summary			
HCM Average Control Delay	326.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.43		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	102.1%	ICU Level of Service	G
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	322	770	146	0	0	0	0	579	410	359	734	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	13	12	12	12	12	12	10	10	8	12	12	12
Total Lost time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Util. Factor	0.91	0.91						0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00						1.00	1.00	1.00	1.00	
Flpb, ped/bikes	0.99	1.00						1.00	1.00	1.00	1.00	
Frt	1.00	0.98						1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1509	3156						4368	2244	1598	4680	
Flt Permitted	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1509	3156						4368	2244	1598	4680	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	332	794	151	0	0	0	0	597	423	370	757	0
RTOR Reduction (vph)	0	14	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	299	964	0	0	0	0	0	597	423	370	757	0
Confl. Peds. (#/hr)	6		1	1		6	6					6
Heavy Vehicles (%)	6%	1%	0%	0%	0%	0%	0%	5%	4%	7%	5%	0%
Turn Type	Perm								Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Actuated Green, G (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Effective Green, g (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Actuated g/C Ratio	0.32	0.32						0.27	0.27	0.30	0.59	
Clearance Time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Grp Cap (vph)	489	1022						1165	598	472	2763	
v/s Ratio Prot								0.14		c0.23	0.16	
v/s Ratio Perm	0.20	0.31							c0.19			
v/c Ratio	0.61	0.94						0.51	0.71	0.78	0.27	
Uniform Delay, d1	29.9	34.6						32.7	34.8	33.9	10.5	
Progression Factor	1.00	1.00						1.14	1.14	0.86	0.22	
Incremental Delay, d2	5.6	17.5						1.4	6.2	4.8	0.1	
Delay (s)	35.5	52.0						38.7	45.8	34.1	2.4	
Level of Service	D	D						D	D	C	A	
Approach Delay (s)		48.2			0.0			41.6			12.8	
Approach LOS		D			A			D			B	

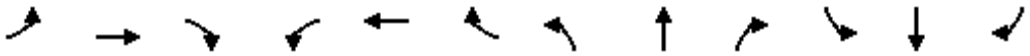
Intersection Summary			
HCM Average Control Delay	34.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	102.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	290	25	24	11	164	0	0	149	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	14	12	12	16	12
Total Lost time (s)				4.0	4.0		4.0	4.0			-3.0	
Lane Util. Factor				1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes				1.00	0.99		1.00	1.00			1.00	
Flpb, ped/bikes				1.00	1.00		1.00	1.00			1.00	
Frt				1.00	0.93		1.00	1.00			1.00	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1688	3132		1710	1846			1955	
Flt Permitted				0.95	1.00		0.54	1.00			1.00	
Satd. Flow (perm)				1688	3132		974	1846			1955	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	322	28	27	12	182	0	0	166	6
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	322	37	0	12	182	0	0	171	0
Confl. Peds. (#/hr)	2		2	2		2			6	6		
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	0%	4%	0%	0%	4%	0%
Turn Type				Perm			pm+pt					
Protected Phases					8		7	2			6	
Permitted Phases				8			2					
Actuated Green, G (s)				27.0	27.0		50.0	50.0			40.0	
Effective Green, g (s)				27.0	27.0		50.0	50.0			46.0	
Actuated g/C Ratio				0.32	0.32		0.59	0.59			0.54	
Clearance Time (s)				4.0	4.0		4.0	4.0			3.0	
Lane Grp Cap (vph)				536	995		634	1086			1058	
v/s Ratio Prot					0.01		0.00	c0.10			0.09	
v/s Ratio Perm				c0.19			0.01					
v/c Ratio				0.60	0.04		0.02	0.17			0.16	
Uniform Delay, d1				24.5	20.0		10.5	8.0			9.8	
Progression Factor				1.00	1.00		1.04	1.18			1.00	
Incremental Delay, d2				4.9	0.1		0.1	0.3			0.3	
Delay (s)				29.4	20.1		11.0	9.8			10.1	
Level of Service				C	C		B	A			B	
Approach Delay (s)		0.0			28.0			9.8			10.1	
Approach LOS		A			C			A			B	

Intersection Summary			
HCM Average Control Delay	19.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	37.0%	ICU Level of Service	A
Analysis Period (min)	15		

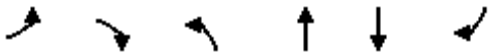
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	12	11	23	5	0	14	0	149	45	46	393	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	16	15	12	8	12	8	12	12	12	10	13	12
Total Lost time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.97			0.98			0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00			1.00		1.00	1.00	
Frt	1.00	0.90			0.90			0.97		1.00	1.00	
Flt Protected	0.95	1.00			0.99			1.00		0.95	1.00	
Satd. Flow (prot)	1935	1735			1565			1718		1590	1860	
Flt Permitted	0.74	1.00			0.97			1.00		0.59	1.00	
Satd. Flow (perm)	1516	1735			1531			1718		987	1860	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	13	12	24	5	0	15	0	157	47	48	414	0
RTOR Reduction (vph)	0	16	0	0	10	0	0	13	0	0	0	0
Lane Group Flow (vph)	13	20	0	0	10	0	0	191	0	48	414	0
Confl. Peds. (#/hr)	1		11	11		1	1		10	10		1
Confl. Bikes (#/hr)			2	2			1		2	2		1
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Turn Type	Perm			Perm						pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Effective Green, g (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Actuated g/C Ratio	0.32	0.32			0.32			0.47		0.59	0.59	
Clearance Time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Grp Cap (vph)	482	551			486			808		630	1094	
v/s Ratio Prot		c0.01						0.11		0.01	c0.22	
v/s Ratio Perm	0.01				0.01					0.04		
v/c Ratio	0.03	0.04			0.02			0.24		0.08	0.38	
Uniform Delay, d1	20.0	20.0			19.9			13.4		8.8	9.3	
Progression Factor	1.00	1.00			1.00			1.00		0.98	0.87	
Incremental Delay, d2	0.1	0.1			0.1			0.7		0.2	0.9	
Delay (s)	20.1	20.1			20.0			14.1		8.8	9.0	
Level of Service	C	C			B			B		A	A	
Approach Delay (s)		20.1			20.0			14.1			9.0	
Approach LOS		C			B			B			A	

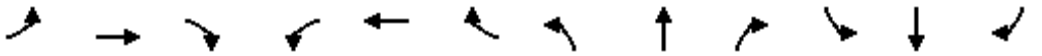
Intersection Summary			
HCM Average Control Delay	11.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	41.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



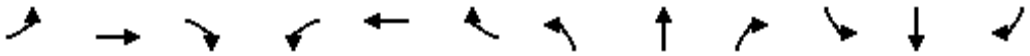
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	48	42	12	193	288	28
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	14	12	13	12	10	12
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.94		1.00	1.00	0.99	
Flt Protected	0.97		0.95	1.00	1.00	
Satd. Flow (prot)	1752		1765	1782	1657	
Flt Permitted	0.97		0.50	1.00	1.00	
Satd. Flow (perm)	1752		937	1782	1657	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	53	47	13	214	320	31
RTOR Reduction (vph)	32	0	0	0	5	0
Lane Group Flow (vph)	68	0	13	214	346	0
Confl. Peds. (#/hr)			2			2
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.0		36.0	36.0	36.0	
Effective Green, g (s)	21.0		36.0	36.0	36.0	
Actuated g/C Ratio	0.32		0.55	0.55	0.55	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	566		519	987	918	
v/s Ratio Prot	c0.04			0.12	c0.21	
v/s Ratio Perm			0.01			
v/c Ratio	0.12		0.03	0.22	0.38	
Uniform Delay, d1	15.5		6.6	7.4	8.2	
Progression Factor	1.00		0.51	0.61	1.43	
Incremental Delay, d2	0.4		0.1	0.5	1.0	
Delay (s)	15.9		3.4	5.0	12.7	
Level of Service	B		A	A	B	
Approach Delay (s)	15.9			4.9	12.7	
Approach LOS	B			A	B	

Intersection Summary			
HCM Average Control Delay	10.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	30.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



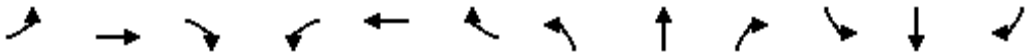
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	31	268	9	258	132	0	0	283	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	14	16	12	12	15	12	12	13	10
Total Lost time (s)					4.0		4.0	4.0			3.0	3.0
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Frt					1.00		1.00	1.00			1.00	0.85
Flt Protected					1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3772		1693	1678			1738	1428
Flt Permitted					1.00		0.47	1.00			1.00	1.00
Satd. Flow (perm)					3772		844	1678			1738	1428
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	34	298	10	287	147	0	0	314	19
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	0	0	0	11
Lane Group Flow (vph)	0	0	0	0	339	0	287	147	0	0	314	8
Confl. Peds. (#/hr)	1					1			5	5		
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	1%	18%	0%	0%	7%	0%
Turn Type				Split			pm+pt					Perm
Protected Phases				8	8		7	2			6	
Permitted Phases							2					6
Actuated Green, G (s)					26.0		51.0	51.0			38.0	38.0
Effective Green, g (s)					26.0		51.0	51.0			38.0	38.0
Actuated g/C Ratio					0.31		0.60	0.60			0.45	0.45
Clearance Time (s)					4.0		4.0	4.0			3.0	3.0
Lane Grp Cap (vph)					1154		606	1007			777	638
v/s Ratio Prot					c0.09		c0.06	0.09			0.18	
v/s Ratio Perm							c0.23					0.01
v/c Ratio					0.29		0.47	0.15			0.40	0.01
Uniform Delay, d1					22.5		13.7	7.5			15.9	13.1
Progression Factor					1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2					0.6		2.6	0.3			1.6	0.0
Delay (s)					23.1		16.4	7.8			17.4	13.1
Level of Service					C		B	A			B	B
Approach Delay (s)		0.0			23.1			13.5			17.2	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM Average Control Delay	17.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	95	94	38	133	205	30	59	703	44
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	15	12	12	12	12	12	13	12
Total Lost time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.98		1.00	0.98		1.00	0.99	
Flt Protected					0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1896		1710	3287		1707	3467	
Flt Permitted					0.98		0.25	1.00		0.59	1.00	
Satd. Flow (perm)					1896		446	3287		1061	3467	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	106	104	42	148	228	33	66	781	49
RTOR Reduction (vph)	0	0	0	0	10	0	0	15	0	0	6	0
Lane Group Flow (vph)	0	0	0	0	242	0	148	246	0	66	824	0
Confl. Peds. (#/hr)							5		5	5		5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	1%	0%
Turn Type				Split			pm+pt			pm+pt		
Protected Phases				8	8		5	2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)					23.0		41.0	34.0		41.0	34.0	
Effective Green, g (s)					23.0		41.0	34.0		41.0	34.0	
Actuated g/C Ratio					0.31		0.55	0.45		0.55	0.45	
Clearance Time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Grp Cap (vph)					581		362	1490		640	1572	
v/s Ratio Prot					c0.13		c0.04	0.07		0.01	c0.24	
v/s Ratio Perm							0.19			0.05		
v/c Ratio					0.42		0.41	0.16		0.10	0.52	
Uniform Delay, d1					20.7		16.4	12.1		8.2	14.7	
Progression Factor					1.00		0.84	0.82		1.00	1.00	
Incremental Delay, d2					2.2		3.4	0.2		0.3	1.3	
Delay (s)					22.9		17.1	10.2		8.5	16.0	
Level of Service					C		B	B		A	B	
Approach Delay (s)		0.0			22.9			12.7			15.4	
Approach LOS		A			C			B			B	

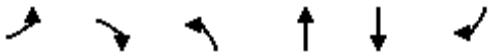
Intersection Summary			
HCM Average Control Delay	15.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	53.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	32	49	13	9	63	63	7	273	24	159	589	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	16	12	12	10	11	12	12	11	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.94		1.00	0.99		1.00	0.99	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1964			1655		1595	3172		1704	3231	
Flt Permitted		0.89			0.99		0.36	1.00		0.56	1.00	
Satd. Flow (perm)		1775			1637		600	3172		1008	3231	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	34	52	14	9	66	66	7	287	25	167	620	53
RTOR Reduction (vph)	0	8	0	0	42	0	0	9	0	0	8	0
Lane Group Flow (vph)	0	92	0	0	99	0	7	303	0	167	665	0
Confl. Peds. (#/hr)	2					2	1		6	6		1
Confl. Bikes (#/hr)			1	1			3					3
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	0%	3%	0%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Effective Green, g (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Actuated g/C Ratio		0.33			0.33		0.56	0.56		0.56	0.56	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		592			546		336	1776		564	1809	
v/s Ratio Prot								0.10			c0.21	
v/s Ratio Perm		0.05			c0.06		0.01			0.17		
v/c Ratio		0.16			0.18		0.02	0.17		0.30	0.37	
Uniform Delay, d1		17.6			17.7		7.3	8.0		8.7	9.1	
Progression Factor		1.00			1.00		1.00	1.00		0.27	0.25	
Incremental Delay, d2		0.6			0.7		0.1	0.2		1.2	0.5	
Delay (s)		18.1			18.5		7.5	8.2		3.5	2.8	
Level of Service		B			B		A	A		A	A	
Approach Delay (s)		18.1			18.5			8.2			2.9	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	6.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	48.4%	ICU Level of Service	A
Analysis Period (min)	15		

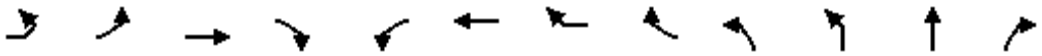
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	37	192	67	251	588	81
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	41	213	74	279	653	90

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	254	167	186	436	308
Volume Left (vph)	41	74	0	0	0
Volume Right (vph)	213	0	0	0	90
Hadj (s)	-0.42	0.27	0.05	0.05	-0.15
Departure Headway (s)	5.7	6.6	6.3	5.9	5.7
Degree Utilization, x	0.41	0.30	0.33	0.71	0.48
Capacity (veh/h)	592	528	546	602	622
Control Delay (s)	12.6	11.2	11.2	20.8	12.7
Approach Delay (s)	12.6	11.2		17.4	
Approach LOS	B	B		C	

Intersection Summary			
Delay	14.9		
HCM Level of Service	B		
Intersection Capacity Utilization	53.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	32	35	378	18	24	414	78	82	55	68	354	32
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	0.95	
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.93			1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Frt		1.00	1.00	0.85	1.00	1.00	0.85			1.00	0.99	
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	
Satd. Flow (prot)		1612	1731	1530	1710	1731	1421			1710	3251	
Flt Permitted		0.14	1.00	1.00	0.52	1.00	1.00			0.14	1.00	
Satd. Flow (perm)		238	1731	1530	930	1731	1421			257	3251	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	36	39	420	20	27	460	87	91	61	76	393	36
RTOR Reduction (vph)	0	0	0	12	0	0	36	0	0	0	7	0
Lane Group Flow (vph)	0	75	420	8	27	460	142	0	0	137	422	0
Confl. Peds. (#/hr)		25					25					3
Heavy Vehicles (%)	6%	6%	4%	0%	0%	4%	0%	0%	0%	0%	4%	0%
Turn Type	Perm	pm+pt		Perm	Perm		Perm		Perm	Perm		
Protected Phases		7	4			8					2	
Permitted Phases	4	4		4	8		8		2	2		
Actuated Green, G (s)		44.0	44.0	44.0	25.0	25.0	25.0			28.0	28.0	
Effective Green, g (s)		44.0	44.0	44.0	25.0	25.0	25.0			28.0	28.0	
Actuated g/C Ratio		0.42	0.42	0.42	0.24	0.24	0.24			0.27	0.27	
Clearance Time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Grp Cap (vph)		303	725	641	221	412	338			69	867	
v/s Ratio Prot		0.04	c0.24			c0.27					0.13	
v/s Ratio Perm		0.07		0.01	0.03		0.10			c0.53		
v/c Ratio		0.25	0.58	0.01	0.12	1.12	0.42			1.99	0.49	
Uniform Delay, d1		21.6	23.4	17.8	31.4	40.0	33.9			38.5	32.4	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Incremental Delay, d2		1.9	3.4	0.0	1.1	79.9	3.8			491.0	2.0	
Delay (s)		23.5	26.8	17.9	32.5	119.9	37.7			529.5	34.4	
Level of Service		C	C	B	C	F	D			F	C	
Approach Delay (s)			25.9			94.3					154.2	
Approach LOS			C			F					F	

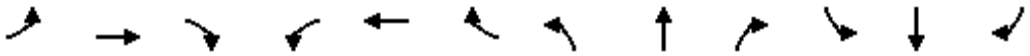
Intersection Summary			
HCM Average Control Delay	147.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.45		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	104.2%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations								
Volume (vph)	107	571	82	103	4	114	607	197
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5				4.5	4.5	
Lane Util. Factor	1.00	0.95				1.00	0.88	
Frpb, ped/bikes	1.00	1.00				1.00	1.00	
Flpb, ped/bikes	1.00	1.00				1.00	1.00	
Frt	1.00	0.96				1.00	0.85	
Flt Protected	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1705	3246				1710	2633	
Flt Permitted	0.37	1.00				0.95	1.00	
Satd. Flow (perm)	670	3246				1710	2633	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	119	634	91	114	4	127	674	219
RTOR Reduction (vph)	0	12	0	0	0	0	26	0
Lane Group Flow (vph)	119	827	0	0	0	131	867	0
Confl. Peds. (#/hr)	3							
Heavy Vehicles (%)	0%	2%	0%	0%	0%	0%	3%	0%
Turn Type	Perm				Split		Perm	
Protected Phases		6			9	9		
Permitted Phases	6						9	
Actuated Green, G (s)	27.5	27.5				20.5	20.5	
Effective Green, g (s)	27.5	27.5				20.5	20.5	
Actuated g/C Ratio	0.26	0.26				0.20	0.20	
Clearance Time (s)	4.5	4.5				4.5	4.5	
Lane Grp Cap (vph)	175	850				334	514	
v/s Ratio Prot		0.25				0.08		
v/s Ratio Perm	0.18						c0.33	
v/c Ratio	0.68	0.97				0.39	1.69	
Uniform Delay, d1	34.8	38.4				36.8	42.2	
Progression Factor	1.00	1.00				1.00	1.00	
Incremental Delay, d2	19.3	25.0				3.4	317.6	
Delay (s)	54.1	63.4				40.3	359.9	
Level of Service	D	E				D	F	
Approach Delay (s)		62.2				319.0		
Approach LOS		E				F		

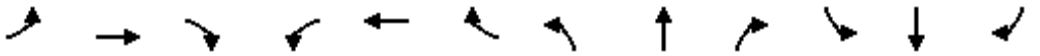
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	65	602	0	0	506	50	85	52	18	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	11	11	16	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.99			0.98				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		1681			1956			1842				
Flt Permitted		0.90			1.00			0.97				
Satd. Flow (perm)		1523			1956			1842				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	72	669	0	0	562	56	94	58	20	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	741	0	0	618	0	0	172	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		40.0			40.0			17.0				
Effective Green, g (s)		40.0			40.0			17.0				
Actuated g/C Ratio		0.62			0.62			0.26				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		937			1204			482				
v/s Ratio Prot					0.32							
v/s Ratio Perm		c0.49						0.09				
v/c Ratio		0.79			0.51			0.36				
Uniform Delay, d1		9.4			7.0			19.5				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		6.8			1.6			2.1				
Delay (s)		16.1			8.6			21.6				
Level of Service		B			A			C				
Approach Delay (s)		16.1			8.6			21.6			0.0	
Approach LOS		B			A			C			A	

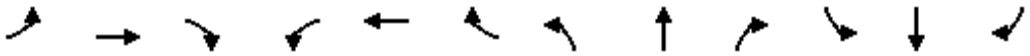
Intersection Summary			
HCM Average Control Delay	13.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	87.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	71	427	162	117	335	125	106	639	84	137	759	94
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	9	9	10	9
Total Lost time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.96	1.00	1.00	0.95	1.00	1.00	0.94
Flpb, ped/bikes		1.00	1.00		0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1985	1434		1950	1444	1546	3040	1296	1506	3069	1252
Flt Permitted		0.38	1.00		0.54	1.00	0.23	1.00	1.00	0.29	1.00	1.00
Satd. Flow (perm)		757	1434		1077	1444	373	3040	1296	455	3069	1252
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	75	449	171	123	353	132	112	673	88	144	799	99
RTOR Reduction (vph)	0	0	101	0	0	94	0	0	53	0	0	49
Lane Group Flow (vph)	0	524	70	0	476	38	112	673	35	144	799	50
Confl. Peds. (#/hr)	24		45	45		24	36		24	24		36
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	2%	2%	2%	2%	3%	2%	3%	5%	1%	2%	4%	3%
Turn Type	pm+pt		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		43.0	43.0		30.0	30.0	50.6	42.3	42.3	51.4	42.7	42.7
Effective Green, g (s)		43.0	43.0		30.0	30.0	50.6	42.3	42.3	51.4	42.7	42.7
Actuated g/C Ratio		0.41	0.41		0.29	0.29	0.48	0.40	0.40	0.49	0.41	0.41
Clearance Time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		427	587		308	413	272	1225	522	310	1248	509
v/s Ratio Prot		c0.12					0.03	0.22		c0.04	c0.26	
v/s Ratio Perm		0.39	0.05		c0.44	0.03	0.17		0.03	0.19		0.04
v/c Ratio		1.23	0.12		1.55	0.09	0.41	0.55	0.07	0.46	0.64	0.10
Uniform Delay, d1		31.0	19.2		37.5	27.5	16.5	24.0	19.2	16.0	25.0	19.2
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.75	1.55	2.63
Incremental Delay, d2		121.4	0.4		261.0	0.4	1.0	1.8	0.3	1.1	2.4	0.4
Delay (s)		152.4	19.7		298.5	27.9	17.5	25.8	19.5	29.0	41.1	51.0
Level of Service		F	B		F	C	B	C	B	C	D	D
Approach Delay (s)		119.7			239.8			24.1			40.4	
Approach LOS		F			F			C			D	

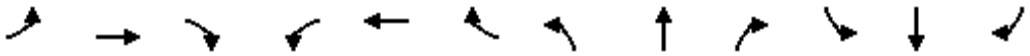
Intersection Summary			
HCM Average Control Delay	90.8	HCM Level of Service	F
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	95.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	85	486	99	94	468	94	55	61	69	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		0.98			0.98			0.95				
Flt Protected		0.99			0.99			0.99				
Satd. Flow (prot)		1645			1645			1799				
Flt Permitted		0.85			0.83			0.99				
Satd. Flow (perm)		1411			1381			1799				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	94	540	110	104	520	104	61	68	77	0	0	0
RTOR Reduction (vph)	0	10	0	0	9	0	0	33	0	0	0	0
Lane Group Flow (vph)	0	734	0	0	719	0	0	173	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		40.0			40.0			17.0				
Effective Green, g (s)		40.0			40.0			17.0				
Actuated g/C Ratio		0.62			0.62			0.26				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		868			850			471				
v/s Ratio Prot												
v/s Ratio Perm		c0.52			0.52			0.10				
v/c Ratio		0.85			0.85			0.37				
Uniform Delay, d1		10.0			10.0			19.6				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		10.0			10.1			2.2				
Delay (s)		20.0			20.1			21.8				
Level of Service		B			C			C				
Approach Delay (s)		20.0			20.1			21.8			0.0	
Approach LOS		B			C			C			A	

Intersection Summary			
HCM Average Control Delay	20.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.7%	ICU Level of Service	C
Analysis Period (min)	15		

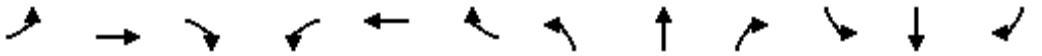
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	53	485	82	76	525	37	39	76	72	54	238	55
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	11	12	12	15	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.96		1.00	0.96		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		0.99	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.98	
Flt Protected		1.00	1.00		0.99	1.00		0.98	1.00		0.99	
Satd. Flow (prot)		1685	1382		1713	1417		1685	1455		1879	
Flt Permitted		0.89	1.00		0.85	1.00		0.82	1.00		0.94	
Satd. Flow (perm)		1505	1382		1459	1417		1404	1455		1774	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	56	511	86	80	553	39	41	80	76	57	251	58
RTOR Reduction (vph)	0	0	37	0	0	12	0	0	52	0	9	0
Lane Group Flow (vph)	0	567	49	0	633	27	0	121	24	0	357	0
Confl. Peds. (#/hr)	25		19	19		25	36		30	30		36
Confl. Bikes (#/hr)	1		2	2		1	3					3
Heavy Vehicles (%)	0%	3%	3%	0%	1%	0%	0%	1%	1%	0%	1%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Effective Green, g (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.32	0.32		0.32	
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Grp Cap (vph)		863	792		836	812		449	466		568	
v/s Ratio Prot												
v/s Ratio Perm		0.38	0.04		c0.43	0.02		0.09	0.02		c0.20	
v/c Ratio		0.66	0.06		0.76	0.03		0.27	0.05		0.63	
Uniform Delay, d1		11.0	7.1		12.1	7.0		19.0	17.6		21.7	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		3.9	0.2		6.3	0.1		1.5	0.2		5.2	
Delay (s)		14.8	7.2		18.4	7.0		20.4	17.8		26.9	
Level of Service		B	A		B	A		C	B		C	
Approach Delay (s)		13.8			17.7			19.4			26.9	
Approach LOS		B			B			B			C	

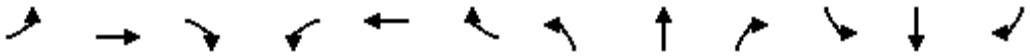
Intersection Summary			
HCM Average Control Delay	18.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	100.7%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	483	34	45	537	54	45	165	55	123	210	33
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	11	16	8	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	0.98	1.00		1.00	1.00		0.99	1.00	1.00	0.99	1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1533	3066		1652	3730		1585	1663	1370	1568	1680	1397
Flt Permitted	0.35	1.00		0.40	1.00		0.57	1.00	1.00	0.63	1.00	1.00
Satd. Flow (perm)	563	3066		687	3730		953	1663	1370	1043	1680	1397
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	66	537	38	50	597	60	50	183	61	137	233	37
RTOR Reduction (vph)	0	8	0	0	12	0	0	0	37	0	0	22
Lane Group Flow (vph)	66	567	0	50	645	0	50	183	24	137	233	15
Confl. Peds. (#/hr)	51		3	3		51	13		13	13		13
Heavy Vehicles (%)	2%	3%	3%	0%	2%	0%	0%	1%	2%	1%	0%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Effective Green, g (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	269	1462		328	1779		381	665	548	417	672	559
v/s Ratio Prot		c0.19			0.17			0.11			c0.14	
v/s Ratio Perm	0.12			0.07			0.05		0.02	0.13		0.01
v/c Ratio	0.25	0.39		0.15	0.36		0.13	0.28	0.04	0.33	0.35	0.03
Uniform Delay, d1	10.1	10.9		9.6	10.8		12.3	13.1	11.9	13.5	13.6	11.8
Progression Factor	1.00	1.00		1.00	1.00		0.83	0.89	0.73	0.59	0.59	0.26
Incremental Delay, d2	2.2	0.8		1.0	0.6		0.7	1.0	0.2	2.0	1.4	0.1
Delay (s)	12.2	11.7		10.6	11.3		11.0	12.7	8.8	9.9	9.4	3.1
Level of Service	B	B		B	B		B	B	A	A	A	A
Approach Delay (s)		11.7			11.3			11.6			9.0	
Approach LOS		B			B			B			A	

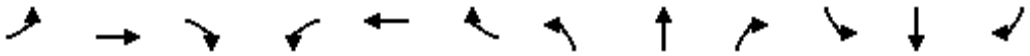
Intersection Summary			
HCM Average Control Delay	11.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	409	81	73	394	67	57	180	64	89	245	80
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	11	10	11	11	10	11	11	10	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	0.97	1.00		0.95	1.00		0.99	1.00		0.96	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.96		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1329	3134		1519	3128		1580	2919		1452	2997	
Flt Permitted	0.44	1.00		0.42	1.00		0.53	1.00		0.59	1.00	
Satd. Flow (perm)	619	3134		678	3128		882	2919		907	2997	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	63	431	85	77	415	71	60	189	67	94	258	84
RTOR Reduction (vph)	0	0	0	0	0	0	0	39	0	0	42	0
Lane Group Flow (vph)	63	516	0	77	486	0	60	217	0	94	300	0
Confl. Peds. (#/hr)	112		99	99		112	23		53	53		23
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	16%	1%	0%	0%	1%	9%	0%	8%	2%	5%	5%	7%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.41	0.41		0.41	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	297	1504		325	1501		365	1207		375	1239	
v/s Ratio Prot		c0.16			0.16			0.07			0.10	
v/s Ratio Perm	0.10			0.11			0.07			c0.10		
v/c Ratio	0.21	0.34		0.24	0.32		0.16	0.18		0.25	0.24	
Uniform Delay, d1	11.3	12.1		11.4	12.0		13.8	13.9		14.4	14.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.6	0.6		1.7	0.6		1.0	0.3		1.6	0.5	
Delay (s)	12.9	12.8		13.2	12.6		14.8	14.3		16.0	14.8	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		12.8			12.7			14.4			15.1	
Approach LOS		B			B			B			B	

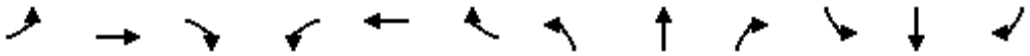
Intersection Summary			
HCM Average Control Delay	13.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	96	439	62	32	522	48	86	203	60	76	473	109
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	8	16	12	9	10	10	9	10	10
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1595	1652		1370	1973		1534	2998		1535	3013	
Flt Permitted	0.24	1.00		0.31	1.00		0.28	1.00		0.58	1.00	
Satd. Flow (perm)	405	1652		447	1973		453	2998		939	3013	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	101	462	65	34	549	51	91	214	63	80	498	115
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	101	527	0	34	600	0	91	277	0	80	613	0
Confl. Peds. (#/hr)	21		95	95		21	36		8	8		36
Confl. Bikes (#/hr)	2		3	3		2	2					2
Heavy Vehicles (%)	0%	2%	0%	7%	2%	0%	0%	3%	0%	0%	2%	1%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	43.9	39.3		40.7	37.7		26.7	21.8		26.7	21.8	
Effective Green, g (s)	43.9	37.3		40.7	35.7		26.7	19.8		26.7	19.8	
Actuated g/C Ratio	0.52	0.44		0.48	0.42		0.31	0.23		0.31	0.23	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	274	725		247	829		205	698		329	702	
v/s Ratio Prot	c0.02	c0.32		0.00	0.30		c0.03	0.09		0.01	c0.20	
v/s Ratio Perm	0.17			0.06			0.11			0.06		
v/c Ratio	0.37	0.73		0.14	0.72		0.44	0.40		0.24	0.87	
Uniform Delay, d1	23.5	19.7		20.2	20.5		29.2	27.6		21.9	31.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.8	6.3		0.3	5.5		1.5	1.7		0.4	14.2	
Delay (s)	24.4	25.9		20.4	26.0		30.7	29.2		22.2	45.5	
Level of Service	C	C		C	C		C	C		C	D	
Approach Delay (s)		25.7			25.7			29.6			42.9	
Approach LOS		C			C			C			D	

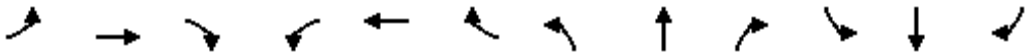
Intersection Summary			
HCM Average Control Delay	31.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	79.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	75	393	65	117	509	118	67	158	58	127	367	82
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	11	11	11	11	12	12	10	10	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		0.99	1.00	
Frt		0.98			0.98		1.00	0.96		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3681			3131		1652	3237		1549	3027	
Flt Permitted		0.71			0.72		0.42	1.00		0.60	1.00	
Satd. Flow (perm)		2643			2282		737	3237		983	3027	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	83	437	72	130	566	131	74	176	64	141	408	91
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	592	0	0	827	0	74	240	0	141	499	0
Confl. Peds. (#/hr)	23		30	30		23	1		20	20		1
Confl. Bikes (#/hr)	3					3						
Heavy Vehicles (%)	0%	3%	0%	2%	2%	0%	0%	1%	0%	2%	2%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.0			33.0		32.0	32.0		32.0	32.0	
Effective Green, g (s)		34.0			34.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio		0.45			0.45		0.44	0.44		0.44	0.44	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		1198			1035		324	1424		433	1332	
v/s Ratio Prot								0.07			c0.16	
v/s Ratio Perm		0.22			c0.36		0.10			0.14		
v/c Ratio		0.49			0.80		0.23	0.17		0.33	0.37	
Uniform Delay, d1		14.4			17.6		13.1	12.7		13.7	14.1	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.5			6.5		1.6	0.3		2.0	0.8	
Delay (s)		15.9			24.0		14.7	13.0		15.7	14.9	
Level of Service		B			C		B	B		B	B	
Approach Delay (s)		15.9			24.0			13.4			15.1	
Approach LOS		B			C			B			B	

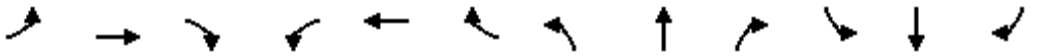
Intersection Summary			
HCM Average Control Delay	18.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	98	871	6	20	584	249	1	1	9	213	1	80
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	12	12	12	12	12	13	13	13
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	1.00		1.00	1.00	0.85		0.89			0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00		1.00			0.97	
Satd. Flow (prot)	1605	3206		1660	3320	1485		1545			3176	
Flt Permitted	0.38	1.00		0.25	1.00	1.00		0.98			0.77	
Satd. Flow (perm)	648	3206		436	3320	1485		1519			2533	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	109	968	7	22	649	277	1	1	10	237	1	89
RTOR Reduction (vph)	0	0	0	0	0	103	0	7	0	0	52	0
Lane Group Flow (vph)	109	975	0	22	649	174	0	5	0	0	275	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	46.1	46.1		46.1	46.1	46.1		19.5			19.5	
Effective Green, g (s)	46.1	46.1		46.1	46.1	46.1		19.5			19.5	
Actuated g/C Ratio	0.63	0.63		0.63	0.63	0.63		0.26			0.26	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		8.0			8.0	
Lane Grp Cap (vph)	406	2008		273	2080	930		402			671	
v/s Ratio Prot		c0.30			0.20							
v/s Ratio Perm	0.17			0.05		0.12		0.00			c0.11	
v/c Ratio	0.27	0.49		0.08	0.31	0.19		0.01			0.41	
Uniform Delay, d1	6.2	7.4		5.4	6.4	5.8		19.9			22.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	1.6	0.8		0.6	0.4	0.4		0.0			1.7	
Delay (s)	7.8	8.2		6.0	6.8	6.3		20.0			24.0	
Level of Service	A	A		A	A	A		B			C	
Approach Delay (s)		8.2			6.6			20.0			24.0	
Approach LOS		A			A			B			C	

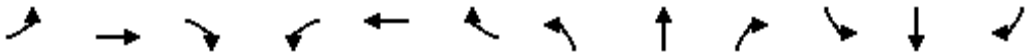
Intersection Summary			
HCM Average Control Delay	9.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	73.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	131	228	125	94	163	56	144	907	90	129	825	98
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	9	12	10	10	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.95		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1560	1504		1563	1585		1493	3069	1337	1523	3099	1318
Flt Permitted	0.45	1.00		0.20	1.00		0.20	1.00	1.00	0.16	1.00	1.00
Satd. Flow (perm)	743	1504		337	1585		317	3069	1337	263	3099	1318
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	138	240	132	99	172	59	152	955	95	136	868	103
RTOR Reduction (vph)	0	23	0	0	15	0	0	0	40	0	0	48
Lane Group Flow (vph)	138	349	0	99	216	0	152	955	55	136	868	55
Confl. Peds. (#/hr)	10		13	13		10	18		7	7		18
Confl. Bikes (#/hr)	2					2	2		1	1		2
Heavy Vehicles (%)	2%	1%	1%	2%	1%	2%	3%	4%	0%	1%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	28.0	21.0		28.0	21.0		42.0	35.0	35.0	42.0	35.0	35.0
Effective Green, g (s)	26.0	22.0		26.0	22.0		40.0	35.0	35.0	40.0	35.0	35.0
Actuated g/C Ratio	0.31	0.26		0.31	0.26		0.47	0.41	0.41	0.47	0.41	0.41
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	285	389		190	410		232	1264	551	213	1276	543
v/s Ratio Prot	0.03	c0.23		c0.04	0.14		c0.05	c0.31		0.05	0.28	
v/s Ratio Perm	0.11			0.12			0.26		0.04	0.26		0.04
v/c Ratio	0.48	0.90		0.52	0.53		0.66	0.76	0.10	0.64	0.68	0.10
Uniform Delay, d1	22.7	30.4		22.9	27.0		14.7	21.3	15.3	15.0	20.4	15.4
Progression Factor	1.00	1.00		1.00	1.00		0.67	0.79	0.53	1.00	1.00	1.00
Incremental Delay, d2	5.8	25.9		9.9	4.8		12.3	3.8	0.3	13.8	2.9	0.4
Delay (s)	28.4	56.3		32.7	31.8		22.1	20.7	8.5	28.8	23.4	15.7
Level of Service	C	E		C	C		C	C	A	C	C	B
Approach Delay (s)		48.8			32.1			19.9			23.3	
Approach LOS		D			C			B			C	

Intersection Summary			
HCM Average Control Delay	27.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	74.0%	ICU Level of Service	D
Analysis Period (min)	15		

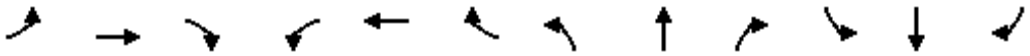
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	22	181	37	20	173	22	33	149	40	46	255	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	14	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.99			1.00			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.99			0.98			0.98	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1837			1848			1938			1975	
Flt Permitted		0.97			0.96			0.92			0.94	
Satd. Flow (perm)		1781			1790			1800			1869	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	23	187	38	21	178	23	34	154	41	47	263	52
RTOR Reduction (vph)	0	10	0	0	6	0	0	12	0	0	9	0
Lane Group Flow (vph)	0	238	0	0	216	0	0	217	0	0	353	0
Confl. Peds. (#/hr)	18		34	34		18	16		19	19		16
Confl. Bikes (#/hr)			6	6			1		4	4		1
Heavy Vehicles (%)	0%	1%	0%	5%	1%	0%	0%	2%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.42			0.42			0.46			0.46	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		740			744			831			863	
v/s Ratio Prot												
v/s Ratio Perm		c0.13			0.12			0.12			c0.19	
v/c Ratio		0.32			0.29			0.26			0.41	
Uniform Delay, d1		12.8			12.6			10.7			11.6	
Progression Factor		1.00			0.70			1.22			1.00	
Incremental Delay, d2		1.1			1.0			0.7			1.4	
Delay (s)		14.0			9.8			13.8			13.0	
Level of Service		B			A			B			B	
Approach Delay (s)		14.0			9.8			13.8			13.0	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	12.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.2%	ICU Level of Service	A
Analysis Period (min)	15		

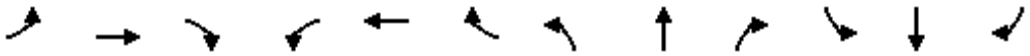
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	193	39	25	180	19	49	200	31	43	214	39
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.97	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.99		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1496	3057		1577	3119		1518	3119		1550	3076	
Flt Permitted	0.61	1.00		0.59	1.00		0.58	1.00		0.59	1.00	
Satd. Flow (perm)	966	3057		984	3119		926	3119		968	3076	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	214	43	28	200	21	54	222	34	48	238	43
RTOR Reduction (vph)	0	26	0	0	12	0	0	14	0	0	18	0
Lane Group Flow (vph)	27	231	0	28	209	0	54	242	0	48	263	0
Confl. Peds. (#/hr)	20		17	17		20	2					2
Confl. Bikes (#/hr)	32		36	36		32	22		25	25		22
Heavy Vehicles (%)	4%	1%	0%	0%	0%	0%	5%	0%	0%	3%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0		39.0	39.0		39.0	39.0	
Effective Green, g (s)	19.0	19.0		19.0	19.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.58	0.58		0.58	0.58	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	282	894		288	912		541	1823		566	1798	
v/s Ratio Prot		c0.08			0.07			0.08			c0.09	
v/s Ratio Perm	0.03			0.03			0.06			0.05		
v/c Ratio	0.10	0.26		0.10	0.23		0.10	0.13		0.08	0.15	
Uniform Delay, d1	16.7	17.6		16.8	17.4		6.0	6.1		5.9	6.1	
Progression Factor	0.93	0.97		0.74	0.73		1.31	1.31		0.38	0.34	
Incremental Delay, d2	0.6	0.7		0.7	0.6		0.4	0.1		0.3	0.2	
Delay (s)	16.2	17.7		13.1	13.4		8.2	8.1		2.5	2.3	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		17.5			13.4			8.1			2.3	
Approach LOS		B			B			A			A	

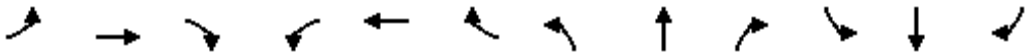
Intersection Summary			
HCM Average Control Delay	9.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.18		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



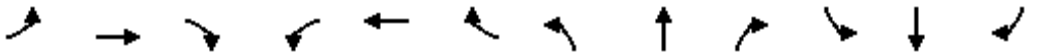
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	67	168	42	25	159	38	27	247	16	40	322	33
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	9	9	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.97		1.00	0.97			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1555	3056		1525	2937			1922			1938	
Flt Permitted	0.61	1.00		0.61	1.00			0.94			0.94	
Satd. Flow (perm)	1007	3056		973	2937			1823			1840	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	74	187	47	28	177	42	30	274	18	44	358	37
RTOR Reduction (vph)	0	28	0	0	25	0	0	3	0	0	5	0
Lane Group Flow (vph)	74	206	0	28	194	0	0	319	0	0	434	0
Confl. Peds. (#/hr)	11		17	17		11	26		7	7		26
Heavy Vehicles (%)	2%	1%	0%	0%	1%	3%	4%	5%	0%	0%	4%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Effective Green, g (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40			0.48			0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	403	1222		389	1175			869			878	
v/s Ratio Prot		0.07			0.07							
v/s Ratio Perm	c0.07			0.03				0.17			c0.24	
v/c Ratio	0.18	0.17		0.07	0.16			0.37			0.49	
Uniform Delay, d1	12.6	12.5		12.0	12.5			10.8			11.6	
Progression Factor	1.04	0.99		0.78	0.76			1.01			1.00	
Incremental Delay, d2	1.0	0.3		0.3	0.3			1.2			2.0	
Delay (s)	14.1	12.7		9.7	9.9			12.1			13.6	
Level of Service	B	B		A	A			B			B	
Approach Delay (s)		13.0			9.8			12.1			13.6	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	12.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



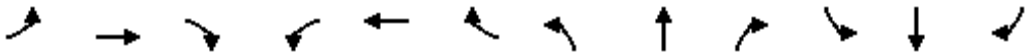
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	47	111	28	20	161	27	41	235	11	33	364	57
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	16	12	10	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.97		1.00	0.98			0.99			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			1.00	
Satd. Flow (prot)	1652	1970		1584	1975			1981			1979	
Flt Permitted	0.57	1.00		0.65	1.00			0.90			0.96	
Satd. Flow (perm)	986	1970		1087	1975			1792			1912	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	52	123	31	22	179	30	46	261	12	37	404	63
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	52	154	0	22	209	0	0	319	0	0	504	0
Confl. Peds. (#/hr)	1		10	10		1	2		5	5		2
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	2%	0%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Effective Green, g (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Actuated g/C Ratio	0.31	0.31		0.31	0.31			0.57			0.57	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	303	606		334	608			1020			1088	
v/s Ratio Prot		0.08			c0.11							
v/s Ratio Perm	0.05			0.02				0.18			c0.26	
v/c Ratio	0.17	0.25		0.07	0.34			0.31			0.46	
Uniform Delay, d1	16.4	16.9		15.9	17.4			7.3			8.2	
Progression Factor	0.83	0.81		0.92	0.93			0.96			1.00	
Incremental Delay, d2	1.2	1.0		0.4	1.5			0.8			1.4	
Delay (s)	14.8	14.6		15.0	17.7			7.9			9.6	
Level of Service	B	B		B	B			A			A	
Approach Delay (s)		14.7			17.5			7.9			9.6	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



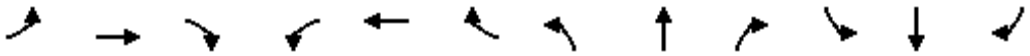
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	54	13	97	2	5	10	62	235	5	5	466	76
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	10	11	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98		1.00	0.98		1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.87		1.00	0.90		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1695	1727		1702	1808		1594	1647	1428	1653	2000	1496
Flt Permitted	0.75	1.00		0.68	1.00		0.39	1.00	1.00	0.59	1.00	1.00
Satd. Flow (perm)	1332	1727		1216	1808		660	1647	1428	1030	2000	1496
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	60	14	108	2	6	11	69	261	6	6	518	84
RTOR Reduction (vph)	0	78	0	0	8	0	0	0	2	0	0	28
Lane Group Flow (vph)	60	44	0	2	9	0	69	261	4	6	518	56
Confl. Peds. (#/hr)	5		5	5		5	3					3
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	0%	2%	0%	0%	2%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	17.0	17.0		17.0	17.0		39.0	39.0	39.0	39.0	39.0	39.0
Effective Green, g (s)	18.0	18.0		18.0	18.0		39.0	39.0	39.0	39.0	39.0	39.0
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.60	0.60	0.60	0.60	0.60	0.60
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	369	478		337	501		396	988	857	618	1200	898
v/s Ratio Prot		0.03			0.01			0.16			c0.26	
v/s Ratio Perm	c0.05			0.00			0.10		0.00	0.01		0.04
v/c Ratio	0.16	0.09		0.01	0.02		0.17	0.26	0.00	0.01	0.43	0.06
Uniform Delay, d1	17.8	17.4		17.0	17.1		5.8	6.2	5.2	5.2	7.0	5.4
Progression Factor	1.39	2.74		1.00	1.00		0.82	0.76	0.98	1.00	1.00	1.00
Incremental Delay, d2	0.9	0.4		0.0	0.1		0.7	0.5	0.0	0.0	1.1	0.1
Delay (s)	25.6	48.1		17.1	17.1		5.5	5.2	5.1	5.3	8.2	5.5
Level of Service	C	D		B	B		A	A	A	A	A	A
Approach Delay (s)		40.7			17.1			5.3			7.8	
Approach LOS		D			B			A			A	

Intersection Summary			
HCM Average Control Delay	12.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	255	163	198	215	0	0	0	0	111	470	377
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)		4.0		3.0	3.0					5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	
Frpb, ped/bikes		0.99		1.00	1.00					1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Frt		0.94		1.00	1.00					1.00	0.93	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		2905		1693	3288					1503	3021	
Flt Permitted		1.00		0.40	1.00					0.95	1.00	
Satd. Flow (perm)		2905		719	3288					1503	3021	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	268	172	208	226	0	0	0	0	117	495	397
RTOR Reduction (vph)	0	101	0	0	0	0	0	0	0	0	141	0
Lane Group Flow (vph)	0	339	0	208	226	0	0	0	0	117	751	0
Confl. Peds. (#/hr)	18		3	3		18	1					1
Heavy Vehicles (%)	0%	4%	1%	1%	4%	0%	0%	0%	0%	10%	2%	1%
Turn Type				D.P+P						Split		
Protected Phases		8		7	7 8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		33.0		53.0	56.0					37.0	37.0	
Effective Green, g (s)		33.0		53.0	56.0					37.0	37.0	
Actuated g/C Ratio		0.32		0.52	0.55					0.36	0.36	
Clearance Time (s)		4.0		3.0						5.0	5.0	
Lane Grp Cap (vph)		940		565	1805					545	1096	
v/s Ratio Prot		0.12		c0.07	0.07					0.08	c0.25	
v/s Ratio Perm				c0.12								
v/c Ratio		0.36		0.37	0.13					0.21	0.68	
Uniform Delay, d1		26.4		13.7	11.1					22.5	27.6	
Progression Factor		1.00		2.23	2.15					1.00	1.00	
Incremental Delay, d2		1.1		1.6	0.1					0.9	3.5	
Delay (s)		27.5		32.0	24.0					23.4	31.0	
Level of Service		C		C	C					C	C	
Approach Delay (s)		27.5			27.9			0.0			30.1	
Approach LOS		C			C			A			C	

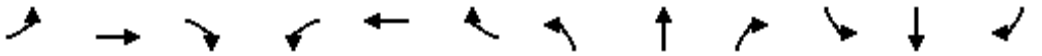
Intersection Summary			
HCM Average Control Delay	29.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	102.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	63.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	141	225	0	0	336	119	77	539	236	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	9	12	13	12	13	12	12	12
Total Lost time (s)	4.0	4.0			4.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.96		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1675	3196			2855		1767	1782	1560			
Flt Permitted	0.32	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	571	3196			2855		1767	1782	1560			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	148	237	0	0	354	125	81	567	248	0	0	0
RTOR Reduction (vph)	0	0	0	0	35	0	0	0	170	0	0	0
Lane Group Flow (vph)	148	237	0	0	444	0	81	567	78	0	0	0
Confl. Peds. (#/hr)	9		13	13		9			1	1		
Confl. Bikes (#/hr)	3					3						
Heavy Vehicles (%)	2%	7%	0%	0%	3%	1%	0%	1%	0%	0%	0%	0%
Turn Type	pm+pt						custom		Perm			
Protected Phases	4	1 4			1		2	2				
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	59.0	63.0			26.0		30.0	30.0	30.0			
Effective Green, g (s)	59.0	63.0			26.0		30.0	30.0	30.0			
Actuated g/C Ratio	0.58	0.62			0.25		0.29	0.29	0.29			
Clearance Time (s)	4.0				4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	687	1974			728		520	524	459			
v/s Ratio Prot	c0.07	0.07			c0.16		0.05	c0.32				
v/s Ratio Perm	0.05								0.05			
v/c Ratio	0.22	0.12			0.61		0.16	1.08	0.17			
Uniform Delay, d1	10.4	8.1			33.5		26.6	36.0	26.7			
Progression Factor	0.42	0.43			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.7	0.1			3.8		0.6	63.3	0.8			
Delay (s)	5.0	3.6			37.3		27.3	99.3	27.5			
Level of Service	A	A			D		C	F	C			
Approach Delay (s)		4.1			37.3			73.0			0.0	
Approach LOS		A			D			E			A	

Intersection Summary			
HCM Average Control Delay	48.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	102.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	63.1%	ICU Level of Service	B
Analysis Period (min)	15		

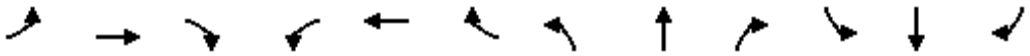
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	517	479	81	534	0	0	0	0	13	436	301
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	11	12	12	12	12	10	10	12
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	1.00
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.93		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3099		1710	3306					1596	3192	1530
Flt Permitted		1.00		0.11	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3099		200	3306					1596	3192	1530
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	539	499	84	556	0	0	0	0	14	454	314
RTOR Reduction (vph)	0	168	0	0	0	0	0	0	0	0	0	200
Lane Group Flow (vph)	0	870	0	84	556	0	0	0	0	14	454	114
Confl. Peds. (#/hr)	8		8	8		8	3					3
Confl. Bikes (#/hr)	9					9			61	61		
Heavy Vehicles (%)	0%	1%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type				pm+pt						Split		Prot
Protected Phases		8		7	7 8					6	6	6
Permitted Phases				7 8								
Actuated Green, G (s)		36.0		54.0	58.0					34.0	34.0	34.0
Effective Green, g (s)		36.0		54.0	58.0					34.0	34.0	34.0
Actuated g/C Ratio		0.36		0.54	0.58					0.34	0.34	0.34
Clearance Time (s)		4.0		4.0						4.0	4.0	4.0
Lane Grp Cap (vph)		1116		380	1917					543	1085	520
v/s Ratio Prot		c0.28		0.04	c0.17					0.01	c0.14	0.07
v/s Ratio Perm				0.08								
v/c Ratio		0.78		0.22	0.29					0.03	0.42	0.22
Uniform Delay, d1		28.5		14.4	10.6					22.0	25.4	23.5
Progression Factor		1.00		1.01	1.19					1.00	1.00	1.00
Incremental Delay, d2		5.4		0.9	0.3					0.1	1.2	1.0
Delay (s)		33.9		15.5	12.9					22.1	26.6	24.5
Level of Service		C		B	B					C	C	C
Approach Delay (s)		33.9			13.2			0.0			25.7	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM Average Control Delay	25.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	93.6%	ICU Level of Service	F
Analysis Period (min)	15		

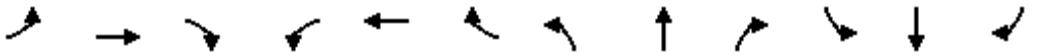
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	422	104	0	0	150	6	465	480	58	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	10	12	11	11	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	0.91	0.91			0.95		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.99		1.00	1.00	0.85			
Flt Protected	0.95	0.97			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1469	3109			3170		1555	1653	1530			
Flt Permitted	0.64	0.71			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	992	2286			3170		1555	1653	1530			
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	435	107	0	0	155	6	479	495	60	0	0	0
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	38	0	0	0
Lane Group Flow (vph)	217	325	0	0	158	0	479	495	22	0	0	0
Confl. Peds. (#/hr)	13		6	6		13			8	8		
Confl. Bikes (#/hr)	1					1			2	2		
Heavy Vehicles (%)	2%	1%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%
Turn Type	pm+pt						custom		custom			
Protected Phases	4	1 4			1		2	2	2			
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Effective Green, g (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Actuated g/C Ratio	0.51	0.51			0.15		0.37	0.37	0.37			
Clearance Time (s)	4.0				4.0		4.0	4.0	4.0			
Lane Grp Cap (vph)	678	1462			476		575	612	566			
v/s Ratio Prot	c0.12	0.08			c0.05		c0.31	0.30	0.01			
v/s Ratio Perm	0.05	0.03										
v/c Ratio	0.32	0.22			0.33		0.83	0.81	0.04			
Uniform Delay, d1	14.1	13.5			38.0		28.7	28.3	20.1			
Progression Factor	0.25	0.26			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.7	0.2			1.9		13.3	11.0	0.1			
Delay (s)	4.2	3.7			39.9		42.0	39.3	20.3			
Level of Service	A	A			D		D	D	C			
Approach Delay (s)		3.9			39.9			39.5			0.0	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM Average Control Delay	28.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	93.6%	ICU Level of Service	F
Analysis Period (min)	15		

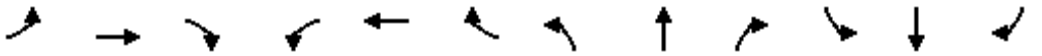
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	78	316	117	109	270	111	87	699	76	100	884	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	9	10	9	9	10	9
Total Lost time (s)		4.0			4.0		4.0	3.5	4.0	4.0	3.5	4.0
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		0.99			0.99		1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.97			0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		2955			2935		1508	3069	1309	1508	3099	1298
Flt Permitted		0.77			0.72		0.16	1.00	1.00	0.25	1.00	1.00
Satd. Flow (perm)		2281			2151		254	3069	1309	401	3099	1298
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	81	329	122	114	281	116	91	728	79	104	921	68
RTOR Reduction (vph)	0	33	0	0	32	0	0	0	48	0	0	33
Lane Group Flow (vph)	0	499	0	0	479	0	91	728	31	104	921	35
Confl. Peds. (#/hr)	35		30	30		35	34		8	8		34
Confl. Bikes (#/hr)	1					1	1					1
Heavy Vehicles (%)	1%	4%	0%	1%	3%	3%	2%	4%	2%	2%	3%	2%
Turn Type	pm+pt			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		35.0			27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)		36.0			28.0		36.0	33.5	33.0	36.0	33.5	33.0
Actuated g/C Ratio		0.42			0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)		5.0			5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)		1014			709		167	1210	508	222	1221	504
v/s Ratio Prot		c0.03					c0.03	0.24		0.02	c0.30	
v/s Ratio Perm		0.17			c0.22		0.21		0.02	0.18		0.03
v/c Ratio		0.49			0.68		0.54	0.60	0.06	0.47	0.75	0.07
Uniform Delay, d1		17.8			24.6		16.8	20.5	16.3	15.9	22.2	16.3
Progression Factor		1.00			1.00		1.48	0.68	0.77	1.11	1.16	1.74
Incremental Delay, d2		1.7			5.1		11.1	2.0	0.2	5.0	3.1	0.2
Delay (s)		19.6			29.7		36.0	16.0	12.8	22.6	29.0	28.6
Level of Service		B			C		D	B	B	C	C	C
Approach Delay (s)		19.6			29.7			17.8			28.3	
Approach LOS		B			C			B			C	

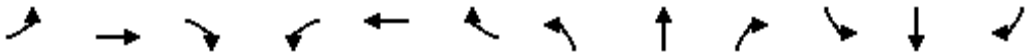
Intersection Summary			
HCM Average Control Delay	23.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	76.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	76	410	0	0	367	84	54	44	33	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.97			0.97				
Flt Protected		0.99			1.00			0.98				
Satd. Flow (prot)		1734			1704			1654				
Flt Permitted		0.87			1.00			0.98				
Satd. Flow (perm)		1519			1704			1654				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	84	456	0	0	408	93	60	49	37	0	0	0
RTOR Reduction (vph)	0	0	0	0	12	0	0	19	0	0	0	0
Lane Group Flow (vph)	0	540	0	0	489	0	0	127	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		38.0			38.0			19.0				
Effective Green, g (s)		38.0			38.0			19.0				
Actuated g/C Ratio		0.58			0.58			0.29				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		888			996			483				
v/s Ratio Prot					0.29							
v/s Ratio Perm		c0.36						0.08				
v/c Ratio		0.61			0.49			0.26				
Uniform Delay, d1		8.7			7.9			17.6				
Progression Factor		1.00			0.76			1.00				
Incremental Delay, d2		3.1			1.5			1.3				
Delay (s)		11.8			7.5			19.0				
Level of Service		B			A			B				
Approach Delay (s)		11.8			7.5			19.0			0.0	
Approach LOS		B			A			B			A	

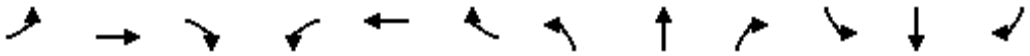
Intersection Summary			
HCM Average Control Delay	10.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	70.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	29	374	37	39	369	50	31	118	39	53	150	45
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	10	12	12	10	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			0.98	
Flpb, ped/bikes		1.00			1.00			0.99			1.00	
Frt		0.99			0.99			0.97			0.97	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1954			1941			2969			2981	
Flt Permitted		0.95			0.94			0.88			0.86	
Satd. Flow (perm)		1869			1825			2646			2589	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	32	416	41	43	410	56	34	131	43	59	167	50
RTOR Reduction (vph)	0	5	0	0	7	0	0	25	0	0	29	0
Lane Group Flow (vph)	0	484	0	0	502	0	0	183	0	0	247	0
Confl. Peds. (#/hr)	32		25	25		32	59		24	24		59
Confl. Bikes (#/hr)	3		2	2		3	4		2	2		4
Heavy Vehicles (%)	0%	3%	0%	3%	3%	0%	0%	0%	7%	4%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0			27.0			27.0	
Effective Green, g (s)		30.0			30.0			27.0			27.0	
Actuated g/C Ratio		0.46			0.46			0.42			0.42	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		863			842			1099			1075	
v/s Ratio Prot												
v/s Ratio Perm		0.26			c0.28			0.07			c0.10	
v/c Ratio		0.56			0.60			0.17			0.23	
Uniform Delay, d1		12.7			13.0			11.9			12.3	
Progression Factor		0.56			0.40			1.30			0.44	
Incremental Delay, d2		2.2			2.7			0.3			0.5	
Delay (s)		9.2			7.9			15.9			5.9	
Level of Service		A			A			B			A	
Approach Delay (s)		9.2			7.9			15.9			5.9	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM Average Control Delay	9.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.0%	ICU Level of Service	D
Analysis Period (min)	15		

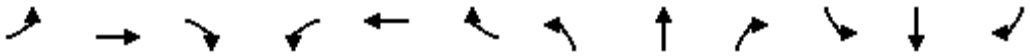
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	51	320	49	81	464	86	46	219	98	83	227	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	9	10	10	9	10	10	12	10	10	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		0.99	1.00		0.99	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.95		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1510	3034		1572	3077		1587	2962		1585	3071	
Flt Permitted	0.32	1.00		0.47	1.00		0.56	1.00		0.54	1.00	
Satd. Flow (perm)	505	3034		775	3077		928	2962		903	3071	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	57	356	54	90	516	96	51	243	109	92	252	72
RTOR Reduction (vph)	0	19	0	0	24	0	0	50	0	0	33	0
Lane Group Flow (vph)	57	391	0	90	588	0	51	302	0	92	291	0
Confl. Peds. (#/hr)	20		31	31		20	16		20	20		16
Confl. Bikes (#/hr)							1		3	3		1
Heavy Vehicles (%)	5%	3%	0%	0%	1%	0%	0%	2%	2%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	171	1027		262	1041		500	1595		486	1654	
v/s Ratio Prot		0.13			c0.19			0.10			0.09	
v/s Ratio Perm	0.11			0.12			0.05			c0.10		
v/c Ratio	0.33	0.38		0.34	0.57		0.10	0.19		0.19	0.18	
Uniform Delay, d1	16.0	16.3		16.1	17.6		7.3	7.7		7.7	7.6	
Progression Factor	0.67	0.64		0.93	0.93		0.72	0.61		1.09	1.08	
Incremental Delay, d2	4.6	0.9		3.5	2.2		0.4	0.3		0.9	0.2	
Delay (s)	15.3	11.4		18.5	18.6		5.6	5.0		9.3	8.5	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		11.9			18.6			5.1			8.7	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	12.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.6%	ICU Level of Service	A
Analysis Period (min)	15		

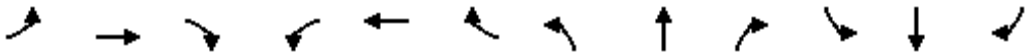
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	338	78	87	414	50	46	231	58	46	279	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	9	10	9	9	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			0.98	
Flpb, ped/bikes	0.98	1.00		0.99	1.00			0.99			1.00	
Frt	1.00	0.97		1.00	0.98			0.97			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1509	3016		1430	3722			3485			3519	
Flt Permitted	0.45	1.00		0.48	1.00			0.86			0.88	
Satd. Flow (perm)	712	3016		725	3722			3028			3118	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	62	356	82	92	436	53	48	243	61	48	294	68
RTOR Reduction (vph)	0	30	0	0	15	0	0	27	0	0	25	0
Lane Group Flow (vph)	62	408	0	92	474	0	0	325	0	0	385	0
Confl. Peds. (#/hr)	38		17	17		38	125		53	53		125
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	3%	0%	7%	2%	0%	0%	6%	10%	2%	5%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Effective Green, g (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48			0.40			0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	340	1438		346	1775			1211			1247	
v/s Ratio Prot		c0.14			0.13							
v/s Ratio Perm	0.09			0.13				0.11			c0.12	
v/c Ratio	0.18	0.28		0.27	0.27			0.27			0.31	
Uniform Delay, d1	9.7	10.3		10.2	10.2			13.1			13.3	
Progression Factor	1.59	1.73		1.10	1.10			0.43			0.73	
Incremental Delay, d2	1.1	0.5		1.7	0.3			0.5			0.6	
Delay (s)	16.6	18.3		12.9	11.5			6.2			10.4	
Level of Service	B	B		B	B			A			B	
Approach Delay (s)		18.1			11.7			6.2			10.4	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM Average Control Delay	12.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.4%	ICU Level of Service	B
Analysis Period (min)	15		

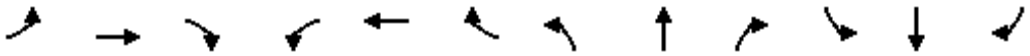
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	86	284	91	92	289	92	120	82	47	47	82	119
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	16	12	12	16	12
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		0.95			1.00			1.00	
Frt		1.00	0.85		0.97			0.97			0.94	
Flt Protected		0.99	1.00		0.99			0.98			0.99	
Satd. Flow (prot)		1670	1436		3086			1885			1835	
Flt Permitted		0.79	1.00		0.79			0.68			0.90	
Satd. Flow (perm)		1332	1436		2469			1303			1674	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	96	316	101	102	321	102	133	91	52	52	91	132
RTOR Reduction (vph)	0	0	48	0	32	0	0	13	0	0	51	0
Lane Group Flow (vph)	0	412	53	0	493	0	0	263	0	0	224	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		34.0	34.0		34.0			21.0			21.0	
Effective Green, g (s)		34.0	34.0		34.0			21.0			21.0	
Actuated g/C Ratio		0.52	0.52		0.52			0.32			0.32	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Grp Cap (vph)		697	751		1291			421			541	
v/s Ratio Prot												
v/s Ratio Perm		c0.31	0.04		0.20			c0.20			0.13	
v/c Ratio		0.59	0.07		0.38			0.63			0.41	
Uniform Delay, d1		10.7	7.7		9.2			18.7			17.2	
Progression Factor		1.82	4.59		0.52			1.00			1.00	
Incremental Delay, d2		3.6	0.2		0.8			6.8			2.3	
Delay (s)		23.0	35.4		5.6			25.5			19.5	
Level of Service		C	D		A			C			B	
Approach Delay (s)		25.5			5.6			25.5			19.5	
Approach LOS		C			A			C			B	

Intersection Summary			
HCM Average Control Delay	17.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	79.2%	ICU Level of Service	D
Analysis Period (min)	15		

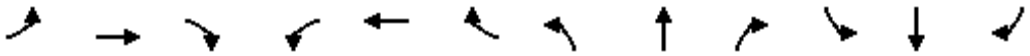
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	55	271	28	26	323	60	26	133	47	62	146	63
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	15	8	16	8	8	16	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.98			0.97			0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1443	3025		1565	3018			3582			3599	
Flt Permitted	0.49	1.00		0.55	1.00			0.90			0.84	
Satd. Flow (perm)	740	3025		909	3018			3238			3069	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	61	301	31	29	359	67	29	148	52	69	162	70
RTOR Reduction (vph)	0	12	0	0	24	0	0	30	0	0	41	0
Lane Group Flow (vph)	61	320	0	29	402	0	0	199	0	0	260	0
Confl. Peds. (#/hr)	24		47	47		24	9		36	36		9
Confl. Bikes (#/hr)			4	4			1					1
Heavy Vehicles (%)	9%	4%	0%	0%	3%	0%	0%	1%	10%	0%	0%	8%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	30.0	30.0		30.0	30.0			27.0			27.0	
Effective Green, g (s)	30.0	30.0		30.0	30.0			27.0			27.0	
Actuated g/C Ratio	0.46	0.46		0.46	0.46			0.42			0.42	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	342	1396		420	1393			1345			1275	
v/s Ratio Prot		0.11			c0.13							
v/s Ratio Perm	0.08			0.03				0.06			c0.08	
v/c Ratio	0.18	0.23		0.07	0.29			0.15			0.20	
Uniform Delay, d1	10.3	10.5		9.7	10.9			11.8			12.1	
Progression Factor	0.69	0.69		0.85	0.68			1.02			0.41	
Incremental Delay, d2	0.9	0.3		0.1	0.2			0.2			0.3	
Delay (s)	8.0	7.6		8.4	7.7			12.4			5.3	
Level of Service	A	A		A	A			B			A	
Approach Delay (s)		7.7			7.7			12.4			5.3	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM Average Control Delay	7.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

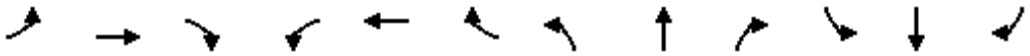


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	47	440	26	86	503	222	24	124	115	340	261	82
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.99			0.96			0.93			0.98	
Flt Protected		1.00			0.99			1.00			0.98	
Satd. Flow (prot)		3280			3167			3089			3181	
Flt Permitted		0.76			0.80			0.90			0.70	
Satd. Flow (perm)		2509			2532			2805			2289	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	52	489	29	96	559	247	27	138	128	378	290	91
RTOR Reduction (vph)	0	6	0	0	60	0	0	69	0	0	16	0
Lane Group Flow (vph)	0	564	0	0	842	0	0	224	0	0	743	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0			30.0			17.0	
Effective Green, g (s)		25.0			25.0			30.0			17.0	
Actuated g/C Ratio		0.38			0.38			0.46			0.26	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		965			974			1338			599	
v/s Ratio Prot								c0.03				
v/s Ratio Perm		0.22			c0.33			0.05			c0.32	
v/c Ratio		0.58			0.86			0.17			1.36dl	
Uniform Delay, d1		15.9			18.4			10.2			24.0	
Progression Factor		1.48			1.00			1.00			0.80	
Incremental Delay, d2		2.6			10.1			0.3			121.3	
Delay (s)		26.0			28.5			10.5			140.5	
Level of Service		C			C			B			F	
Approach Delay (s)		26.0			28.5			10.5			140.5	
Approach LOS		C			C			B			F	

Intersection Summary			
HCM Average Control Delay	59.5	HCM Level of Service	E
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	85.7%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

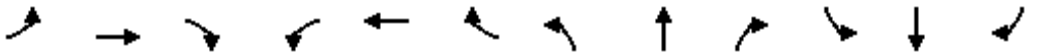
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	895	128	48	792	0	81	0	36	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	10	10	12	12	12	12	12	12	12
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			1.00				
Frt		0.98			1.00			0.96				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		3041			3090			1619				
Flt Permitted		1.00			0.80			0.79				
Satd. Flow (perm)		3041			2489			1329				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	994	142	53	880	0	90	0	40	0	0	0
RTOR Reduction (vph)	0	15	0	0	0	0	0	18	0	0	0	0
Lane Group Flow (vph)	0	1121	0	0	933	0	0	112	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	custom			Perm			Perm			Perm		
Protected Phases		4 5 6 11			8			2			2	
Permitted Phases	4 6 11			8			2			2		
Actuated Green, G (s)		65.0			33.0			16.0				
Effective Green, g (s)		58.0			33.0			16.0				
Actuated g/C Ratio		0.64			0.37			0.18				
Clearance Time (s)					5.0			5.0				
Lane Grp Cap (vph)		1960			913			236				
v/s Ratio Prot		c0.37										
v/s Ratio Perm					c0.37			c0.08				
v/c Ratio		0.57			1.02			0.47				
Uniform Delay, d1		9.0			28.5			33.2				
Progression Factor		0.14			1.42			1.00				
Incremental Delay, d2		0.3			34.2			6.7				
Delay (s)		1.6			74.8			39.9				
Level of Service		A			E			D				
Approach Delay (s)		1.6			74.8			39.9			0.0	
Approach LOS		A			E			D			A	

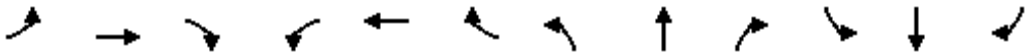
Intersection Summary			
HCM Average Control Delay	35.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	74.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	222	642	22	112	614	185	60	4	107	212	10	212
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	10	12	12	12	12	16	12	12	12	12
Total Lost time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85		0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (prot)	1550	3194		1660	3320	1485		1782		1660	1748	1485
Flt Permitted	0.29	1.00		0.33	1.00	1.00		0.88		0.43	1.00	1.00
Satd. Flow (perm)	472	3194		585	3320	1485		1593		758	1748	1485
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	247	713	24	124	682	206	67	4	119	236	11	236
RTOR Reduction (vph)	0	2	0	0	0	95	0	92	0	0	0	135
Lane Group Flow (vph)	247	735	0	124	682	111	0	98	0	236	11	101
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	55.0	42.6		47.8	38.4	48.4		12.0		25.0	25.0	38.6
Effective Green, g (s)	55.0	42.6		47.8	38.4	48.4		12.0		25.0	25.0	38.6
Actuated g/C Ratio	0.61	0.47		0.53	0.43	0.54		0.13		0.28	0.28	0.43
Clearance Time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Vehicle Extension (s)	4.0	3.0		4.0	3.0	3.0		4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	451	1512		423	1417	799		212		311	486	637
v/s Ratio Prot	c0.08	0.23		0.03	0.21	0.02				c0.08	0.01	0.02
v/s Ratio Perm	c0.25			0.13		0.06		0.06		c0.13		0.04
v/c Ratio	0.55	0.49		0.29	0.48	0.14		0.46		0.76	0.02	0.16
Uniform Delay, d1	9.2	16.2		10.8	18.6	10.4		36.0		28.7	23.6	15.8
Progression Factor	2.65	1.87		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	1.5	1.0		0.5	1.2	0.1		2.2		10.2	0.0	0.2
Delay (s)	25.7	31.3		11.3	19.8	10.5		38.2		38.9	23.6	15.9
Level of Service	C	C		B	B	B		D		D	C	B
Approach Delay (s)		29.9			16.9			38.2			27.3	
Approach LOS		C			B			D			C	

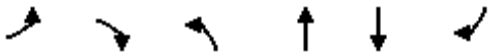
Intersection Summary			
HCM Average Control Delay	25.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	61.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	518	443	2	333	0	0	0	0	19	0	578
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	576	492	2	370	0	0	0	0	21	0	642
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		498										
pX, platoon unblocked												
vC, conflicting volume	370			576			765	950	288	662	950	185
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	370			576			765	950	288	662	950	185
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	94	100	22
cM capacity (veh/h)	1178			987			64	256	706	345	256	823

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	288	288	492	126	247	21	642
Volume Left	0	0	0	2	0	21	0
Volume Right	0	0	492	0	0	0	642
cSH	1700	1700	1700	987	1700	345	823
Volume to Capacity	0.17	0.17	0.29	0.00	0.15	0.06	0.78
Queue Length 95th (ft)	0	0	0	0	0	5	198
Control Delay (s)	0.0	0.0	0.0	0.2	0.0	16.1	23.1
Lane LOS				A		C	C
Approach Delay (s)	0.0			0.1		22.8	
Approach LOS						C	

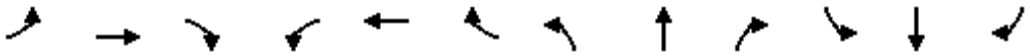
Intersection Summary				
Average Delay	7.2			
Intersection Capacity Utilization	54.2%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	537	0	335	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	597	0	372	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	298	298	372
Volume Left (vph)	298	298	372
Volume Right (vph)	0	0	0
Hadj (s)	0.55	0.55	0.25
Departure Headway (s)	6.2	6.2	5.6
Degree Utilization, x	0.51	0.51	0.58
Capacity (veh/h)	568	570	619
Control Delay (s)	14.3	14.3	16.0
Approach Delay (s)	14.3		16.0
Approach LOS	B		C

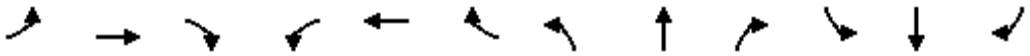
Intersection Summary			
Delay	14.9		
HCM Level of Service	B		
Intersection Capacity Utilization	42.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	472	90	192	594	0	0	0	0	101	21	58
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)		3.0		4.0	4.0						5.0	
Lane Util. Factor		0.95		1.00	0.95						0.95	
Frt		0.98		1.00	1.00						0.95	
Flt Protected		1.00		0.95	1.00						0.97	
Satd. Flow (prot)		3133		1605	3210						3074	
Flt Permitted		1.00		0.33	1.00						0.97	
Satd. Flow (perm)		3133		559	3210						3074	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	524	100	213	660	0	0	0	0	112	23	64
RTOR Reduction (vph)	0	18	0	0	0	0	0	0	0	0	44	0
Lane Group Flow (vph)	0	606	0	213	660	0	0	0	0	0	155	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type				pm+pt						Split		
Protected Phases		4		3	8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		36.0		49.0	49.0						27.0	
Effective Green, g (s)		36.0		49.0	49.0						27.0	
Actuated g/C Ratio		0.42		0.58	0.58						0.32	
Clearance Time (s)		3.0		4.0	4.0						5.0	
Lane Grp Cap (vph)		1327		445	1850						976	
v/s Ratio Prot		0.19		c0.06	0.21						c0.05	
v/s Ratio Perm				c0.22								
v/c Ratio		0.46		0.48	0.36						0.16	
Uniform Delay, d1		17.5		16.3	9.6						20.8	
Progression Factor		1.00		0.49	0.41						1.00	
Incremental Delay, d2		1.1		3.1	0.5						0.3	
Delay (s)		18.6		11.0	4.4						21.2	
Level of Service		B		B	A						C	
Approach Delay (s)		18.6			6.0			0.0			21.2	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	12.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	46.5%	ICU Level of Service	A
Analysis Period (min)	15		

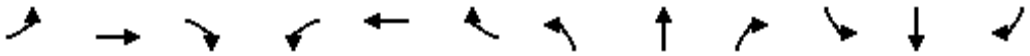
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	95	478	0	0	624	129	162	90	58	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	11	11	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0			3.0			5.0				
Lane Util. Factor	1.00	0.95			0.95			0.91				
Frt	1.00	1.00			0.97			0.97				
Flt Protected	0.95	1.00			1.00			0.97				
Satd. Flow (prot)	1660	3320			3127			4519				
Flt Permitted	0.22	1.00			1.00			0.97				
Satd. Flow (perm)	385	3320			3127			4519				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	106	531	0	0	693	143	180	100	64	0	0	0
RTOR Reduction (vph)	0	0	0	0	21	0	0	44	0	0	0	0
Lane Group Flow (vph)	106	531	0	0	815	0	0	300	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt						Split					
Protected Phases	7	4			8		2	2				
Permitted Phases	4											
Actuated Green, G (s)	48.0	48.0			35.0			27.0				
Effective Green, g (s)	48.0	48.0			35.0			27.0				
Actuated g/C Ratio	0.56	0.56			0.41			0.32				
Clearance Time (s)	5.0	5.0			3.0			5.0				
Lane Grp Cap (vph)	367	1875			1288			1435				
v/s Ratio Prot	0.03	c0.16			c0.26			c0.07				
v/s Ratio Perm	0.13											
v/c Ratio	0.29	0.28			0.63			0.21				
Uniform Delay, d1	18.1	9.6			19.9			21.2				
Progression Factor	0.41	0.33			1.00			1.00				
Incremental Delay, d2	1.8	0.4			2.4			0.3				
Delay (s)	9.3	3.5			22.3			21.5				
Level of Service	A	A			C			C				
Approach Delay (s)		4.4			22.3			21.5			0.0	
Approach LOS		A			C			C			A	

Intersection Summary			
HCM Average Control Delay	15.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.5%	ICU Level of Service	A
Analysis Period (min)	15		

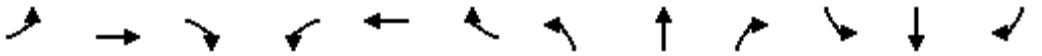
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	114	342	126	79	366	79	178	78	27	30	87	144
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	12	15	12	12	15	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		0.97			0.98			0.99			0.93	
Flt Protected		0.99			0.99			0.97			0.99	
Satd. Flow (prot)		2969			3006			1840			1769	
Flt Permitted		0.68			0.72			0.65			0.94	
Satd. Flow (perm)		2025			2179			1242			1676	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	127	380	140	88	407	88	198	87	30	33	97	160
RTOR Reduction (vph)	0	39	0	0	22	0	0	6	0	0	68	0
Lane Group Flow (vph)	0	608	0	0	561	0	0	309	0	0	222	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		23.0			23.0			32.0			32.0	
Effective Green, g (s)		23.0			23.0			32.0			32.0	
Actuated g/C Ratio		0.35			0.35			0.49			0.49	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		717			771			611			825	
v/s Ratio Prot												
v/s Ratio Perm		c0.30			0.26			c0.25			0.13	
v/c Ratio		0.85			0.73			0.51			0.27	
Uniform Delay, d1		19.4			18.3			11.2			9.7	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		11.9			5.9			3.0			0.8	
Delay (s)		31.3			24.2			14.1			10.5	
Level of Service		C			C			B			B	
Approach Delay (s)		31.3			24.2			14.1			10.5	
Approach LOS		C			C			B			B	

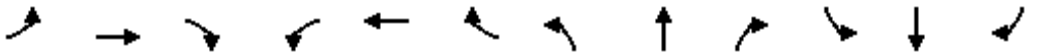
Intersection Summary			
HCM Average Control Delay	22.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	82.5%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	106	201	100	203	311	65	174	589	246	95	953	146
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	12	10	16	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.95		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1559	2967		1574	3683		1508	3069	1333	1521	3099	1336
Flt Permitted	0.45	1.00		0.52	1.00		0.13	1.00	1.00	0.31	1.00	1.00
Satd. Flow (perm)	739	2967		862	3683		212	3069	1333	490	3099	1336
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	112	212	105	214	327	68	183	620	259	100	1003	154
RTOR Reduction (vph)	0	70	0	0	21	0	0	0	165	0	0	98
Lane Group Flow (vph)	112	247	0	214	374	0	183	620	94	100	1003	56
Confl. Peds. (#/hr)	19		16	16		19	22		25	25		22
Heavy Vehicles (%)	2%	2%	0%	1%	2%	2%	2%	4%	0%	1%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	32.0	27.0		32.0	27.0		38.0	31.0	31.0	38.0	31.0	31.0
Effective Green, g (s)	30.0	28.0		30.0	28.0		36.0	31.0	31.0	36.0	31.0	31.0
Actuated g/C Ratio	0.35	0.33		0.35	0.33		0.42	0.36	0.36	0.42	0.36	0.36
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	299	977		338	1213		181	1119	486	280	1130	487
v/s Ratio Prot	0.02	0.08		c0.03	0.10		c0.07	0.20		0.03	0.32	
v/s Ratio Perm	0.11			c0.19			c0.36		0.07	0.13		0.04
v/c Ratio	0.37	0.25		0.63	0.31		1.01	0.55	0.19	0.36	0.89	0.12
Uniform Delay, d1	19.4	20.8		22.2	21.3		20.7	21.5	18.5	15.6	25.4	17.9
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.41	1.05	2.36
Incremental Delay, d2	3.6	0.6		8.7	0.7		69.8	2.0	0.9	2.6	8.0	0.4
Delay (s)	23.0	21.5		30.9	21.9		90.5	23.5	19.4	24.6	34.6	42.7
Level of Service	C	C		C	C		F	C	B	C	C	D
Approach Delay (s)		21.9			25.1			34.0			34.8	
Approach LOS		C			C			C			C	

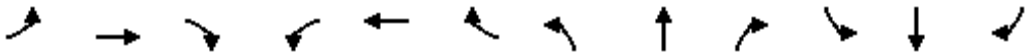
Intersection Summary			
HCM Average Control Delay	31.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	76.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	97	424	30	33	425	24	33	100	41	36	124	76
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	16	12	12	16	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00	0.98		1.00	0.99
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		0.99	1.00
Satd. Flow (prot)		1957	1466		1994	1480		2015	1506		2001	1511
Flt Permitted		0.72	1.00		0.94	1.00		0.91	1.00		0.92	1.00
Satd. Flow (perm)		1426	1466		1888	1480		1863	1506		1870	1511
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	102	446	32	35	447	25	35	105	43	38	131	80
RTOR Reduction (vph)	0	0	17	0	0	13	0	0	25	0	0	47
Lane Group Flow (vph)	0	548	15	0	482	12	0	140	18	0	169	33
Confl. Peds. (#/hr)	11		20	20		11	1		4	4		1
Confl. Bikes (#/hr)	1		1	1		1			1	1		
Heavy Vehicles (%)	4%	3%	0%	0%	2%	0%	0%	0%	0%	0%	1%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Effective Green, g (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Actuated g/C Ratio		0.46	0.46		0.46	0.46		0.42	0.42		0.42	0.42
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		658	677		871	683		774	626		777	628
v/s Ratio Prot												
v/s Ratio Perm		c0.38	0.01		0.26	0.01		0.08	0.01		c0.09	0.02
v/c Ratio		0.83	0.02		0.55	0.02		0.18	0.03		0.22	0.05
Uniform Delay, d1		15.3	9.5		12.7	9.5		12.0	11.2		12.2	11.4
Progression Factor		1.00	1.00		0.62	0.56		0.93	1.03		1.02	0.92
Incremental Delay, d2		11.8	0.1		2.5	0.0		0.5	0.1		0.6	0.2
Delay (s)		27.1	9.6		10.4	5.4		11.6	11.7		13.1	10.6
Level of Service		C	A		B	A		B	B		B	B
Approach Delay (s)		26.1			10.1			11.6			12.3	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM Average Control Delay	16.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	94.8%	ICU Level of Service	F
Analysis Period (min)	15		

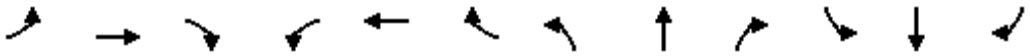
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	115	394	20	41	271	31	10	109	21	110	214	75
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.98		1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1550	3077		1550	3052		1550	3025		1550	2979	
Flt Permitted	0.95	1.00		0.49	1.00		0.54	1.00		0.66	1.00	
Satd. Flow (perm)	1550	3077		795	3052		878	3025		1078	2979	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	128	438	22	46	301	34	11	121	23	122	238	83
RTOR Reduction (vph)	0	6	0	0	13	0	0	13	0	0	49	0
Lane Group Flow (vph)	128	454	0	46	322	0	11	131	0	122	272	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Prot			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Effective Green, g (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.11	0.49		0.34	0.34		0.42	0.42		0.42	0.42	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	167	1515		269	1033		365	1257		448	1237	
v/s Ratio Prot	c0.08	c0.15			0.11			0.04			0.09	
v/s Ratio Perm				0.06			0.01			c0.11		
v/c Ratio	0.77	0.30		0.17	0.31		0.03	0.10		0.27	0.22	
Uniform Delay, d1	28.2	9.8		15.1	15.9		11.2	11.6		12.5	12.2	
Progression Factor	1.17	0.39		0.75	0.73		1.03	1.12		1.12	1.13	
Incremental Delay, d2	22.1	0.4		1.3	0.8		0.1	0.1		1.5	0.4	
Delay (s)	55.0	4.2		12.6	12.3		11.7	13.1		15.5	14.2	
Level of Service	D	A		B	B		B	B		B	B	
Approach Delay (s)		15.3			12.3			13.0			14.5	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	14.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	41.1%	ICU Level of Service	A
Analysis Period (min)	15		

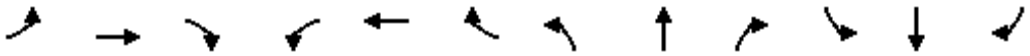
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	84	336	69	203	347	63	25	245	20	55	270	55
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.97		1.00	0.98			0.99			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1550	3019		1550	3028			3272			3225	
Flt Permitted	0.49	1.00		0.95	1.00			0.90			0.86	
Satd. Flow (perm)	798	3019		1550	3028			2966			2803	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	93	373	77	226	386	70	28	272	22	61	300	61
RTOR Reduction (vph)	0	26	0	0	23	0	0	8	0	0	21	0
Lane Group Flow (vph)	93	424	0	226	433	0	0	314	0	0	401	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Prot			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4						2			6		
Actuated Green, G (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Effective Green, g (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Actuated g/C Ratio	0.31	0.31		0.09	0.45			0.38			0.38	
Clearance Time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	246	929		143	1351			1141			1078	
v/s Ratio Prot		c0.14		c0.15	0.14							
v/s Ratio Perm	0.12							0.11			c0.14	
v/c Ratio	0.38	0.46		1.58	0.32			0.28			0.37	
Uniform Delay, d1	17.6	18.1		29.5	11.6			13.8			14.4	
Progression Factor	0.86	0.81		1.28	1.15			0.87			0.70	
Incremental Delay, d2	4.3	1.6		277.2	0.3			0.6			1.0	
Delay (s)	19.4	16.2		314.9	13.7			12.5			11.1	
Level of Service	B	B		F	B			B			B	
Approach Delay (s)		16.7			113.5			12.5			11.1	
Approach LOS		B			F			B			B	

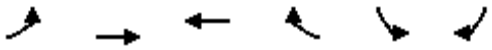
Intersection Summary			
HCM Average Control Delay	48.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	57.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	16	355	26	75	620	75	55	110	165	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	14	12	10	15	10
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			0.95				
Frt		0.99			0.99			0.93				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		1613			1602			3249				
Flt Permitted		0.96			0.92			0.99				
Satd. Flow (perm)		1557			1484			3249				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	18	394	29	83	689	83	61	122	183	0	0	0
RTOR Reduction (vph)	0	3	0	0	5	0	0	139	0	0	0	0
Lane Group Flow (vph)	0	438	0	0	850	0	0	227	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		41.5			41.5			15.5				
Effective Green, g (s)		41.5			41.5			15.5				
Actuated g/C Ratio		0.64			0.64			0.24				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		3.0			3.0			8.0				
Lane Grp Cap (vph)		994			947			775				
v/s Ratio Prot												
v/s Ratio Perm		0.28			c0.57			0.07				
v/c Ratio		0.44			0.90			0.29				
Uniform Delay, d1		5.9			9.9			20.3				
Progression Factor		2.01			1.00			1.00				
Incremental Delay, d2		1.3			13.0			0.9				
Delay (s)		13.2			22.9			21.2				
Level of Service		B			C			C				
Approach Delay (s)		13.2			22.9			21.2			0.0	
Approach LOS		B			C			C			A	

Intersection Summary			
HCM Average Control Delay	20.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	86.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	93	415	598	39	119	164
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	98	437	629	41	125	173
Pedestrians		5	6		17	
Lane Width (ft)		16.0	16.0		10.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		1	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1319	491			
pX, platoon unblocked	0.83				0.83	0.83
vC, conflicting volume	688				1306	672
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	522				1266	503
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	88				8	63
cM capacity (veh/h)	845				136	467

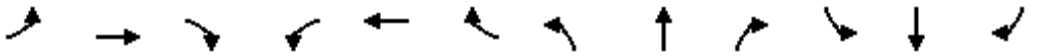
Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	535	671	125	173
Volume Left	98	0	125	0
Volume Right	0	41	0	173
cSH	845	1700	136	467
Volume to Capacity	0.12	0.39	0.92	0.37
Queue Length 95th (ft)	10	0	156	42
Control Delay (s)	3.0	0.0	120.4	17.1
Lane LOS	A		F	C
Approach Delay (s)	3.0	0.0	60.6	
Approach LOS			F	

Intersection Summary			
Average Delay	13.1		
Intersection Capacity Utilization	82.2%	ICU Level of Service	E
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	690	0	1	619	3	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frt	1.00			1.00	0.88	
Flt Protected	1.00			1.00	1.00	
Satd. Flow (prot)	1748			1747	1525	
Flt Permitted	1.00			1.00	1.00	
Satd. Flow (perm)	1748			1747	1525	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	767	0	1	688	3	32
RTOR Reduction (vph)	0	0	0	0	27	0
Lane Group Flow (vph)	767	0	0	689	8	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type			Perm			
Protected Phases	1 2 4			4	3	
Permitted Phases			4			
Actuated Green, G (s)	63.0			31.0	14.0	
Effective Green, g (s)	59.0			31.0	14.0	
Actuated g/C Ratio	0.69			0.36	0.16	
Clearance Time (s)				4.0	4.0	
Lane Grp Cap (vph)	1213			637	251	
v/s Ratio Prot	c0.44				c0.01	
v/s Ratio Perm				0.39		
v/c Ratio	0.63			1.08	0.03	
Uniform Delay, d1	7.1			27.0	29.8	
Progression Factor	0.10			1.00	1.00	
Incremental Delay, d2	1.1			59.8	0.2	
Delay (s)	1.8			86.8	30.1	
Level of Service	A			F	C	
Approach Delay (s)	1.8			86.8	30.1	
Approach LOS	A			F	C	

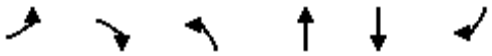
Intersection Summary			
HCM Average Control Delay	41.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	48.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	243	606	32	407	0	0	0	0	17	6	248
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	270	673	36	452	0	0	0	0	19	7	276
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	452			270			1133	1130	472	658	793	452
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	452			270			1133	1130	472	658	793	452
tC, single (s)	4.1			4.2			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			100	100	100	95	98	50
cM capacity (veh/h)	1119			1276			78	200	544	346	314	555

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	180	763	488	26	276
Volume Left	0	0	36	19	0
Volume Right	0	673	0	0	276
cSH	1700	1700	1276	337	555
Volume to Capacity	0.11	0.45	0.03	0.08	0.50
Queue Length 95th (ft)	0	0	2	6	69
Control Delay (s)	0.0	0.0	0.9	16.6	17.7
Lane LOS			A	C	C
Approach Delay (s)	0.0		0.9	17.6	
Approach LOS				C	

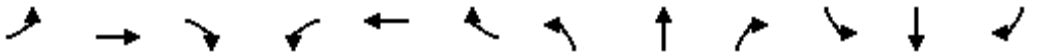
Intersection Summary				
Average Delay	3.3			
Intersection Capacity Utilization	60.5%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	260	0	439	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	289	0	488	0	0	0

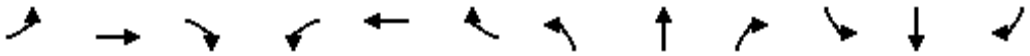
Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	144	144	488
Volume Left (vph)	144	144	488
Volume Right (vph)	0	0	0
Hadj (s)	0.55	0.55	0.25
Departure Headway (s)	6.4	6.4	5.0
Degree Utilization, x	0.26	0.26	0.68
Capacity (veh/h)	536	537	701
Control Delay (s)	10.3	10.3	17.7
Approach Delay (s)	10.3		17.7
Approach LOS	B		C

Intersection Summary			
Delay	15.0		
HCM Level of Service	B		
Intersection Capacity Utilization	40.2%	ICU Level of Service	A
Analysis Period (min)	15		



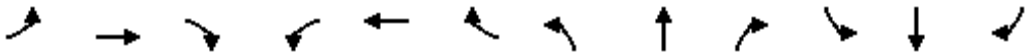
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	553	345	332	869	0	0	0	0	303	269	372
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	13	12	12	12	12	10	10	11
Total Lost time (s)		6.0	6.0		6.0					6.0	6.0	6.0
Lane Util. Factor		0.95	1.00		0.95					0.86	0.81	0.86
Frpb, ped/bikes		1.00	0.98		1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	0.95	0.85
Flt Protected		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (prot)		3179	1232		3427					1359	3807	1133
Flt Permitted		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (perm)		3179	1232		3427					1359	3807	1133
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	582	363	349	915	0	0	0	0	319	283	392
RTOR Reduction (vph)	0	0	208	0	0	0	0	0	0	0	52	113
Lane Group Flow (vph)	0	582	155	0	1264	0	0	0	0	175	571	83
Confl. Peds. (#/hr)	4		6	6		4						
Heavy Vehicles (%)	0%	4%	6%	1%	2%	0%	0%	0%	0%	1%	1%	1%
Parking (#/hr)			0									0
Turn Type			Perm	Split						Split		custom
Protected Phases		2		10 12 14	10 12 14					4	4	
Permitted Phases			2									4 2
Actuated Green, G (s)		39.0	39.0		67.4					23.0	23.0	68.0
Effective Green, g (s)		39.0	39.0		67.4					23.0	23.0	68.0
Actuated g/C Ratio		0.24	0.24		0.42					0.14	0.14	0.42
Clearance Time (s)		6.0	6.0							6.0	6.0	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		775	300		1444					195	547	482
v/s Ratio Prot		c0.18			c0.37					0.13	c0.15	
v/s Ratio Perm			0.13									0.07
v/c Ratio		0.75	0.52		0.88					0.90	1.04	0.17
Uniform Delay, d1		56.0	52.3		42.4					67.3	68.5	28.5
Progression Factor		1.00	1.00		0.17					1.00	1.00	1.00
Incremental Delay, d2		6.6	6.2		0.6					37.0	50.3	0.2
Delay (s)		62.6	58.6		8.0					104.3	118.8	28.7
Level of Service		E	E		A					F	F	C
Approach Delay (s)		61.1			8.0			0.0			98.5	
Approach LOS		E			A			A			F	

Intersection Summary			
HCM Average Control Delay	51.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	32.6
Intersection Capacity Utilization	84.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



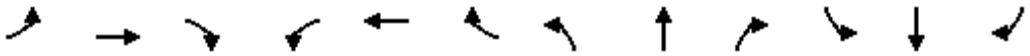
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	292	564	0	0	869	233	332	214	211	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	13	12	12	11	12	13	13	14	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0				
Lane Util. Factor	1.00	0.95			0.95	1.00	0.91	0.91				
Frt	1.00	1.00			1.00	0.85	1.00	0.94				
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (prot)	1605	3431			3210	1485	1561	3056				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (perm)	1605	3431			3210	1485	1561	3056				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	324	627	0	0	966	259	369	238	234	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	93	0	75	0	0	0	0
Lane Group Flow (vph)	324	627	0	0	966	166	288	478	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Split					Perm	Split					
Protected Phases	2 4 8	2 4 8			10		12	12				
Permitted Phases						10						
Actuated Green, G (s)	84.6	84.6			36.4	36.4	12.0	12.0				
Effective Green, g (s)	84.6	84.6			36.4	36.4	12.0	12.0				
Actuated g/C Ratio	0.53	0.53			0.23	0.23	0.08	0.08				
Clearance Time (s)					6.0	6.0	6.0	6.0				
Vehicle Extension (s)					3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	849	1814			730	338	117	229				
v/s Ratio Prot	c0.20	0.18			c0.30		c0.18	0.16				
v/s Ratio Perm						0.11						
v/c Ratio	0.38	0.35			1.32	0.49	2.46	2.09				
Uniform Delay, d1	22.3	21.7			61.8	53.8	74.0	74.0				
Progression Factor	0.06	0.06			1.00	1.00	1.00	1.00				
Incremental Delay, d2	0.2	0.1			155.0	1.1	682.7	504.1				
Delay (s)	1.4	1.3			216.8	54.9	756.7	578.1				
Level of Service	A	A			F	D	F	F				
Approach Delay (s)		1.3			182.5			639.2			0.0	
Approach LOS		A			F			F			A	

Intersection Summary			
HCM Average Control Delay	252.7	HCM Level of Service	F
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	29.0
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	140	506	136	89	270	67	108	522	70	96	1150	120
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	14	12	10	10	12	9	10	12
Total Lost time (s)	4.0	4.0	5.0	4.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1575	1600	1373	1596	1790		1580	3016		1537	3027	
Flt Permitted	0.31	1.00	1.00	0.15	1.00		0.11	1.00		0.33	1.00	
Satd. Flow (perm)	519	1600	1373	253	1790		190	3016		534	3027	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	147	533	143	94	284	71	114	549	74	101	1211	126
RTOR Reduction (vph)	0	0	98	0	10	0	0	12	0	0	9	0
Lane Group Flow (vph)	147	533	45	94	345	0	114	612	0	101	1328	0
Confl. Peds. (#/hr)	28		8	8		28	59		11	11		59
Confl. Bikes (#/hr)	3					3	1		2	2		1
Heavy Vehicles (%)	1%	5%	2%	0%	4%	0%	1%	4%	0%	0%	3%	3%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	36.0	29.0	29.0	33.2	27.6		43.0	36.0		40.2	34.6	
Effective Green, g (s)	34.0	30.0	29.0	31.2	27.6		41.0	36.0		38.2	34.6	
Actuated g/C Ratio	0.37	0.33	0.32	0.34	0.30		0.45	0.39		0.42	0.38	
Clearance Time (s)	3.0	5.0	5.0	3.0	5.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	263	526	437	154	542		177	1191		274	1148	
v/s Ratio Prot	c0.04	c0.33		0.03	0.19		c0.04	0.20		0.02	c0.44	
v/s Ratio Perm	0.17		0.03	0.18			0.25			0.14		
v/c Ratio	0.56	1.01	0.10	0.61	0.64		0.64	0.51		0.37	1.16	
Uniform Delay, d1	20.7	30.6	21.9	23.5	27.5		20.5	21.0		16.8	28.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.6	42.6	0.5	7.0	5.6		7.8	1.6		0.8	80.8	
Delay (s)	23.3	73.2	22.4	30.4	33.1		28.3	22.5		17.6	109.1	
Level of Service	C	E	C	C	C		C	C		B	F	
Approach Delay (s)		55.5			32.5			23.4			102.7	
Approach LOS		E			C			C			F	

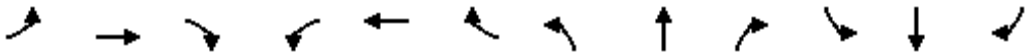
Intersection Summary			
HCM Average Control Delay	65.3	HCM Level of Service	E
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	91.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	91.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	88	462	111	13	334	22	49	59	19	21	91	82
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	10	10	10	12	15	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00			0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.98			0.94	
Flt Protected		0.99	1.00		1.00	1.00		0.98			0.99	
Satd. Flow (prot)		1963	1467		1629	1381		1892			1857	
Flt Permitted		0.89	1.00		0.98	1.00		0.86			0.97	
Satd. Flow (perm)		1760	1467		1598	1381		1649			1813	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	93	486	117	14	352	23	52	62	20	22	96	86
RTOR Reduction (vph)	0	0	45	0	0	12	0	10	0	0	40	0
Lane Group Flow (vph)	0	579	72	0	366	11	0	124	0	0	164	0
Confl. Peds. (#/hr)	12		20	20		12	8		2	2		8
Confl. Bikes (#/hr)	1		2	2		1			1	1		
Heavy Vehicles (%)	3%	3%	0%	0%	3%	0%	0%	0%	0%	0%	1%	3%
Turn Type	Perm		Perm	Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Effective Green, g (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Actuated g/C Ratio		0.49	0.49		0.49	0.49		0.42			0.42	
Clearance Time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		866	722		787	680		685			753	
v/s Ratio Prot												
v/s Ratio Perm		c0.33	0.05		0.23	0.01		0.08			c0.09	
v/c Ratio		0.67	0.10		0.47	0.02		0.18			0.22	
Uniform Delay, d1		12.5	8.8		10.9	8.4		12.0			12.2	
Progression Factor		1.00	1.00		1.84	2.64		1.00			1.98	
Incremental Delay, d2		4.1	0.3		1.9	0.0		0.6			0.7	
Delay (s)		16.6	9.1		21.9	22.3		12.6			24.8	
Level of Service		B	A		C	C		B			C	
Approach Delay (s)		15.3			21.9			12.6			24.8	
Approach LOS		B			C			B			C	

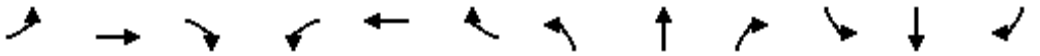
Intersection Summary			
HCM Average Control Delay	18.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	78.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	108	244	91	11	226	10	48	114	19	15	184	82
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.94		1.00	0.97		1.00	0.97		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.96	
Flt Protected		0.98	1.00		1.00	1.00		0.99	1.00		1.00	
Satd. Flow (prot)		1743	1443		1728	1487		1712	1489		1703	
Flt Permitted		0.78	1.00		0.98	1.00		0.85	1.00		0.98	
Satd. Flow (perm)		1387	1443		1692	1487		1481	1489		1680	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	114	257	96	12	238	11	51	120	20	16	194	86
RTOR Reduction (vph)	0	0	58	0	0	7	0	0	10	0	23	0
Lane Group Flow (vph)	0	371	38	0	250	4	0	171	10	0	273	0
Confl. Peds. (#/hr)	19		25	25		19	3		6	6		3
Confl. Bikes (#/hr)	1		2	2		1			1	1		
Heavy Vehicles (%)	0%	2%	0%	0%	4%	0%	0%	5%	0%	0%	0%	2%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Effective Green, g (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Actuated g/C Ratio		0.35	0.35		0.35	0.35		0.49	0.49		0.49	
Clearance Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Grp Cap (vph)		491	511		599	526		729	733		827	
v/s Ratio Prot												
v/s Ratio Perm		c0.27	0.03		0.15	0.00		0.12	0.01		c0.16	
v/c Ratio		0.76	0.08		0.42	0.01		0.23	0.01		0.33	
Uniform Delay, d1		18.5	13.9		15.9	13.6		9.5	8.4		10.0	
Progression Factor		1.79	3.63		0.96	0.95		0.16	0.21		1.06	
Incremental Delay, d2		8.1	0.2		2.1	0.0		0.1	0.0		1.1	
Delay (s)		41.3	50.8		17.4	13.0		1.6	1.7		11.6	
Level of Service		D	D		B	B		A	A		B	
Approach Delay (s)		43.2			17.2			1.6			11.6	
Approach LOS		D			B			A			B	

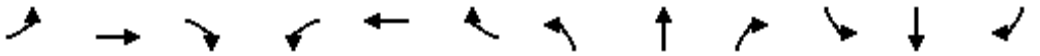
Intersection Summary			
HCM Average Control Delay	23.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	72.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	167	45	96	8	16	9	43	225	8	21	481	209
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.95		0.99			1.00			1.00	0.94
Flpb, ped/bikes		0.98	1.00		0.99			1.00			1.00	1.00
Frt		1.00	0.85		0.96			1.00			1.00	0.85
Flt Protected		0.96	1.00		0.99			0.99			1.00	1.00
Satd. Flow (prot)		1873	1440		1782			1991			1976	1382
Flt Permitted		0.81	1.00		0.93			0.88			0.98	1.00
Satd. Flow (perm)		1573	1440		1686			1762			1946	1382
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	186	50	107	9	18	10	48	250	9	23	534	232
RTOR Reduction (vph)	0	0	63	0	7	0	0	2	0	0	0	92
Lane Group Flow (vph)	0	236	44	0	30	0	0	305	0	0	557	140
Confl. Peds. (#/hr)	37		53	53		37	39		54	54		39
Confl. Bikes (#/hr)							2					2
Heavy Vehicles (%)	4%	0%	1%	0%	0%	0%	0%	1%	0%	0%	3%	4%
Turn Type	pm+pt		Perm	Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		27.0	27.0		17.0			32.0			32.0	32.0
Effective Green, g (s)		27.0	27.0		17.0			32.0			32.0	32.0
Actuated g/C Ratio		0.42	0.42		0.26			0.49			0.49	0.49
Clearance Time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		690	598		441			867			958	680
v/s Ratio Prot		c0.04										
v/s Ratio Perm		0.10	0.03		0.02			0.17			c0.29	0.10
v/c Ratio		0.34	0.07		0.07			0.35			0.58	0.21
Uniform Delay, d1		12.9	11.5		18.0			10.1			11.7	9.3
Progression Factor		1.02	1.85		1.00			0.52			0.66	0.22
Incremental Delay, d2		1.1	0.2		0.3			0.6			2.0	0.5
Delay (s)		14.3	21.4		18.3			5.9			9.7	2.6
Level of Service		B	C		B			A			A	A
Approach Delay (s)		16.5			18.3			5.9			7.6	
Approach LOS		B			B			A			A	

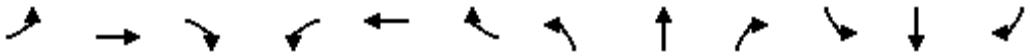
Intersection Summary					
HCM Average Control Delay	9.6	HCM Level of Service	A		
HCM Volume to Capacity ratio	0.45				
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0		
Intersection Capacity Utilization	72.5%	ICU Level of Service	C		
Analysis Period (min)	15				

c Critical Lane Group



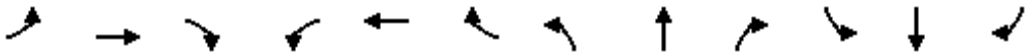
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	922	289	675	1189	0	0	0	0	513	284	334
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	11	8	8	8	11	12	14
Total Lost time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Lane Util. Factor		0.91		1.00	0.95					0.91	0.86	0.91
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.96		1.00	1.00					1.00	0.98	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.98	1.00
Satd. Flow (prot)		4575		1621	3320					1489	2913	1442
Flt Permitted		1.00		0.10	1.00					0.95	0.98	1.00
Satd. Flow (perm)		4575		173	3320					1489	2913	1442
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	971	304	711	1252	0	0	0	0	540	299	352
RTOR Reduction (vph)	0	49	0	0	0	0	0	0	0	0	9	58
Lane Group Flow (vph)	0	1226	0	711	1252	0	0	0	0	308	603	213
Confl. Peds. (#/hr)	15		11	11		15						
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	0%	3%	3%	2%	3%	0%	0%	0%	0%	1%	3%	3%
Turn Type				pm+pt						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Actuated Green, G (s)		35.0		74.9	74.9					28.1	28.1	28.1
Effective Green, g (s)		35.0		74.9	74.9					28.1	28.1	28.1
Actuated g/C Ratio		0.30		0.65	0.65					0.24	0.24	0.24
Clearance Time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Vehicle Extension (s)		7.0		3.5	7.0					3.5	3.5	3.5
Lane Grp Cap (vph)		1392		558	2162					364	712	352
v/s Ratio Prot		0.27		c0.39	0.38							
v/s Ratio Perm				c0.44						0.21	0.21	0.15
v/c Ratio		0.88		1.27	0.58					0.85	0.85	0.60
Uniform Delay, d1		38.0		33.0	11.2					41.4	41.4	38.5
Progression Factor		1.00		0.85	2.08					1.00	1.00	1.00
Incremental Delay, d2		8.3		126.7	0.3					16.7	9.4	3.1
Delay (s)		46.3		154.6	23.6					58.1	50.8	41.6
Level of Service		D		F	C					E	D	D
Approach Delay (s)		46.3			71.0			0.0			50.6	
Approach LOS		D			E			A			D	

Intersection Summary			
HCM Average Control Delay	58.4	HCM Level of Service	E
HCM Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	119.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	341	1094	0	0	1435	271	430	351	393	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	11	12	12	12	12	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0		6.0				
Lane Util. Factor	0.97	0.95			0.95	1.00		0.91				
Frpb, ped/bikes	1.00	1.00			1.00	0.98		1.00				
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00				
Frt	1.00	1.00			1.00	0.85		0.95				
Flt Protected	0.95	1.00			1.00	1.00		0.98				
Satd. Flow (prot)	3144	3353			3241	1489		4492				
Flt Permitted	0.07	1.00			1.00	1.00		0.98				
Satd. Flow (perm)	220	3353			3241	1489		4492				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	359	1152	0	0	1511	285	453	369	414	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	68	0	75	0	0	0	0
Lane Group Flow (vph)	359	1152	0	0	1511	217	0	1161	0	0	0	0
Confl. Peds. (#/hr)	7		5	5		7						
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	2%	2%	0%	0%	2%	1%	2%	1%	3%	0%	0%	0%
Turn Type	pm+pt					Perm	Perm					
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8					
Actuated Green, G (s)	74.0	74.0			54.1	54.1		29.0				
Effective Green, g (s)	74.0	74.0			54.1	54.1		29.0				
Actuated g/C Ratio	0.64	0.64			0.47	0.47		0.25				
Clearance Time (s)	6.0	6.0			6.0	6.0		6.0				
Vehicle Extension (s)	3.5	7.0			7.0	7.0		5.0				
Lane Grp Cap (vph)	495	2158			1525	700		1133				
v/s Ratio Prot	c0.09	0.34			c0.47							
v/s Ratio Perm	0.38					0.15		0.26				
v/c Ratio	0.73	0.53			0.99	0.31		1.02				
Uniform Delay, d1	31.7	11.1			30.2	18.9		43.0				
Progression Factor	1.55	0.03			0.91	1.06		1.00				
Incremental Delay, d2	2.6	0.5			5.1	0.1		33.2				
Delay (s)	51.9	0.7			32.6	20.1		76.2				
Level of Service	D	A			C	C		E				
Approach Delay (s)		12.9			30.6			76.2			0.0	
Approach LOS		B			C			E			A	

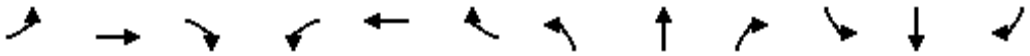
Intersection Summary			
HCM Average Control Delay	37.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	119.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	135	774	408	104	1197	100	227	179	66	85	162	121
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	11	12	12	10	10	13	10	10	10
Total Lost time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		0.99	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.96		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1565	3273	1313	1602	3284		1578	3002		1540	2941	
Flt Permitted	0.11	1.00	1.00	0.34	1.00		0.39	1.00		0.59	1.00	
Satd. Flow (perm)	174	3273	1313	580	3284		654	3002		961	2941	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	142	815	429	109	1260	105	239	188	69	89	171	127
RTOR Reduction (vph)	0	0	173	0	6	0	0	38	0	0	107	0
Lane Group Flow (vph)	142	815	256	109	1359	0	239	219	0	89	191	0
Confl. Peds. (#/hr)	11		23	23		11	8		12	12		8
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	2%	1%	3%	3%	3%	0%	1%	1%	2%	3%	0%	1%
Parking (#/hr)			0									
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	64.8	52.2	68.6	43.4	34.3		38.2	26.4		26.6	18.3	
Effective Green, g (s)	64.8	52.2	68.6	43.4	34.3		38.2	26.4		26.6	18.3	
Actuated g/C Ratio	0.56	0.45	0.60	0.38	0.30		0.33	0.23		0.23	0.16	
Clearance Time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0		3.0	7.0		3.0	7.0	
Lane Grp Cap (vph)	425	1486	783	300	979		349	689		264	468	
v/s Ratio Prot	c0.08	c0.25	0.05	0.03	c0.41		c0.10	0.07		0.02	0.07	
v/s Ratio Perm	0.11		0.15	0.11			c0.13			0.05		
v/c Ratio	0.33	0.55	0.33	0.36	1.39		0.68	0.32		0.34	0.41	
Uniform Delay, d1	17.5	22.8	11.6	23.9	40.4		30.5	36.8		36.1	43.5	
Progression Factor	0.78	0.78	1.37	1.00	1.00		1.04	1.06		1.00	1.00	
Incremental Delay, d2	1.6	1.1	0.2	0.8	181.2		5.2	0.9		0.8	2.1	
Delay (s)	15.3	18.9	16.1	24.7	221.5		37.0	39.9		36.8	45.5	
Level of Service	B	B	B	C	F		D	D		D	D	
Approach Delay (s)		17.7			207.0			38.5			43.5	
Approach LOS		B			F			D			D	

Intersection Summary			
HCM Average Control Delay	97.6	HCM Level of Service	F
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	88.9%	ICU Level of Service	E
Analysis Period (min)	15		

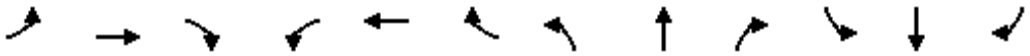
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	46	250	367	186	441	113	362	340	107	206	408	56
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	12	11	12	12	11	13	12	10	11	12
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.91		1.00	0.97		1.00	0.96		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1707	2925		1653	3267		1620	3381		1580	3183	
Flt Permitted	0.39	1.00		0.18	1.00		0.32	1.00		0.48	1.00	
Satd. Flow (perm)	698	2925		314	3267		544	3381		802	3183	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	48	263	386	196	464	119	381	358	113	217	429	59
RTOR Reduction (vph)	0	225	0	0	19	0	0	26	0	0	9	0
Lane Group Flow (vph)	48	424	0	196	564	0	381	445	0	217	479	0
Confl. Peds. (#/hr)	12		3	3		12	5					5
Heavy Vehicles (%)	0%	2%	2%	0%	1%	1%	2%	1%	0%	1%	2%	0%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	35.5	28.8		46.8	36.1		56.2	44.2		40.1	32.1	
Effective Green, g (s)	35.5	28.8		46.8	36.1		56.2	44.2		40.1	32.1	
Actuated g/C Ratio	0.31	0.25		0.41	0.31		0.49	0.38		0.35	0.28	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.5	7.0		3.5	7.0		3.5	7.0		3.5	7.0	
Lane Grp Cap (vph)	274	733		291	1026		454	1299		334	888	
v/s Ratio Prot	0.01	0.15		c0.08	0.17		c0.15	0.13		0.05	0.15	
v/s Ratio Perm	0.04			c0.19			c0.26			0.18		
v/c Ratio	0.18	0.58		0.67	0.55		0.84	0.34		0.65	0.54	
Uniform Delay, d1	28.3	37.8		24.9	32.7		20.8	25.1		28.8	35.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.99	0.97	
Incremental Delay, d2	0.4	3.3		6.3	2.1		13.1	0.7		4.2	2.2	
Delay (s)	28.7	41.1		31.2	34.8		33.9	25.8		32.9	36.4	
Level of Service	C	D		C	C		C	C		C	D	
Approach Delay (s)		40.2			33.9			29.4			35.3	
Approach LOS		D			C			C			D	

Intersection Summary			
HCM Average Control Delay	34.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.5%	ICU Level of Service	E
Analysis Period (min)	15		

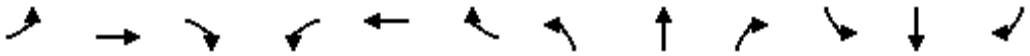
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	105	603	293	10	376	66	720	355	9	198	625	183
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	9	11	12	9	9	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.96			0.98		1.00	1.00		1.00	0.97	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		2967			3034		1452	3229		1523	2874	
Flt Permitted		0.71			0.92		0.18	1.00		0.48	1.00	
Satd. Flow (perm)		2106			2802		271	3229		773	2874	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	117	670	326	11	418	73	800	394	10	220	694	203
RTOR Reduction (vph)	0	70	0	0	21	0	0	3	0	0	42	0
Lane Group Flow (vph)	0	1043	0	0	481	0	800	401	0	220	855	0
Confl. Peds. (#/hr)	4		2	2		4	8		4	4		8
Confl. Bikes (#/hr)							2					2
Heavy Vehicles (%)	1%	2%	2%	0%	2%	6%	6%	2%	0%	1%	3%	3%
Turn Type	pm+pt			Perm			pm+pt			pm+pt		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			17.0		28.0	24.0		28.0	24.0	
Effective Green, g (s)		25.0			17.0		28.0	24.0		28.0	24.0	
Actuated g/C Ratio		0.38			0.26		0.43	0.37		0.43	0.37	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		863			733		189	1192		379	1061	
v/s Ratio Prot		c0.07					c0.26	0.12		0.04	0.30	
v/s Ratio Perm		c0.39			0.17		c1.56			0.21		
v/c Ratio		1.21			0.66		4.23	0.34		0.58	0.81	
Uniform Delay, d1		20.0			21.4		16.7	14.8		13.0	18.4	
Progression Factor		1.00			1.47		1.11	0.87		1.00	1.00	
Incremental Delay, d2		104.9			0.4		1455.9	0.1		6.4	6.6	
Delay (s)		124.9			31.9		1474.4	12.9		19.4	25.0	
Level of Service		F			C		F	B		B	C	
Approach Delay (s)		124.9			31.9			984.0			23.9	
Approach LOS		F			C			F			C	

Intersection Summary			
HCM Average Control Delay	347.2	HCM Level of Service	F
HCM Volume to Capacity ratio	2.79		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	124.4%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	67	198	222	337	167	28	414	1147	993	35	866	70
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.92		1.00	0.98		1.00	0.93		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1707	1840		1601	1992		1676	3013		1437	3282	
Flt Permitted	0.63	1.00		0.34	1.00		0.22	1.00		0.13	1.00	
Satd. Flow (perm)	1128	1840		574	1992		382	3013		195	3282	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	69	204	229	347	172	29	427	1182	1024	36	893	72
RTOR Reduction (vph)	0	57	0	0	9	0	0	240	0	0	9	0
Lane Group Flow (vph)	69	376	0	347	192	0	427	1966	0	36	956	0
Confl. Peds. (#/hr)	3		20	20		3	2		3	3		2
Confl. Bikes (#/hr)			1	1			2		2	2		2
Heavy Vehicles (%)	0%	0%	1%	6%	0%	0%	2%	3%	6%	19%	3%	2%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	24.0	24.0		24.0	24.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.48	0.48		0.48	0.48	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	416	679		212	736		182	1437		93	1565	
v/s Ratio Prot		0.20			0.10			0.65			0.29	
v/s Ratio Perm	0.06			c0.60			c1.12			0.18		
v/c Ratio	0.17	0.55		1.64	0.26		2.35	1.37		0.39	0.61	
Uniform Delay, d1	13.8	16.3		20.5	14.3		17.0	17.0		10.9	12.5	
Progression Factor	1.00	1.00		1.33	1.34		1.00	1.00		1.04	0.96	
Incremental Delay, d2	0.9	3.2		288.5	0.1		622.5	170.2		4.3	0.6	
Delay (s)	14.6	19.5		315.9	19.2		639.5	187.2		15.6	12.7	
Level of Service	B	B		F	B		F	F		B	B	
Approach Delay (s)		18.8			207.1			260.5			12.8	
Approach LOS		B			F			F			B	

Intersection Summary			
HCM Average Control Delay	175.4	HCM Level of Service	F
HCM Volume to Capacity ratio	2.04		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	133.3%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	785	455	550	18	3	10	9	47	9	0	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	10	10	10	12	12	16	12	12	16	12
Total Lost time (s)		5.0		5.0				4.0			4.0	
Lane Util. Factor		0.95		0.95				1.00			1.00	
Frpb, ped/bikes		1.00		1.00				0.99			0.98	
Flpb, ped/bikes		1.00		1.00				1.00			1.00	
Frt		1.00		1.00				0.91			0.94	
Flt Protected		1.00		0.98				0.99			0.97	
Satd. Flow (prot)		3160		3065				1810			1824	
Flt Permitted		0.95		0.59				0.96			0.89	
Satd. Flow (perm)		3009		1850				1750			1671	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	2	826	479	579	19	3	11	9	49	9	0	3
RTOR Reduction (vph)	0	0	0	2	0	0	0	38	0	0	4	0
Lane Group Flow (vph)	0	828	0	1075	0	0	0	34	0	0	13	0
Confl. Peds. (#/hr)	7		4		7		7		2	2		7
Confl. Bikes (#/hr)							2		2	2		2
Heavy Vehicles (%)	0%	1%	2%	1%	6%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Perm		custom				Perm			Perm		
Protected Phases		8	7	4				2			6	
Permitted Phases	8		4 7				2			6		
Actuated Green, G (s)		18.0		27.0				14.0			14.0	
Effective Green, g (s)		18.0		27.0				14.0			14.0	
Actuated g/C Ratio		0.28		0.42				0.22			0.22	
Clearance Time (s)		5.0		5.0				4.0			4.0	
Lane Grp Cap (vph)		833		881				377			360	
v/s Ratio Prot				c0.11								
v/s Ratio Perm		0.28		c0.39				c0.02			0.01	
v/c Ratio		0.99		2.29dl				0.09			0.04	
Uniform Delay, d1		23.4		19.0				20.4			20.2	
Progression Factor		1.39		0.83				1.00			1.00	
Incremental Delay, d2		8.1		108.4				0.5			0.2	
Delay (s)		40.7		124.2				20.9			20.4	
Level of Service		D		F				C			C	
Approach Delay (s)		40.7		124.2				20.9			20.4	
Approach LOS		D		F				C			C	

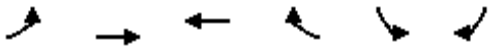
Intersection Summary			
HCM Average Control Delay	762.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.66		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	158.4%	ICU Level of Service	H
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group



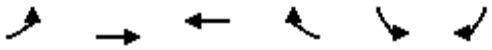
Movement	SBR2	NEL	NER
Lane Configurations			
Volume (vph)	5	3	1155
Ideal Flow (vphpl)	1800	1800	1800
Lane Width	12	12	12
Total Lost time (s)		5.0	
Lane Util. Factor		1.00	
Frpb, ped/bikes		1.00	
Flpb, ped/bikes		1.00	
Frt		0.87	
Flt Protected		1.00	
Satd. Flow (prot)		1557	
Flt Permitted		1.00	
Satd. Flow (perm)		1557	
Peak-hour factor, PHF	0.95	0.95	0.95
Adj. Flow (vph)	5	3	1216
RTOR Reduction (vph)	0	0	0
Lane Group Flow (vph)	0	1219	0
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Heavy Vehicles (%)	0%	0%	0%
Turn Type			
Protected Phases		3	
Permitted Phases			
Actuated Green, G (s)		10.0	
Effective Green, g (s)		10.0	
Actuated g/C Ratio		0.15	
Clearance Time (s)		5.0	
Lane Grp Cap (vph)		240	
v/s Ratio Prot		c0.78	
v/s Ratio Perm			
v/c Ratio		5.08	
Uniform Delay, d1		27.5	
Progression Factor		1.23	
Incremental Delay, d2		1836.5	
Delay (s)		1870.3	
Level of Service		F	
Approach Delay (s)		1870.3	
Approach LOS		F	

Intersection Summary



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	355	1614	774	63	96	257
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frt		1.00	0.99		1.00	0.85
Flt Protected		0.99	1.00		0.95	1.00
Satd. Flow (prot)		3291	3283		1660	1485
Flt Permitted		0.61	1.00		0.95	1.00
Satd. Flow (perm)		2011	3283		1660	1485
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	394	1793	860	70	107	286
RTOR Reduction (vph)	0	0	9	0	0	128
Lane Group Flow (vph)	0	2187	921	0	107	158
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		40.0	40.0		17.0	17.0
Effective Green, g (s)		40.0	40.0		17.0	17.0
Actuated g/C Ratio		0.62	0.62		0.26	0.26
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1238	2020		434	388
v/s Ratio Prot			0.28		0.06	
v/s Ratio Perm		c1.09				c0.11
v/c Ratio		1.77	0.46		0.25	0.41
Uniform Delay, d1		12.5	6.7		18.9	19.8
Progression Factor		1.98	0.93		1.27	1.54
Incremental Delay, d2		345.3	0.7		1.3	3.1
Delay (s)		370.0	6.9		25.4	33.7
Level of Service		F	A		C	C
Approach Delay (s)		370.0	6.9		31.4	
Approach LOS		F	A		C	

Intersection Summary			
HCM Average Control Delay	235.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.36		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	98.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



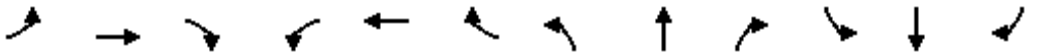
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	104	1609	747	152	265	94
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	12	10	11	12	10	10
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frpb, ped/bikes		1.00	1.00		1.00	0.99
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.97		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3122	3106		1506	1343
Flt Permitted		0.77	1.00		0.95	1.00
Satd. Flow (perm)		2402	3106		1506	1343
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	109	1694	786	160	279	99
RTOR Reduction (vph)	0	0	26	0	0	64
Lane Group Flow (vph)	0	1803	920	0	279	35
Confl. Peds. (#/hr)	2			2		1
Heavy Vehicles (%)	1%	2%	2%	10%	6%	5%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		34.0	34.0		23.0	23.0
Effective Green, g (s)		34.0	34.0		23.0	23.0
Actuated g/C Ratio		0.52	0.52		0.35	0.35
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1256	1625		533	475
v/s Ratio Prot			0.30		c0.19	
v/s Ratio Perm		c0.75				0.03
v/c Ratio		1.44	0.57		0.52	0.07
Uniform Delay, d1		15.5	10.5		16.7	13.9
Progression Factor		1.10	1.32		1.64	3.39
Incremental Delay, d2		196.4	1.1		3.2	0.3
Delay (s)		213.5	15.0		30.5	47.4
Level of Service		F	B		C	D
Approach Delay (s)		213.5	15.0		35.0	
Approach LOS		F	B		C	

Intersection Summary			
HCM Average Control Delay	131.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	102.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



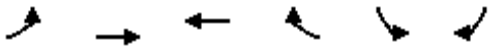
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1404	329	121	771	222	58
Ideal Flow (vphpl)	2300	1800	1800	2300	1800	1800
Lane Width	15	12	14	16	15	12
Total Lost time (s)	5.0		5.0	5.0	5.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.97		1.00	1.00	0.97	
Flt Protected	1.00		0.95	1.00	0.96	
Satd. Flow (prot)	2417		1788	2506	1749	
Flt Permitted	1.00		0.13	1.00	0.96	
Satd. Flow (perm)	2417		243	2506	1749	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	1433	336	123	787	227	59
RTOR Reduction (vph)	13	0	0	0	11	0
Lane Group Flow (vph)	1756	0	123	787	275	0
Confl. Peds. (#/hr)						1
Heavy Vehicles (%)	2%	2%	2%	4%	7%	0%
Turn Type			Perm			
Protected Phases	4			8	2	
Permitted Phases			8			
Actuated Green, G (s)	31.0		31.0	31.0	24.0	
Effective Green, g (s)	31.0		31.0	31.0	24.0	
Actuated g/C Ratio	0.48		0.48	0.48	0.37	
Clearance Time (s)	5.0		5.0	5.0	5.0	
Lane Grp Cap (vph)	1153		116	1195	646	
v/s Ratio Prot	c0.73			0.31	c0.16	
v/s Ratio Perm			0.51			
v/c Ratio	1.52		1.06	0.66	0.43	
Uniform Delay, d1	17.0		17.0	13.0	15.3	
Progression Factor	1.52		1.00	1.00	1.00	
Incremental Delay, d2	235.7		100.7	2.9	2.0	
Delay (s)	261.5		117.7	15.8	17.4	
Level of Service	F		F	B	B	
Approach Delay (s)	261.5			29.6	17.4	
Approach LOS	F			C	B	

Intersection Summary			
HCM Average Control Delay	166.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	113.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	1680	84	112	875	1	73	0	157	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	15	13	11	11	12	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0	4.0	3.0	3.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00			
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1881	3431	1479	1589	3320	1530		1938	1500			
Flt Permitted	0.29	1.00	1.00	0.08	1.00	1.00		0.76	1.00			
Satd. Flow (perm)	583	3431	1479	128	3320	1530		1545	1500			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	1867	93	124	972	1	81	0	174	0	0	0
RTOR Reduction (vph)	0	0	27	0	0	0	0	0	140	0	0	0
Lane Group Flow (vph)	1	1867	66	124	972	1	0	81	34	0	0	0
Heavy Vehicles (%)	0%	3%	0%	4%	3%	0%	0%	0%	2%	0%	0%	0%
Turn Type	Perm		Perm	custom		custom	Perm		Perm	Perm		
Protected Phases		4		3	3 8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)	49.4	49.4	49.4	67.1	67.1	67.1		9.9	9.9			
Effective Green, g (s)	49.4	49.4	49.4	67.1	67.1	67.1		9.9	9.9			
Actuated g/C Ratio	0.58	0.58	0.58	0.79	0.79	0.79		0.12	0.12			
Clearance Time (s)	4.0	4.0	4.0	3.0		4.0		4.0	4.0			
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0			
Lane Grp Cap (vph)	339	1994	860	354	2621	1208		180	175			
v/s Ratio Prot		c0.54		0.06	c0.29							
v/s Ratio Perm	0.00		0.04	0.22		0.00		c0.05	0.02			
v/c Ratio	0.00	0.94	0.08	0.35	0.37	0.00		0.45	0.20			
Uniform Delay, d1	7.5	16.4	7.8	14.8	2.7	1.9		35.0	34.0			
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00			
Incremental Delay, d2	0.0	9.9	0.2	0.6	0.1	0.0		1.8	0.6			
Delay (s)	7.5	26.2	8.0	15.4	2.8	1.9		36.8	34.5			
Level of Service	A	C	A	B	A	A		D	C			
Approach Delay (s)		25.4			4.2			35.2			0.0	
Approach LOS		C			A			D			A	

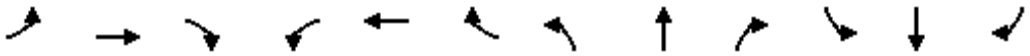
Intersection Summary			
HCM Average Control Delay	19.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	70.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	9	952	843	30	71	13
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10
Total Lost time (s)		5.0	5.0		3.0	
Lane Util. Factor		0.95	0.95		1.00	
Frt		1.00	0.99		0.98	
Flt Protected		1.00	1.00		0.96	
Satd. Flow (prot)		3098	3083		1533	
Flt Permitted		0.94	1.00		0.96	
Satd. Flow (perm)		2923	3083		1533	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	10	1058	937	33	79	14
RTOR Reduction (vph)	0	0	3	0	7	0
Lane Group Flow (vph)	0	1068	967	0	86	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Perm					
Protected Phases		4	8 2 11		5	
Permitted Phases	4					
Actuated Green, G (s)		33.0	64.0		7.0	
Effective Green, g (s)		33.0	64.0		7.0	
Actuated g/C Ratio		0.37	0.71		0.08	
Clearance Time (s)		5.0			3.0	
Lane Grp Cap (vph)		1072	2192		119	
v/s Ratio Prot			c0.31		c0.06	
v/s Ratio Perm		c0.37				
v/c Ratio		1.00	0.44		0.72	
Uniform Delay, d1		28.4	5.5		40.5	
Progression Factor		1.00	0.01		1.00	
Incremental Delay, d2		26.6	0.2		31.1	
Delay (s)		55.0	0.2		71.7	
Level of Service		E	A		E	
Approach Delay (s)		55.0	0.2		71.7	
Approach LOS		E	A		E	

Intersection Summary			
HCM Average Control Delay	30.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	46.9%	ICU Level of Service	A
Analysis Period (min)	15		

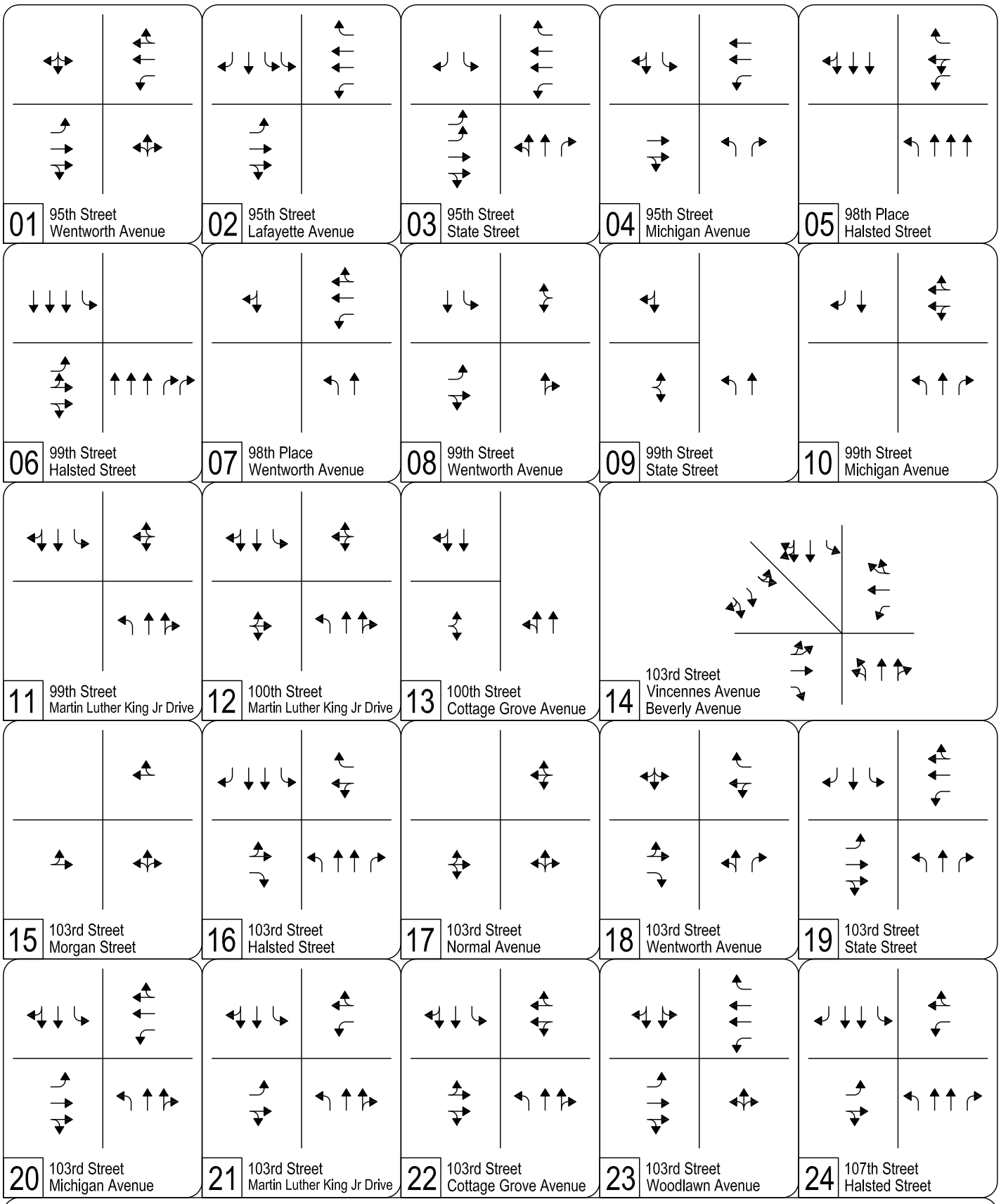
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	58	500	0	1	582	39	3	2	28	202	0	138
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12	12	11	12	11
Total Lost time (s)		4.0			4.0			3.0			3.0	3.0
Lane Util. Factor		1.00			0.95			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			0.94			1.00	0.98
Flpb, ped/bikes		1.00			1.00			1.00			0.99	1.00
Frt		1.00			0.99			0.88			1.00	0.85
Flt Protected		0.99			1.00			1.00			0.95	1.00
Satd. Flow (prot)		1771			3341			1467			1670	1348
Flt Permitted		0.87			0.95			0.88			0.88	1.00
Satd. Flow (perm)		1550			3191			1296			1545	1348
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	64	556	0	1	647	43	3	2	31	224	0	153
RTOR Reduction (vph)	0	0	0	0	6	0	0	28	0	0	0	103
Lane Group Flow (vph)	0	620	0	0	685	0	0	8	0	0	224	50
Confl. Peds. (#/hr)	60		44	44		60	14		10	10		14
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	0%	1%	0%	0%	1%	3%	20%	0%	0%	1%	0%	7%
Turn Type	Perm			Prot			Perm			pm+pt		Perm
Protected Phases		4		3	3 4			1		2	1 2	
Permitted Phases	4				3		1	1		1 2		1 2
Actuated Green, G (s)		31.0			45.0			9.0			25.0	28.0
Effective Green, g (s)		31.0			45.0			9.0			25.0	28.0
Actuated g/C Ratio		0.36			0.53			0.11			0.29	0.33
Clearance Time (s)		4.0						3.0				
Lane Grp Cap (vph)		565			1714			137			478	444
v/s Ratio Prot					c0.07						c0.09	
v/s Ratio Perm		c0.40			0.15			0.01			c0.05	0.04
v/c Ratio		1.10			0.40			0.06			0.47	0.11
Uniform Delay, d1		27.0			11.9			34.2			24.6	19.9
Progression Factor		1.00			1.37			1.00			1.00	1.00
Incremental Delay, d2		67.2			0.1			0.8			3.3	0.5
Delay (s)		94.2			16.4			35.0			27.8	20.4
Level of Service		F			B			D			C	C
Approach Delay (s)		94.2			16.4			35.0			24.8	
Approach LOS		F			B			D			C	

Intersection Summary			
HCM Average Control Delay	46.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	78.2%	ICU Level of Service	D
Analysis Period (min)	15		

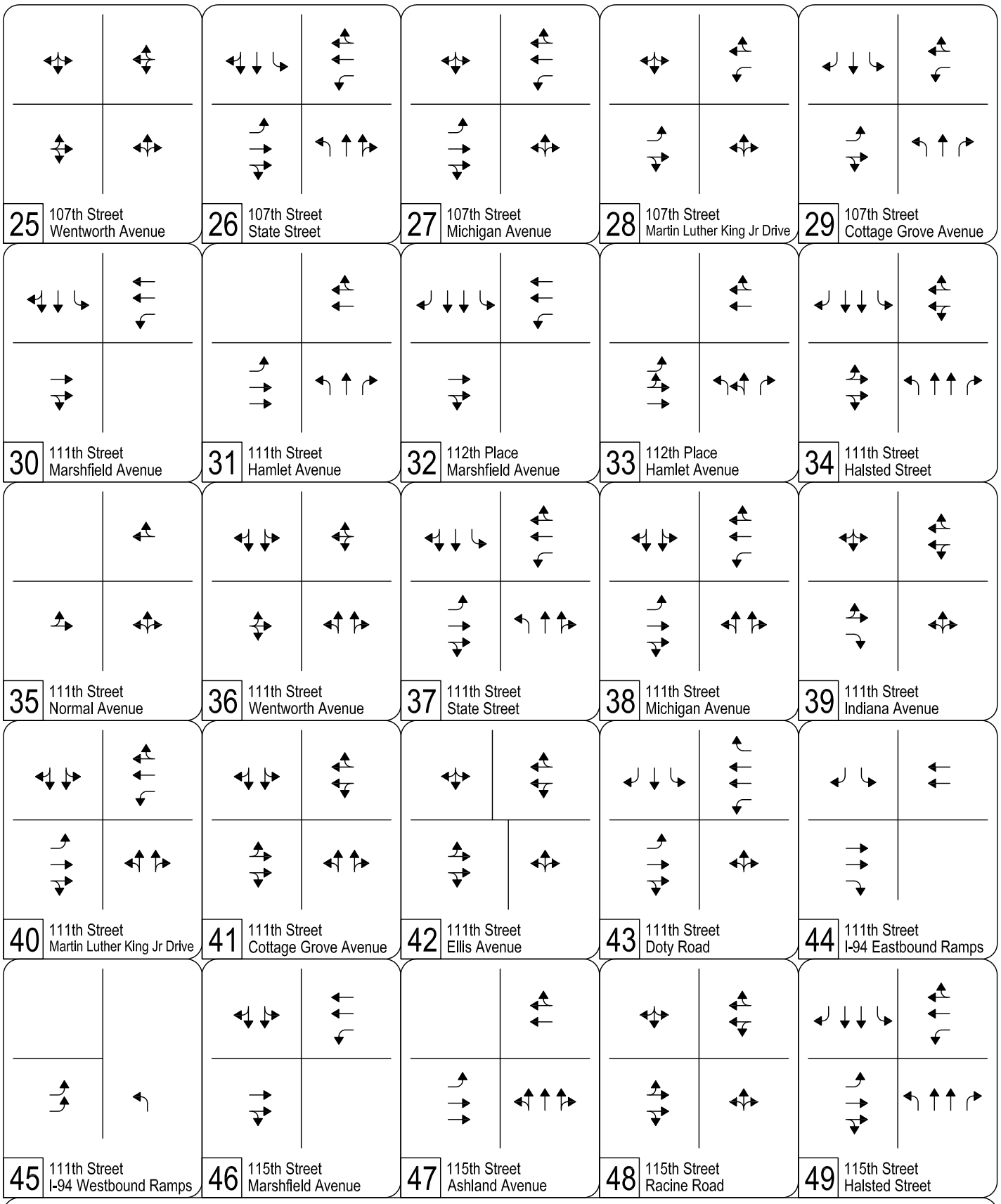
c Critical Lane Group



Halsted Rail Alternative Mitigated (2030) Intersection Lane Geometry

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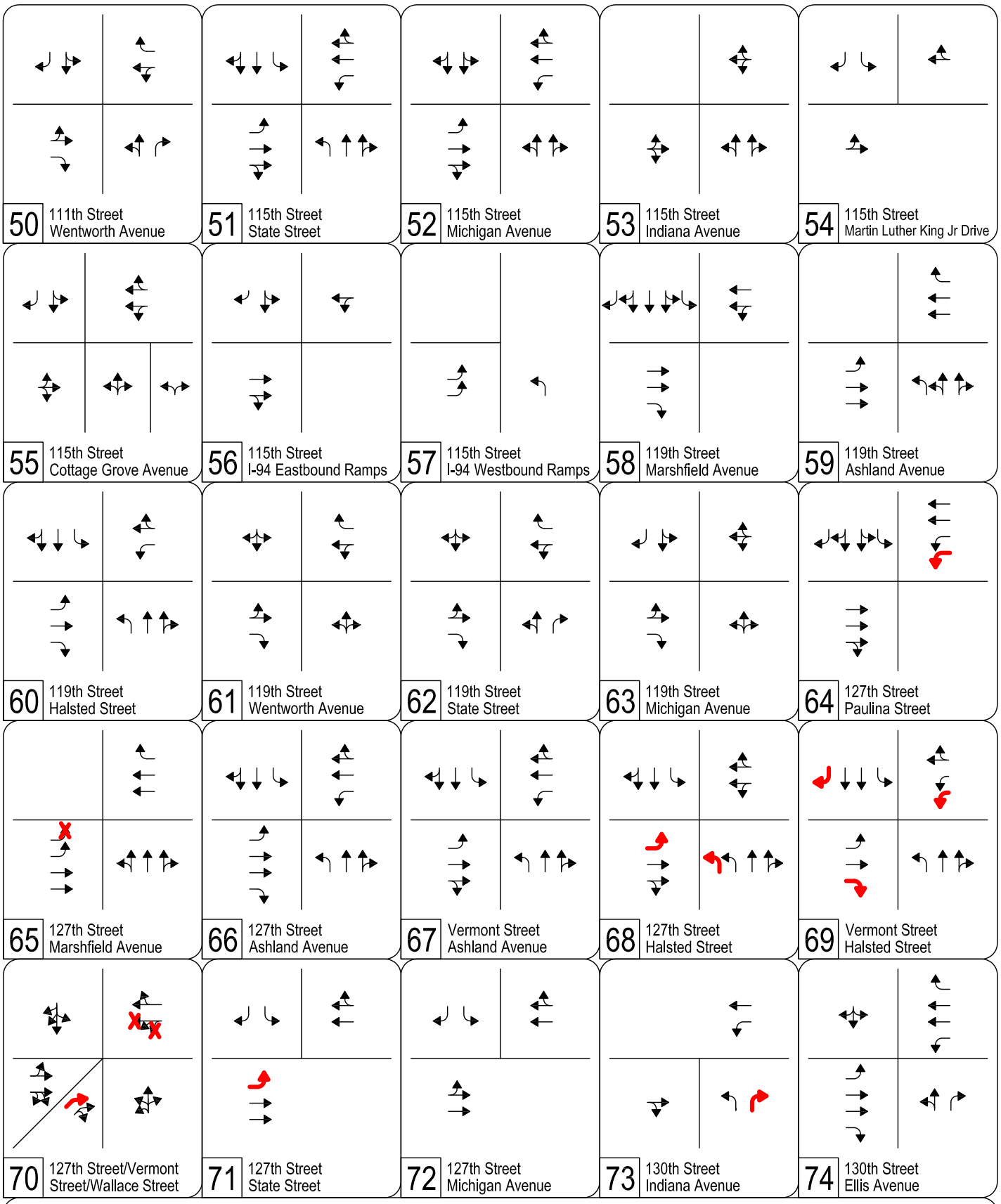
Legend: Existing Added Removed



Halsted Rail Alternative Mitigated (2030) Intersection Lane Geometry

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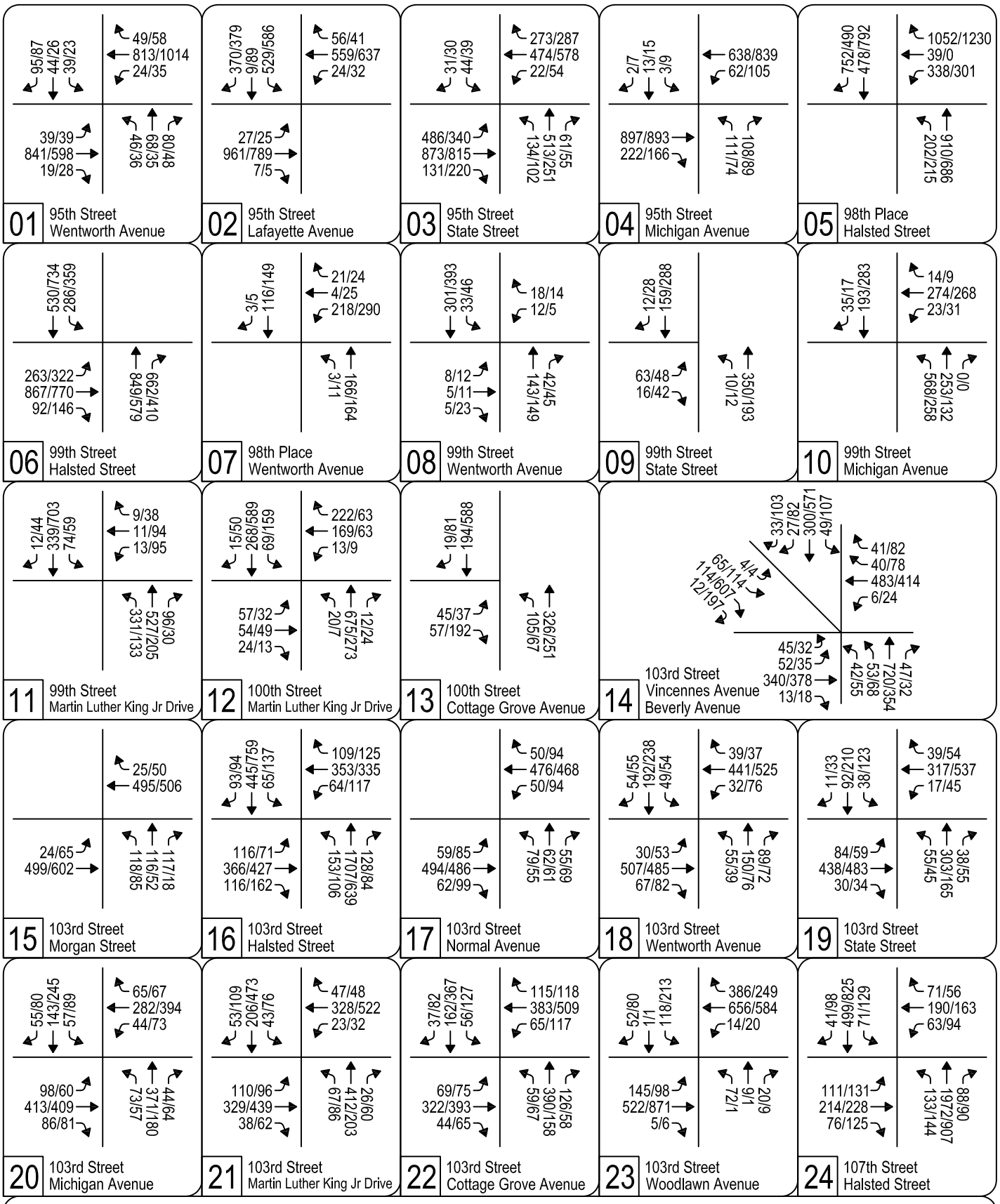
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Halsted Rail Alternative Mitigated (2030) Intersection Lane Geometry

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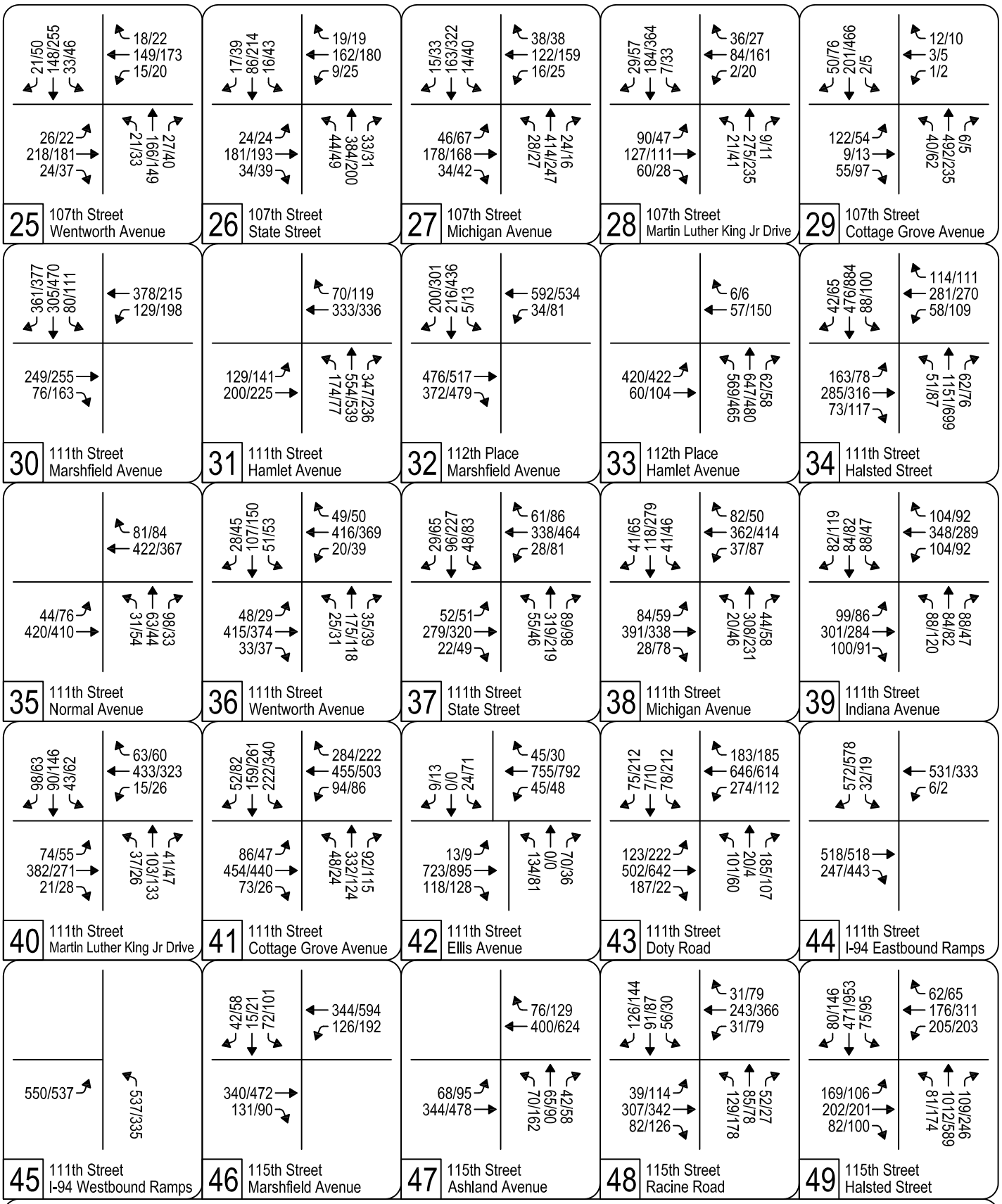
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Halsted Rail Alternative Mitigated (2030) Intersection Traffic Volumes

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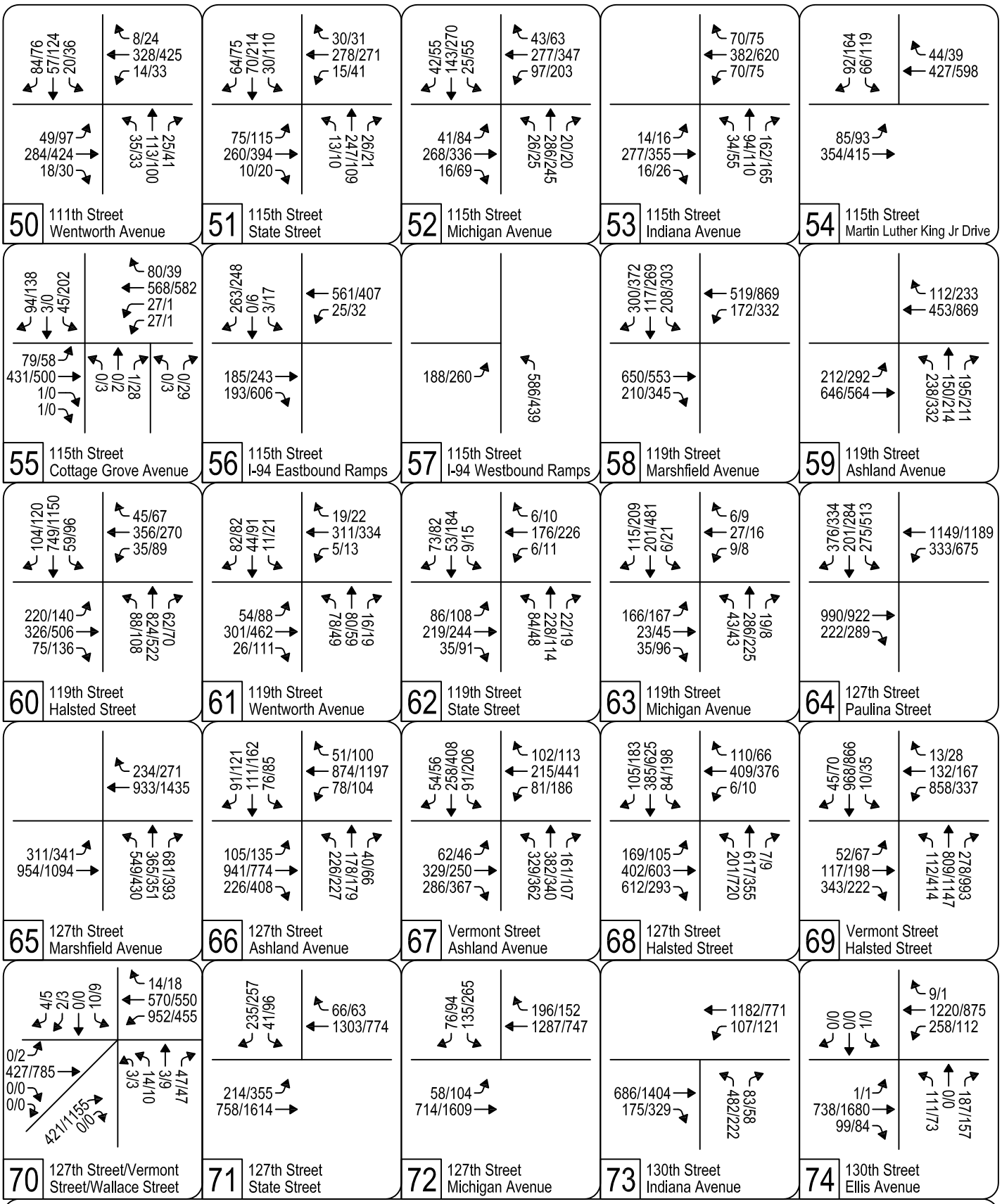
Legend: AM/PM Peak Hour Volumes



Halsted Rail Alternative Mitigated (2030) Intersection Traffic Volumes

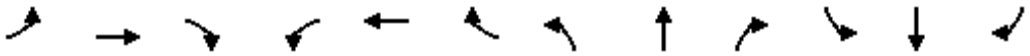
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Legend: AM/PM Peak Hour Volumes



Halsted Rail Alternative Mitigated (2030) Intersection Traffic Volumes

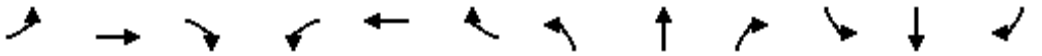
Legend: AM/PM Peak Hour Volumes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	841	19	24	813	49	46	68	80	39	44	95
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	16	10	10	16	8	15	8	8	14	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			0.99			0.99	
Flpb, ped/bikes	0.99	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	0.99			0.94			0.93	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1417	2976		1592	2979			1755			1673	
Flt Permitted	0.25	1.00		0.25	1.00			0.90			0.91	
Satd. Flow (perm)	369	2976		417	2979			1596			1532	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	41	885	20	25	856	52	48	72	84	41	46	100
RTOR Reduction (vph)	0	2	0	0	7	0	0	39	0	0	59	0
Lane Group Flow (vph)	41	903	0	25	901	0	0	165	0	0	128	0
Confl. Peds. (#/hr)	61		11	11		61	3		5	5		3
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	11%	7%	0%	0%	6%	2%	2%	7%	4%	5%	7%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			22.0			22.0	
Effective Green, g (s)	34.0	34.0		34.0	34.0			23.0			23.0	
Actuated g/C Ratio	0.52	0.52		0.52	0.52			0.35			0.35	
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0			5.0	
Lane Grp Cap (vph)	193	1557		218	1558			565			542	
v/s Ratio Prot		c0.30			0.30							
v/s Ratio Perm	0.11			0.06				c0.10			0.08	
v/c Ratio	0.21	0.58		0.11	0.58			0.29			0.24	
Uniform Delay, d1	8.3	10.6		7.9	10.6			15.1			14.8	
Progression Factor	1.00	1.00		0.83	1.16			1.00			1.00	
Incremental Delay, d2	2.5	1.6		0.9	1.4			1.3			1.0	
Delay (s)	10.8	12.2		7.5	13.6			16.4			15.8	
Level of Service	B	B		A	B			B			B	
Approach Delay (s)		12.1			13.5			16.4			15.8	
Approach LOS		B			B			B			B	

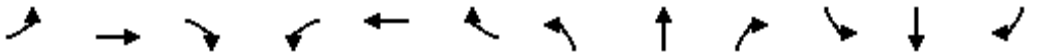
Intersection Summary			
HCM Average Control Delay	13.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	27	961	7	24	559	56	0	0	0	529	9	370
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00				0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.67				1.00	1.00	0.96
Flpb, ped/bikes	0.91	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	778	3285		1710	3138	512				3100	1440	1399
Flt Permitted	0.43	1.00		0.14	1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	352	3285		248	3138	512				3100	1440	1399
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	28	1012	7	25	588	59	0	0	0	557	9	389
RTOR Reduction (vph)	0	1	0	0	0	26	0	0	0	0	0	172
Lane Group Flow (vph)	28	1018	0	25	588	33	0	0	0	557	9	217
Confl. Peds. (#/hr)	354		13	13		354	22		22	22		22
Confl. Bikes (#/hr)	4					4			1	1		
Heavy Vehicles (%)	100%	4%	0%	0%	9%	100%	0%	0%	0%	7%	25%	5%
Turn Type	pm+pt			pm+pt		Perm				Split		Perm
Protected Phases	7	4		3	8					6	6	
Permitted Phases	4			8		8						6
Actuated Green, G (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Effective Green, g (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Actuated g/C Ratio	0.33	0.33		0.56	0.56	0.56				0.23	0.23	0.23
Clearance Time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Grp Cap (vph)	162	1087		634	1762	288				715	332	323
v/s Ratio Prot	0.02	c0.31		0.01	c0.19					c0.18	0.01	
v/s Ratio Perm	0.04			0.01		0.06						0.16
v/c Ratio	0.17	0.94		0.04	0.33	0.12				0.78	0.03	0.67
Uniform Delay, d1	31.6	42.2		15.1	15.4	13.4				46.9	38.7	45.5
Progression Factor	0.80	0.82		0.29	0.63	1.53				1.00	1.00	1.00
Incremental Delay, d2	2.0	14.1		0.1	0.3	0.5				8.2	0.2	10.7
Delay (s)	27.2	48.9		4.5	10.0	20.9				55.1	38.9	56.2
Level of Service	C	D		A	A	C				E	D	E
Approach Delay (s)		48.3			10.7			0.0			55.4	
Approach LOS		D			B			A			E	

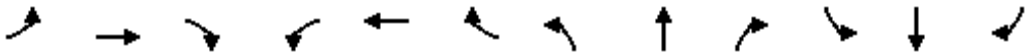
Intersection Summary			
HCM Average Control Delay	41.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	52.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	486	873	131	22	474	273	134	513	61	44	0	31
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.65		1.00	0.94	1.00		0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.98		1.00	1.00	0.85		1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (prot)	3190	3107		1555	2923	944		3300	1417	855		734
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (perm)	3190	3107		1555	2923	944		3300	1417	855		734
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	512	919	138	23	499	287	141	540	64	46	0	33
RTOR Reduction (vph)	0	9	0	0	0	158	0	0	25	0	0	31
Lane Group Flow (vph)	512	1049	0	23	499	129	0	681	39	46	0	2
Confl. Peds. (#/hr)	425		21	21		425	6		34	34		6
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	4%	8%	3%	10%	17%	5%	1%	3%	2%	100%	0%	100%
Turn Type	Prot			Prot		Perm	Split		Perm	Prot		custom
Protected Phases	7	4		3	8		2	2		6		
Permitted Phases						8			2			6
Actuated Green, G (s)	43.0	65.0		9.0	31.0	31.0		30.0	30.0	8.0		8.0
Effective Green, g (s)	43.0	65.0		9.0	31.0	31.0		30.0	30.0	8.0		8.0
Actuated g/C Ratio	0.33	0.50		0.07	0.24	0.24		0.23	0.23	0.06		0.06
Clearance Time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	1055	1554		108	697	225		762	327	53		45
v/s Ratio Prot	0.16	c0.34		0.01	c0.17			c0.21		c0.05		
v/s Ratio Perm						0.14			0.03			0.00
v/c Ratio	0.49	0.67		0.21	0.72	0.57		0.89	0.12	0.87		0.05
Uniform Delay, d1	34.7	24.5		57.2	45.5	43.6		48.5	39.5	60.5		57.4
Progression Factor	0.75	0.20		1.00	1.00	1.00		0.94	0.90	1.00		1.00
Incremental Delay, d2	0.7	1.1		4.5	6.2	10.1		14.9	0.7	76.0		0.4
Delay (s)	26.9	6.0		61.6	51.7	53.8		60.7	36.2	136.5		57.8
Level of Service	C	A		E	D	D		E	D	F		E
Approach Delay (s)		12.8			52.7			58.6			103.6	
Approach LOS		B			D			E			F	

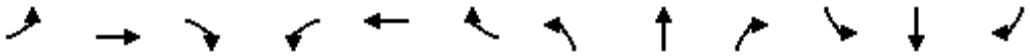
Intersection Summary			
HCM Average Control Delay	35.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	897	222	62	638	0	111	0	108	3	13	2
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	11	11	8	12	12	12	14	15	12
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes		0.99		1.00	1.00		1.00		0.98	1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00		1.00		1.00	0.99	1.00	
Frt		0.97		1.00	1.00		1.00		0.85	1.00	0.98	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		2860		1650	3005		1390		1465	1803	1943	
Flt Permitted		1.00		0.15	1.00		0.75		1.00	0.95	1.00	
Satd. Flow (perm)		2860		267	3005		1093		1465	1803	1943	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	997	247	69	709	0	123	0	120	3	14	2
RTOR Reduction (vph)	0	22	0	0	0	0	0	0	77	0	1	0
Lane Group Flow (vph)	0	1222	0	69	709	0	123	0	43	3	15	0
Confl. Peds. (#/hr)	49		15	15		49			12	12		
Heavy Vehicles (%)	0%	6%	14%	0%	10%	0%	23%	0%	2%	0%	0%	0%
Turn Type				Perm			custom		custom	Perm		
Protected Phases		4			8						6	
Permitted Phases				8			2		2	6		
Actuated Green, G (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Effective Green, g (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Actuated g/C Ratio		0.60		0.60	0.60		0.32		0.32	0.32	0.32	
Clearance Time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)		1716		160	1803		350		469	577	622	
v/s Ratio Prot		c0.43			0.24						0.01	
v/s Ratio Perm				0.26			c0.11		0.03	0.00		
v/c Ratio		0.71		0.43	0.39		0.35		0.09	0.01	0.02	
Uniform Delay, d1		14.0		10.8	10.5		26.0		23.8	23.2	23.3	
Progression Factor		1.00		1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		2.5		8.3	0.6		2.8		0.4	0.0	0.1	
Delay (s)		16.5		19.1	11.1		28.8		24.2	23.2	23.4	
Level of Service		B		B	B		C		C	C	C	
Approach Delay (s)		16.5			11.8			26.5			23.3	
Approach LOS		B			B			C			C	

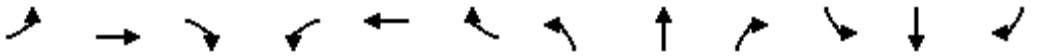
Intersection Summary			
HCM Average Control Delay	16.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	338	39	1052	202	910	0	0	478	752
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	12	10	10	12	12	11	12
Total Lost time (s)				4.0	4.0	5.0	3.0	4.0			4.0	
Lane Util. Factor				0.95	0.95	1.00	1.00	0.91			0.91	
Frpb, ped/bikes				1.00	1.00	0.99	1.00	1.00			0.98	
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00			1.00	
Frt				1.00	1.00	0.85	1.00	1.00			0.91	
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (prot)				1525	1629	1479	1550	4368			3940	
Flt Permitted				0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (perm)				1525	1629	1479	1550	4368			3940	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	345	40	1073	206	929	0	0	488	767
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	345	40	1073	206	929	0	0	1255	0
Confl. Peds. (#/hr)	2					2	12		8	8		12
Heavy Vehicles (%)	0%	0%	0%	3%	5%	2%	3%	5%	0%	0%	5%	8%
Turn Type				Perm		Perm	Prot					
Protected Phases					8		5	2			6	
Permitted Phases				8		8						
Actuated Green, G (s)				30.0	30.0	30.0	32.0	66.0			31.0	
Effective Green, g (s)				31.0	31.0	30.0	32.0	66.0			31.0	
Actuated g/C Ratio				0.30	0.30	0.29	0.30	0.63			0.30	
Clearance Time (s)				5.0	5.0	5.0	3.0	4.0			4.0	
Lane Grp Cap (vph)				450	481	423	472	2746			1163	
v/s Ratio Prot							c0.13	0.21			c0.32	
v/s Ratio Perm				0.23	0.02	c0.73						
v/c Ratio				0.77	0.08	2.54	0.44	0.34			1.91dr	
Uniform Delay, d1				33.7	26.7	37.5	29.3	9.2			37.0	
Progression Factor				1.00	1.00	1.00	0.66	2.39			1.00	
Incremental Delay, d2				11.8	0.3	698.4	2.0	0.2			50.5	
Delay (s)				45.5	27.1	735.9	21.3	22.2			87.5	
Level of Service				D	C	F	C	C			F	
Approach Delay (s)		0.0			553.1			22.0			87.5	
Approach LOS		A			F			C			F	

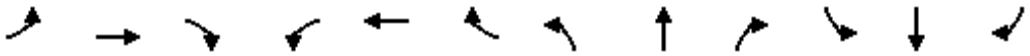
Intersection Summary			
HCM Average Control Delay	244.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.33		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.0%	ICU Level of Service	F
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group



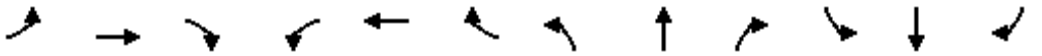
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	263	867	92	0	0	0	0	849	662	286	530	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	13	12	12	12	12	12	10	10	8	12	12	12
Total Lost time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Util. Factor	0.91	0.91						0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00						1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00						1.00	1.00	1.00	1.00	
Frt	1.00	0.99						1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1497	3184						4368	2187	1583	4636	
Flt Permitted	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1497	3184						4368	2187	1583	4636	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	271	894	95	0	0	0	0	875	682	295	546	0
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	244	1009	0	0	0	0	0	875	682	295	546	0
Confl. Peds. (#/hr)	4		14	14		4	4		3	3		4
Heavy Vehicles (%)	7%	1%	0%	0%	0%	0%	0%	5%	4%	8%	6%	0%
Turn Type	Perm								Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Actuated Green, G (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Effective Green, g (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Actuated g/C Ratio	0.32	0.32						0.27	0.27	0.30	0.59	
Clearance Time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Grp Cap (vph)	485	1031						1165	583	467	2737	
v/s Ratio Prot								0.20		c0.19	0.12	
v/s Ratio Perm	0.16	0.32							c0.31			
v/c Ratio	0.50	0.98						0.75	1.17	0.63	0.20	
Uniform Delay, d1	28.7	35.1						35.3	38.5	32.1	10.0	
Progression Factor	1.00	1.00						0.43	0.45	1.06	0.42	
Incremental Delay, d2	3.7	23.4						0.4	78.3	2.2	0.1	
Delay (s)	32.4	58.5						15.5	95.8	36.1	4.3	
Level of Service	C	E						B	F	D	A	
Approach Delay (s)		53.5			0.0			50.7			15.4	
Approach LOS		D			A			D			B	

Intersection Summary			
HCM Average Control Delay	43.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



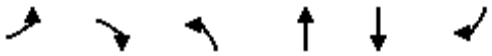
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	218	4	21	3	166	0	0	116	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	14	12	12	16	12
Total Lost time (s)				4.0	4.0		4.0	4.0			-3.0	
Lane Util. Factor				1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes				1.00	0.98		1.00	1.00			1.00	
Flpb, ped/bikes				1.00	1.00		1.00	1.00			1.00	
Frt				1.00	0.87		1.00	1.00			1.00	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1578	2709		1285	1882			1961	
Flt Permitted				0.95	1.00		0.58	1.00			1.00	
Satd. Flow (perm)				1578	2709		781	1882			1961	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	242	4	23	3	184	0	0	129	3
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	242	9	0	3	184	0	0	131	0
Confl. Peds. (#/hr)	2		2	2		2	3					3
Heavy Vehicles (%)	0%	0%	0%	8%	25%	5%	33%	2%	0%	0%	3%	33%
Turn Type				Perm			pm+pt					
Protected Phases					8		7	2			6	
Permitted Phases				8			2					
Actuated Green, G (s)				27.0	27.0		50.0	50.0			40.0	
Effective Green, g (s)				27.0	27.0		50.0	50.0			46.0	
Actuated g/C Ratio				0.32	0.32		0.59	0.59			0.54	
Clearance Time (s)				4.0	4.0		4.0	4.0			3.0	
Lane Grp Cap (vph)				501	861		501	1107			1061	
v/s Ratio Prot					0.00		0.00	c0.10			0.07	
v/s Ratio Perm				c0.15			0.00					
v/c Ratio				0.48	0.01		0.01	0.17			0.12	
Uniform Delay, d1				23.4	19.9		10.0	8.0			9.6	
Progression Factor				1.00	1.00		1.06	1.18			1.00	
Incremental Delay, d2				3.3	0.0		0.0	0.3			0.2	
Delay (s)				26.7	19.9		10.6	9.8			9.8	
Level of Service				C	B		B	A			A	
Approach Delay (s)		0.0			26.0			9.8			9.8	
Approach LOS		A			C			A			A	

Intersection Summary			
HCM Average Control Delay	17.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



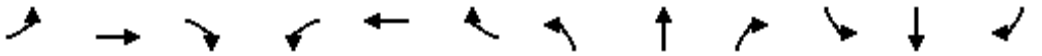
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	8	5	5	12	0	18	0	143	42	33	301	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	16	15	12	8	12	8	12	12	12	10	13	12
Total Lost time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99			1.00			1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00			1.00		1.00	1.00	
Frt	1.00	0.93			0.92			0.97		1.00	1.00	
Flt Protected	0.95	1.00			0.98			1.00		0.95	1.00	
Satd. Flow (prot)	1938	1809			1620			1686		1595	1755	
Flt Permitted	0.74	1.00			0.93			1.00		0.60	1.00	
Satd. Flow (perm)	1502	1809			1543			1686		1005	1755	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	8	5	5	13	0	19	0	151	44	35	317	0
RTOR Reduction (vph)	0	3	0	0	13	0	0	12	0	0	0	0
Lane Group Flow (vph)	8	7	0	0	19	0	0	183	0	35	317	0
Confl. Peds. (#/hr)			3	3			5		2	2		5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	3%	0%	6%	0%
Turn Type	Perm			Perm						pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Effective Green, g (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Actuated g/C Ratio	0.32	0.32			0.32			0.47		0.59	0.59	
Clearance Time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Grp Cap (vph)	477	575			490			793		640	1032	
v/s Ratio Prot		0.00						0.11		0.00	c0.18	
v/s Ratio Perm	0.01				c0.01					0.03		
v/c Ratio	0.02	0.01			0.04			0.23		0.05	0.31	
Uniform Delay, d1	19.9	19.9			20.0			13.4		8.5	8.8	
Progression Factor	1.00	1.00			1.00			1.00		1.01	0.93	
Incremental Delay, d2	0.1	0.0			0.1			0.7		0.2	0.7	
Delay (s)	20.0	19.9			20.2			14.0		8.8	8.9	
Level of Service	B	B			C			B		A	A	
Approach Delay (s)		19.9			20.2			14.0			8.9	
Approach LOS		B			C			B			A	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.21		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



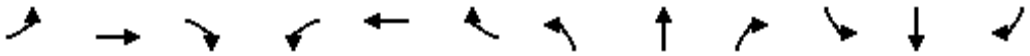
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	63	16	10	350	159	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	14	12	13	12	10	12
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.97		1.00	1.00	0.99	
Flt Protected	0.96		0.95	1.00	1.00	
Satd. Flow (prot)	1787		1767	1765	1634	
Flt Permitted	0.96		0.64	1.00	1.00	
Satd. Flow (perm)	1787		1187	1765	1634	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	70	18	11	389	177	13
RTOR Reduction (vph)	12	0	0	0	4	0
Lane Group Flow (vph)	76	0	11	389	186	0
Confl. Peds. (#/hr)		2				
Heavy Vehicles (%)	0%	0%	0%	2%	2%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.0		36.0	36.0	36.0	
Effective Green, g (s)	21.0		36.0	36.0	36.0	
Actuated g/C Ratio	0.32		0.55	0.55	0.55	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	577		657	978	905	
v/s Ratio Prot	c0.04			c0.22	0.11	
v/s Ratio Perm			0.01			
v/c Ratio	0.13		0.02	0.40	0.21	
Uniform Delay, d1	15.6		6.5	8.3	7.3	
Progression Factor	1.00		0.32	0.51	1.16	
Incremental Delay, d2	0.5		0.0	1.1	0.4	
Delay (s)	16.0		2.1	5.4	8.9	
Level of Service	B		A	A	A	
Approach Delay (s)	16.0			5.3	8.9	
Approach LOS	B			A	A	

Intersection Summary			
HCM Average Control Delay	7.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	39.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	23	274	14	568	253	0	0	193	35
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	14	16	12	12	15	12	12	13	10
Total Lost time (s)					4.0		4.0	4.0			3.0	3.0
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Frt					0.99		1.00	1.00			1.00	0.85
Flt Protected					1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3738		1660	1752			1603	1298
Flt Permitted					1.00		0.57	1.00			1.00	1.00
Satd. Flow (perm)					3738		1002	1752			1603	1298
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	26	304	16	631	281	0	0	214	39
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	0	0	0	22
Lane Group Flow (vph)	0	0	0	0	342	0	631	281	0	0	214	17
Confl. Peds. (#/hr)									30	30		
Heavy Vehicles (%)	0%	0%	0%	11%	2%	0%	3%	13%	0%	0%	16%	10%
Turn Type				Split			pm+pt					Perm
Protected Phases				8	8		7	2			6	
Permitted Phases							2					6
Actuated Green, G (s)					26.0		51.0	51.0			38.0	38.0
Effective Green, g (s)					26.0		51.0	51.0			38.0	38.0
Actuated g/C Ratio					0.31		0.60	0.60			0.45	0.45
Clearance Time (s)					4.0		4.0	4.0			3.0	3.0
Lane Grp Cap (vph)					1143		679	1051			717	580
v/s Ratio Prot					c0.09		c0.11	0.16			0.13	
v/s Ratio Perm							c0.45					0.01
v/c Ratio					0.30		0.93	0.27			0.30	0.03
Uniform Delay, d1					22.5		17.0	8.1			15.0	13.2
Progression Factor					1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2					0.7		21.0	0.6			1.1	0.1
Delay (s)					23.2		38.0	8.7			16.1	13.3
Level of Service					C		D	A			B	B
Approach Delay (s)		0.0			23.2			29.0			15.6	
Approach LOS		A			C			C			B	

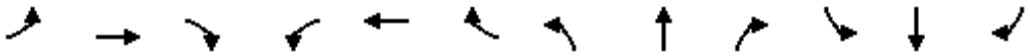
Intersection Summary			
HCM Average Control Delay	25.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	13	11	9	331	527	96	74	339	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	15	12	12	12	12	12	13	12
Total Lost time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.96		1.00	0.98		1.00	0.99	
Flt Protected					0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1796		1692	3237		1707	3352	
Flt Permitted					0.98		0.50	1.00		0.31	1.00	
Satd. Flow (perm)					1796		894	3237		566	3352	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	14	12	10	368	586	107	82	377	13
RTOR Reduction (vph)	0	0	0	0	7	0	0	20	0	0	3	0
Lane Group Flow (vph)	0	0	0	0	29	0	368	673	0	82	387	0
Confl. Peds. (#/hr)	2					2	6		20	20		6
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	0%	0%	0%	11%	0%	1%	3%	0%	0%	5%	0%
Turn Type				Split			pm+pt			pm+pt		
Protected Phases				8	8		5	2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)					23.0		41.0	34.0		41.0	34.0	
Effective Green, g (s)					23.0		41.0	34.0		41.0	34.0	
Actuated g/C Ratio					0.31		0.55	0.45		0.55	0.45	
Clearance Time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Grp Cap (vph)					551		563	1467		416	1520	
v/s Ratio Prot					c0.02		c0.06	0.21		0.02	0.12	
v/s Ratio Perm							c0.30			0.09		
v/c Ratio					0.05		0.65	0.46		0.20	0.25	
Uniform Delay, d1					18.3		13.7	14.2		12.3	12.7	
Progression Factor					1.00		0.69	0.74		1.00	1.00	
Incremental Delay, d2					0.2		5.3	0.9		1.1	0.4	
Delay (s)					18.5		14.8	11.4		13.4	13.1	
Level of Service					B		B	B		B	B	
Approach Delay (s)		0.0			18.5			12.6			13.1	
Approach LOS		A			B			B			B	

Intersection Summary			
HCM Average Control Delay	12.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	15		

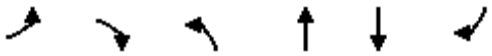
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	57	54	24	13	169	222	20	675	12	69	268	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	16	12	12	10	11	12	12	11	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.93		1.00	1.00		1.00	0.99	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1946			1626		1596	3232		1641	3131	
Flt Permitted		0.68			0.99		0.57	1.00		0.33	1.00	
Satd. Flow (perm)		1354			1613		957	3232		575	3131	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	60	57	25	14	178	234	21	711	13	73	282	16
RTOR Reduction (vph)	0	10	0	0	59	0	0	2	0	0	5	0
Lane Group Flow (vph)	0	132	0	0	367	0	21	722	0	73	293	0
Confl. Peds. (#/hr)									6	6		
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	0%	0%	12%	2%	2%	0%	2%	0%	4%	5%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Effective Green, g (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Actuated g/C Ratio		0.33			0.33		0.56	0.56		0.56	0.56	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		451			538		536	1810		322	1753	
v/s Ratio Prot								c0.22			0.09	
v/s Ratio Perm		0.10			c0.23		0.02			0.13		
v/c Ratio		0.29			0.68		0.04	0.40		0.23	0.17	
Uniform Delay, d1		18.5			21.6		7.4	9.3		8.3	8.0	
Progression Factor		1.00			1.00		1.00	1.00		0.17	0.06	
Incremental Delay, d2		1.6			6.9		0.1	0.7		1.6	0.2	
Delay (s)		20.1			28.4		7.6	10.0		3.0	0.7	
Level of Service		C			C		A	B		A	A	
Approach Delay (s)		20.1			28.4			9.9			1.1	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM Average Control Delay	13.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.8%	ICU Level of Service	C
Analysis Period (min)	15		

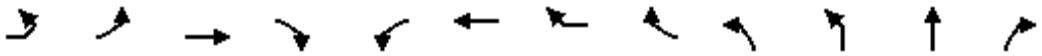
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	45	57	105	326	194	19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	50	63	117	362	216	21

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	113	237	241	144	93
Volume Left (vph)	50	117	0	0	0
Volume Right (vph)	63	0	0	0	21
Hadj (s)	-0.16	0.33	0.08	0.09	-0.07
Departure Headway (s)	5.3	5.4	5.1	5.4	5.2
Degree Utilization, x	0.17	0.36	0.35	0.22	0.14
Capacity (veh/h)	628	654	684	641	660
Control Delay (s)	9.3	10.1	9.6	8.7	7.9
Approach Delay (s)	9.3	9.9		8.4	
Approach LOS	A	A		A	

Intersection Summary			
Delay	9.4		
HCM Level of Service	A		
Intersection Capacity Utilization	35.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	45	52	340	13	6	483	40	41	42	53	720	47
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	0.95	
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.97			1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Frt		1.00	1.00	0.85	1.00	1.00	0.85			1.00	0.99	
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	
Satd. Flow (prot)		1575	1731	1530	1710	1731	1487			1710	3289	
Flt Permitted		0.11	1.00	1.00	0.54	1.00	1.00			0.39	1.00	
Satd. Flow (perm)		187	1731	1530	967	1731	1487			700	3289	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	50	58	378	14	7	537	44	46	47	59	800	52
RTOR Reduction (vph)	0	0	0	7	0	0	32	0	0	0	5	0
Lane Group Flow (vph)	0	108	378	7	7	537	58	0	0	106	847	0
Confl. Peds. (#/hr)		5					5					6
Heavy Vehicles (%)	8%	9%	4%	0%	0%	4%	0%	0%	0%	0%	3%	0%
Turn Type	Perm	pm+pt		Perm	Perm		Perm		Perm	Perm		
Protected Phases		7	4			8					2	
Permitted Phases	4	4		4	8		8		2	2		
Actuated Green, G (s)		50.0	50.0	50.0	32.0	32.0	32.0			25.0	25.0	
Effective Green, g (s)		50.0	50.0	50.0	32.0	32.0	32.0			25.0	25.0	
Actuated g/C Ratio		0.48	0.48	0.48	0.30	0.30	0.30			0.24	0.24	
Clearance Time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Grp Cap (vph)		281	824	729	295	528	453			167	783	
v/s Ratio Prot		0.05	c0.22			c0.31					c0.26	
v/s Ratio Perm		0.13		0.00	0.01		0.04			0.15		
v/c Ratio		0.38	0.46	0.01	0.02	1.02	0.13			0.63	1.08	
Uniform Delay, d1		20.3	18.4	14.5	25.6	36.5	26.4			35.9	40.0	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Incremental Delay, d2		3.9	1.8	0.0	0.1	43.5	0.6			17.0	56.8	
Delay (s)		24.2	20.3	14.5	25.7	80.0	27.0			52.9	96.8	
Level of Service		C	C	B	C	F	C			D	F	
Approach Delay (s)			21.0			71.9					91.9	
Approach LOS			C			E					F	

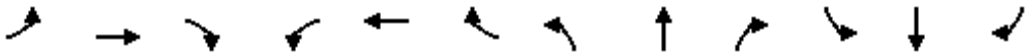
Intersection Summary			
HCM Average Control Delay	62.7	HCM Level of Service	E
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	80.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations								
Volume (vph)	49	300	27	33	4	65	114	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5				4.5	4.5	
Lane Util. Factor	1.00	0.95				1.00	0.88	
Frpb, ped/bikes	1.00	1.00				1.00	1.00	
Flpb, ped/bikes	1.00	1.00				1.00	1.00	
Frt	1.00	0.97				1.00	0.85	
Flt Protected	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1706	3279				1710	2621	
Flt Permitted	0.16	1.00				0.95	1.00	
Satd. Flow (perm)	293	3279				1710	2621	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	54	333	30	37	4	72	127	13
RTOR Reduction (vph)	0	8	0	0	0	0	7	0
Lane Group Flow (vph)	54	392	0	0	0	76	133	0
Confl. Peds. (#/hr)	6							
Heavy Vehicles (%)	0%	2%	0%	0%	0%	0%	3%	0%
Turn Type	Perm				Split		Perm	
Protected Phases		6			9	9		
Permitted Phases	6						9	
Actuated Green, G (s)	24.5	24.5				17.5	17.5	
Effective Green, g (s)	24.5	24.5				17.5	17.5	
Actuated g/C Ratio	0.23	0.23				0.17	0.17	
Clearance Time (s)	4.5	4.5				4.5	4.5	
Lane Grp Cap (vph)	68	765				285	437	
v/s Ratio Prot		0.12				0.04		
v/s Ratio Perm	0.18						c0.05	
v/c Ratio	0.79	0.51				0.27	0.31	
Uniform Delay, d1	37.9	35.1				38.2	38.4	
Progression Factor	1.00	1.00				1.00	1.00	
Incremental Delay, d2	61.4	2.4				2.3	1.8	
Delay (s)	99.3	37.5				40.4	40.2	
Level of Service	F	D				D	D	
Approach Delay (s)		44.9				40.3		
Approach LOS		D				D		

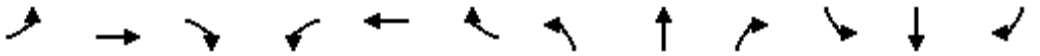
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	499	0	0	495	25	118	116	117	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	11	11	16	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.99			0.95				
Flt Protected		1.00			1.00			0.98				
Satd. Flow (prot)		1653			1930			1771				
Flt Permitted		0.96			1.00			0.98				
Satd. Flow (perm)		1598			1930			1771				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	554	0	0	550	28	131	129	130	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	581	0	0	578	0	0	390	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		31.0			31.0			26.0				
Effective Green, g (s)		31.0			31.0			26.0				
Actuated g/C Ratio		0.48			0.48			0.40				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		762			920			708				
v/s Ratio Prot					0.30							
v/s Ratio Perm		c0.36						0.22				
v/c Ratio		0.76			0.63			0.55				
Uniform Delay, d1		14.0			12.7			15.0				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		7.1			3.2			3.1				
Delay (s)		21.1			15.9			18.1				
Level of Service		C			B			B				
Approach Delay (s)		21.1			15.9			18.1			0.0	
Approach LOS		C			B			B			A	

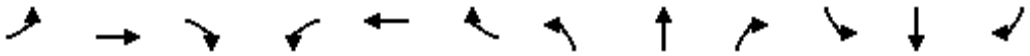
Intersection Summary			
HCM Average Control Delay	18.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	75.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	116	366	116	64	353	109	153	1707	128	65	445	93
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	9	9	10	9
Total Lost time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.96	1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1923	1426		1923	1396	1501	3099	1285	1425	2956	1265
Flt Permitted		0.55	1.00		0.62	1.00	0.38	1.00	1.00	0.10	1.00	1.00
Satd. Flow (perm)		1062	1426		1194	1396	608	3099	1285	145	2956	1265
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	122	385	122	67	372	115	161	1797	135	68	468	98
RTOR Reduction (vph)	0	0	72	0	0	68	0	0	30	0	0	59
Lane Group Flow (vph)	0	507	50	0	439	47	161	1797	105	68	468	39
Confl. Peds. (#/hr)	42		39	39		42	20		8	8		20
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	6%	4%	3%	0%	6%	5%	6%	3%	4%	8%	8%	4%
Turn Type	pm+pt		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		43.0	43.0		43.0	43.0	54.0	47.0	47.0	45.5	41.5	41.5
Effective Green, g (s)		43.0	43.0		43.0	43.0	54.0	47.0	47.0	45.5	41.5	41.5
Actuated g/C Ratio		0.41	0.41		0.41	0.41	0.51	0.45	0.45	0.43	0.40	0.40
Clearance Time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		435	584		489	572	393	1387	575	112	1168	500
v/s Ratio Prot							0.04	c0.58		c0.02	0.16	
v/s Ratio Perm		c0.48	0.04		0.37	0.03	0.17		0.08	0.24		0.03
v/c Ratio		1.17	0.09		0.90	0.08	0.41	1.30	0.18	0.61	0.40	0.08
Uniform Delay, d1		31.0	19.0		28.9	18.9	14.4	29.0	17.4	24.7	22.8	19.8
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.50	0.77	0.42
Incremental Delay, d2		96.9	0.3		21.9	0.3	0.7	138.5	0.7	8.7	1.0	0.3
Delay (s)		127.9	19.3		50.8	19.2	15.1	167.5	18.1	45.8	18.6	8.6
Level of Service		F	B		D	B	B	F	B	D	B	A
Approach Delay (s)		106.8			44.3			146.1			20.0	
Approach LOS		F			D			F			B	

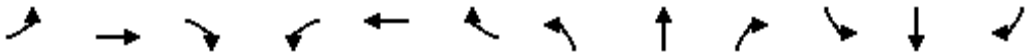
Intersection Summary			
HCM Average Control Delay	104.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.21		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	117.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	494	62	50	476	50	79	62	55	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		0.99			0.99			0.96				
Flt Protected		1.00			1.00			0.98				
Satd. Flow (prot)		1627			1630			1779				
Flt Permitted		0.90			0.91			0.98				
Satd. Flow (perm)		1473			1489			1779				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	66	549	69	56	529	56	88	69	61	0	0	0
RTOR Reduction (vph)	0	6	0	0	5	0	0	21	0	0	0	0
Lane Group Flow (vph)	0	678	0	0	636	0	0	197	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		38.0			38.0			19.0				
Effective Green, g (s)		38.0			38.0			19.0				
Actuated g/C Ratio		0.58			0.58			0.29				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		861			870			520				
v/s Ratio Prot												
v/s Ratio Perm		c0.46			0.43			0.11				
v/c Ratio		0.79			0.73			0.38				
Uniform Delay, d1		10.4			9.8			18.3				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		7.2			5.4			2.1				
Delay (s)		17.6			15.2			20.4				
Level of Service		B			B			C				
Approach Delay (s)		17.6			15.2			20.4			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM Average Control Delay	17.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	65.3%	ICU Level of Service	C
Analysis Period (min)	15		

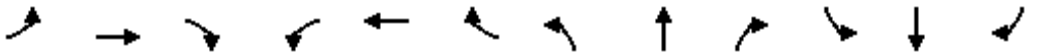
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	507	67	32	441	39	55	150	89	49	192	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	11	12	12	15	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.97		1.00	0.95		1.00	0.98		0.98	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		0.99	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.98	
Flt Protected		1.00	1.00		1.00	1.00		0.99	1.00		0.99	
Satd. Flow (prot)		1656	1255		1636	1288		1658	1490		1737	
Flt Permitted		0.96	1.00		0.95	1.00		0.84	1.00		0.92	
Satd. Flow (perm)		1595	1255		1554	1288		1416	1490		1607	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	32	534	71	34	464	41	58	158	94	52	202	57
RTOR Reduction (vph)	0	0	30	0	0	16	0	0	64	0	11	0
Lane Group Flow (vph)	0	566	41	0	498	25	0	216	30	0	300	0
Confl. Peds. (#/hr)	33		15	15		33	68		5	5		68
Confl. Bikes (#/hr)	4					4						
Heavy Vehicles (%)	0%	5%	14%	19%	5%	9%	2%	2%	1%	10%	7%	8%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Effective Green, g (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.32	0.32		0.32	
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Grp Cap (vph)		914	720		891	738		453	477		514	
v/s Ratio Prot												
v/s Ratio Perm		c0.35	0.03		0.32	0.02		0.15	0.02		c0.19	
v/c Ratio		0.62	0.06		0.56	0.03		0.48	0.06		0.58	
Uniform Delay, d1		10.6	7.1		10.0	7.0		20.5	17.7		21.3	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		3.1	0.1		2.5	0.1		3.6	0.3		4.8	
Delay (s)		13.7	7.2		12.6	7.0		24.0	18.0		26.1	
Level of Service		B	A		B	A		C	B		C	
Approach Delay (s)		13.0			12.2			22.2			26.1	
Approach LOS		B			B			C			C	

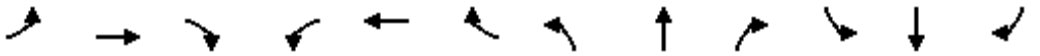
Intersection Summary			
HCM Average Control Delay	16.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	95.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



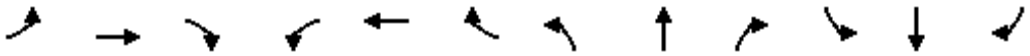
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	84	438	30	17	317	39	55	303	38	38	92	11
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	11	16	8	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.98	1.00	1.00	0.99
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1464	2990		1459	3534		1534	1647	1301	1517	1541	1156
Flt Permitted	0.51	1.00		0.43	1.00		0.69	1.00	1.00	0.45	1.00	1.00
Satd. Flow (perm)	788	2990		658	3534		1116	1647	1301	720	1541	1156
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	93	487	33	19	352	43	61	337	42	42	102	12
RTOR Reduction (vph)	0	7	0	0	15	0	0	0	22	0	0	7
Lane Group Flow (vph)	93	513	0	19	380	0	61	337	20	42	102	5
Confl. Peds. (#/hr)	16		9	9		16	1		5	5		1
Heavy Vehicles (%)	8%	6%	0%	13%	8%	3%	4%	2%	8%	5%	9%	22%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Effective Green, g (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	376	1426		314	1685		446	659	520	288	616	462
v/s Ratio Prot		c0.17			0.11			c0.20			0.07	
v/s Ratio Perm	0.12			0.03			0.05		0.02	0.06		0.00
v/c Ratio	0.25	0.36		0.06	0.23		0.14	0.51	0.04	0.15	0.17	0.01
Uniform Delay, d1	10.1	10.7		9.2	10.0		12.4	14.7	11.9	12.4	12.5	11.7
Progression Factor	1.00	1.00		1.00	1.00		0.60	0.74	0.31	0.53	0.54	0.28
Incremental Delay, d2	1.6	0.7		0.4	0.3		0.6	2.8	0.1	1.1	0.6	0.0
Delay (s)	11.6	11.4		9.5	10.3		8.0	13.6	3.8	7.7	7.3	3.4
Level of Service	B	B		A	B		A	B	A	A	A	A
Approach Delay (s)		11.5			10.2			11.9			7.1	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	10.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



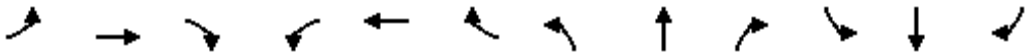
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	98	413	86	44	282	65	73	371	44	57	143	55
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	11	10	11	11	10	11	11	10	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.96	1.00		1.00	1.00		0.98	1.00		0.97	1.00	
Frt	1.00	0.97		1.00	0.97		1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1464	3056		1588	3009		1541	3022		1403	2767	
Flt Permitted	0.52	1.00		0.42	1.00		0.62	1.00		0.46	1.00	
Satd. Flow (perm)	808	3056		698	3009		1007	3022		678	2767	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	103	435	91	46	297	68	77	391	46	60	151	58
RTOR Reduction (vph)	0	0	0	0	0	0	0	12	0	0	34	0
Lane Group Flow (vph)	103	526	0	46	365	0	77	425	0	60	175	0
Confl. Peds. (#/hr)	98		10	10		98	28		52	52		28
Heavy Vehicles (%)	5%	5%	4%	0%	5%	7%	2%	6%	13%	10%	11%	20%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.41	0.41		0.41	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	388	1467		335	1444		416	1249		280	1144	
v/s Ratio Prot		c0.17			0.12			c0.14			0.06	
v/s Ratio Perm	0.13			0.07			0.08			0.09		
v/c Ratio	0.27	0.36		0.14	0.25		0.19	0.34		0.21	0.15	
Uniform Delay, d1	11.6	12.2		10.9	11.5		14.0	15.0		14.2	13.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.7	0.7		0.9	0.4		1.0	0.7		1.7	0.3	
Delay (s)	13.3	12.9		11.7	12.0		15.0	15.8		15.9	14.1	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		13.0			11.9			15.6			14.5	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	110	329	38	23	328	47	67	412	26	43	206	53
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	8	16	12	9	10	10	9	10	10
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1533	1576		1474	1841		1533	3073		1372	2881	
Flt Permitted	0.45	1.00		0.46	1.00		0.58	1.00		0.41	1.00	
Satd. Flow (perm)	720	1576		713	1841		942	3073		597	2881	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	116	346	40	24	345	49	71	434	27	45	217	56
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	116	386	0	24	394	0	71	461	0	45	273	0
Confl. Peds. (#/hr)	7		23	23		7	10		8	8		10
Confl. Bikes (#/hr)	1		2	2		1	1		1	1		1
Heavy Vehicles (%)	4%	8%	10%	0%	9%	5%	0%	3%	0%	12%	7%	6%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	47.0	41.8		40.6	38.6		26.8	22.2		23.6	20.6	
Effective Green, g (s)	47.0	39.8		40.6	36.6		26.8	20.2		23.6	18.6	
Actuated g/C Ratio	0.55	0.47		0.48	0.43		0.32	0.24		0.28	0.22	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	448	738		358	793		329	730		193	630	
v/s Ratio Prot	c0.02	c0.24		0.00	0.21		c0.01	c0.15		0.01	0.09	
v/s Ratio Perm	0.13			0.03			0.06			0.06		
v/c Ratio	0.26	0.52		0.07	0.50		0.22	0.63		0.23	0.43	
Uniform Delay, d1	13.5	15.9		15.0	17.5		21.5	29.1		26.1	28.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	2.6		0.1	2.2		0.3	4.1		0.6	2.2	
Delay (s)	13.8	18.6		15.1	19.7		21.9	33.2		26.8	30.8	
Level of Service	B	B		B	B		C	C		C	C	
Approach Delay (s)		17.5			19.5			31.7			30.2	
Approach LOS		B			B			C			C	

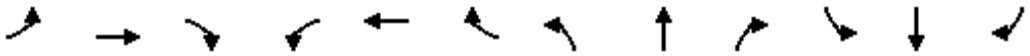
Intersection Summary			
HCM Average Control Delay	24.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	63.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	69	322	44	65	383	115	59	390	126	56	162	37
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	11	11	11	11	12	12	10	10	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		0.99	1.00	
Frt		0.98			0.97		1.00	0.96		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3493			2913		1614	3156		1581	2921	
Flt Permitted		0.78			0.84		0.61	1.00		0.38	1.00	
Satd. Flow (perm)		2748			2465		1042	3156		628	2921	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	77	358	49	72	426	128	66	433	140	62	180	41
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	484	0	0	626	0	66	573	0	62	221	0
Confl. Peds. (#/hr)	20		16	16		20	5		33	33		5
Confl. Bikes (#/hr)	2					2			2	2		
Heavy Vehicles (%)	9%	9%	0%	24%	7%	6%	2%	4%	2%	0%	5%	9%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.0			33.0		32.0	32.0		32.0	32.0	
Effective Green, g (s)		34.0			34.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio		0.45			0.45		0.44	0.44		0.44	0.44	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		1246			1117		458	1389		276	1285	
v/s Ratio Prot								c0.18			0.08	
v/s Ratio Perm		0.18			c0.25		0.06			0.10		
v/c Ratio		0.39			0.56		0.14	0.41		0.22	0.17	
Uniform Delay, d1		13.6			15.0		12.6	14.4		13.0	12.7	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.9			2.0		0.7	0.9		1.9	0.3	
Delay (s)		14.5			17.1		13.2	15.3		14.9	13.0	
Level of Service		B			B		B	B		B	B	
Approach Delay (s)		14.5			17.1			15.1			13.4	
Approach LOS		B			B			B			B	

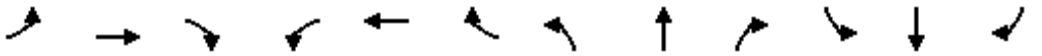
Intersection Summary			
HCM Average Control Delay	15.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	145	522	5	14	656	386	72	9	20	118	1	52
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	12	12	12	12	12	13	13	13
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	1.00		1.00	1.00	0.85		0.97			0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97			0.97	
Satd. Flow (prot)	1574	3144		1629	3257	1457		1611			3105	
Flt Permitted	0.35	1.00		0.42	1.00	1.00		0.69			0.75	
Satd. Flow (perm)	585	3144		721	3257	1457		1158			2398	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	161	580	6	16	729	429	80	10	22	131	1	58
RTOR Reduction (vph)	0	1	0	0	0	150	0	12	0	0	44	0
Lane Group Flow (vph)	161	585	0	16	729	279	0	100	0	0	146	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	46.0	46.0		46.0	46.0	46.0		16.7			16.7	
Effective Green, g (s)	46.0	46.0		46.0	46.0	46.0		16.7			16.7	
Actuated g/C Ratio	0.65	0.65		0.65	0.65	0.65		0.24			0.24	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		8.0			8.0	
Lane Grp Cap (vph)	381	2046		469	2119	948		274			566	
v/s Ratio Prot		0.19			0.22							
v/s Ratio Perm	c0.28			0.02		0.19		c0.09			0.06	
v/c Ratio	0.42	0.29		0.03	0.34	0.29		0.36			0.26	
Uniform Delay, d1	6.0	5.3		4.4	5.6	5.3		22.6			22.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	3.4	0.4		0.1	0.4	0.8		3.5			1.0	
Delay (s)	9.4	5.7		4.5	6.0	6.1		26.1			23.0	
Level of Service	A	A		A	A	A		C			C	
Approach Delay (s)		6.5			6.0			26.1			23.0	
Approach LOS		A			A			C			C	

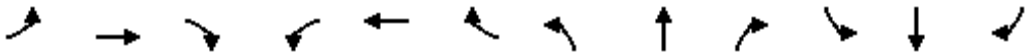
Intersection Summary			
HCM Average Control Delay	8.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	70.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	111	214	76	63	190	71	133	1972	88	71	499	41
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	9	12	10	10	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.96	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.96		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1548	1498		1547	1584		1493	3069	1271	1452	2983	1301
Flt Permitted	0.37	1.00		0.32	1.00		0.39	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	608	1498		521	1584		612	3069	1271	180	2983	1301
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	117	225	80	66	200	75	140	2076	93	75	525	43
RTOR Reduction (vph)	0	15	0	0	16	0	0	0	18	0	0	25
Lane Group Flow (vph)	117	290	0	66	259	0	140	2076	75	75	525	18
Confl. Peds. (#/hr)	4		9	9		4	6		16	16		6
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	3%	3%	4%	3%	1%	2%	3%	4%	4%	6%	7%	3%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	28.0	21.0		28.0	21.0		42.0	35.0	35.0	42.0	35.0	35.0
Effective Green, g (s)	26.0	22.0		26.0	22.0		40.0	35.0	35.0	40.0	35.0	35.0
Actuated g/C Ratio	0.31	0.26		0.31	0.26		0.47	0.41	0.41	0.47	0.41	0.41
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	252	388		232	410		350	1264	523	174	1228	536
v/s Ratio Prot	c0.03	c0.19		0.02	0.16		0.03	c0.68		c0.03	0.18	
v/s Ratio Perm	0.11			0.07			0.16		0.06	0.17		0.01
v/c Ratio	0.46	0.75		0.28	0.63		0.40	1.64	0.14	0.43	0.43	0.03
Uniform Delay, d1	22.5	29.0		21.9	27.9		13.3	25.0	15.6	18.1	17.8	14.9
Progression Factor	1.00	1.00		1.00	1.00		0.62	0.71	0.50	1.00	1.00	1.00
Incremental Delay, d2	6.0	12.4		3.1	7.2		2.7	292.0	0.5	7.6	1.1	0.1
Delay (s)	28.6	41.4		24.9	35.2		11.0	309.8	8.2	25.7	18.9	15.0
Level of Service	C	D		C	D		B	F	A	C	B	B
Approach Delay (s)		37.8			33.2			279.5			19.5	
Approach LOS		D			C			F			B	

Intersection Summary			
HCM Average Control Delay	184.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	96.8%	ICU Level of Service	F
Analysis Period (min)	15		

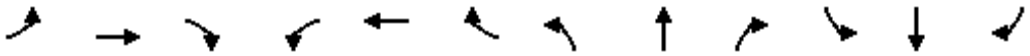
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	26	218	24	15	149	18	21	166	27	33	148	21
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	14	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.99			0.98			0.99	
Flt Protected		1.00			1.00			1.00			0.99	
Satd. Flow (prot)		1843			1836			1900			1931	
Flt Permitted		0.96			0.97			0.97			0.94	
Satd. Flow (perm)		1787			1790			1844			1822	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	27	225	25	15	154	19	22	171	28	34	153	22
RTOR Reduction (vph)	0	5	0	0	6	0	0	8	0	0	6	0
Lane Group Flow (vph)	0	272	0	0	182	0	0	213	0	0	203	0
Confl. Peds. (#/hr)	5		11	11		5	7		34	34		7
Confl. Bikes (#/hr)			3	3								
Heavy Vehicles (%)	4%	2%	0%	20%	1%	0%	12%	3%	8%	0%	3%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.42			0.42			0.46			0.46	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		742			744			851			841	
v/s Ratio Prot												
v/s Ratio Perm		c0.15			0.10			c0.12			0.11	
v/c Ratio		0.37			0.24			0.25			0.24	
Uniform Delay, d1		13.1			12.4			10.7			10.6	
Progression Factor		1.00			0.64			1.08			1.00	
Incremental Delay, d2		1.4			0.8			0.7			0.7	
Delay (s)		14.5			8.6			12.2			11.3	
Level of Service		B			A			B			B	
Approach Delay (s)		14.5			8.6			12.2			11.3	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	11.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.8%	ICU Level of Service	A
Analysis Period (min)	15		

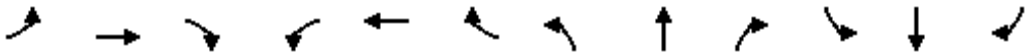
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	181	34	9	162	19	44	384	33	16	86	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.95	1.00		1.00	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1465	2994		1302	3037		1529	3093		1492	2868	
Flt Permitted	0.63	1.00		0.60	1.00		0.68	1.00		0.48	1.00	
Satd. Flow (perm)	965	2994		827	3037		1093	3093		757	2868	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	201	38	10	180	21	49	427	37	18	96	19
RTOR Reduction (vph)	0	24	0	0	13	0	0	10	0	0	8	0
Lane Group Flow (vph)	27	215	0	10	188	0	49	454	0	18	107	0
Confl. Peds. (#/hr)	35		6	6		35	18					18
Confl. Bikes (#/hr)	14		32	32		14	23		7	7		23
Heavy Vehicles (%)	4%	4%	0%	22%	2%	6%	3%	2%	0%	7%	8%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0		39.0	39.0		39.0	39.0	
Effective Green, g (s)	19.0	19.0		19.0	19.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.58	0.58		0.58	0.58	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	282	875		242	888		639	1808		443	1677	
v/s Ratio Prot		c0.07			0.06			c0.15			0.04	
v/s Ratio Perm	0.03			0.01			0.04			0.02		
v/c Ratio	0.10	0.25		0.04	0.21		0.08	0.25		0.04	0.06	
Uniform Delay, d1	16.7	17.5		16.5	17.3		5.9	6.6		5.7	5.8	
Progression Factor	0.73	0.73		0.76	0.74		0.93	0.96		0.49	0.44	
Incremental Delay, d2	0.6	0.6		0.3	0.5		0.2	0.3		0.2	0.1	
Delay (s)	12.9	13.5		12.8	13.4		5.7	6.6		3.0	2.6	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		13.5			13.3			6.5			2.7	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	9.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.7%	ICU Level of Service	A
Analysis Period (min)	15		

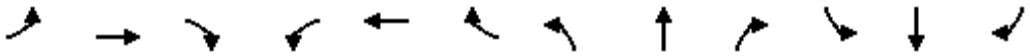
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	46	178	34	16	122	38	28	414	24	14	163	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	9	9	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.98		1.00	0.96			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1556	2952		1515	2868			1878			1808	
Flt Permitted	0.64	1.00		0.60	1.00			0.98			0.96	
Satd. Flow (perm)	1047	2952		965	2868			1838			1739	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	51	198	38	18	136	42	31	460	27	16	181	17
RTOR Reduction (vph)	0	23	0	0	25	0	0	3	0	0	5	0
Lane Group Flow (vph)	51	213	0	18	153	0	0	515	0	0	209	0
Confl. Peds. (#/hr)	10		29	29		10	17		10	10		17
Confl. Bikes (#/hr)									2	2		
Heavy Vehicles (%)	2%	4%	10%	0%	4%	0%	0%	8%	4%	0%	13%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Effective Green, g (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40			0.48			0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	419	1181		386	1147			877			829	
v/s Ratio Prot		c0.07			0.05							
v/s Ratio Perm	0.05			0.02				c0.28			0.12	
v/c Ratio	0.12	0.18		0.05	0.13			0.59			0.25	
Uniform Delay, d1	12.3	12.6		11.9	12.4			12.4			10.1	
Progression Factor	1.01	0.92		0.86	0.88			1.02			1.00	
Incremental Delay, d2	0.6	0.3		0.2	0.2			2.8			0.7	
Delay (s)	13.1	12.0		10.5	11.1			15.4			10.8	
Level of Service	B	B		B	B			B			B	
Approach Delay (s)		12.2			11.0			15.4			10.8	
Approach LOS		B			B			B			B	

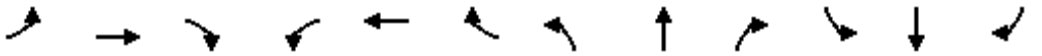
Intersection Summary			
HCM Average Control Delay	13.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	90	127	60	2	84	36	21	275	9	7	184	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	16	12	10	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.95		1.00	0.95			1.00			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1605	1879		1587	1870			1971			1933	
Flt Permitted	0.67	1.00		0.57	1.00			0.98			0.99	
Satd. Flow (perm)	1135	1879		950	1870			1928			1916	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	100	141	67	2	93	40	23	306	10	8	204	32
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	100	208	0	2	133	0	0	339	0	0	244	0
Confl. Peds. (#/hr)			8	8			1		8	8		1
Heavy Vehicles (%)	3%	3%	2%	0%	6%	0%	0%	3%	0%	0%	4%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Effective Green, g (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Actuated g/C Ratio	0.31	0.31		0.31	0.31			0.57			0.57	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	349	578		292	575			1097			1091	
v/s Ratio Prot		c0.11			0.07							
v/s Ratio Perm	0.09			0.00				c0.18			0.13	
v/c Ratio	0.29	0.36		0.01	0.23			0.31			0.22	
Uniform Delay, d1	17.1	17.5		15.6	16.8			7.3			6.9	
Progression Factor	0.90	0.89		0.89	0.92			0.94			1.00	
Incremental Delay, d2	2.0	1.7		0.0	0.9			0.7			0.5	
Delay (s)	17.5	17.4		14.0	16.3			7.6			7.4	
Level of Service	B	B		B	B			A			A	
Approach Delay (s)		17.4			16.3			7.6			7.4	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



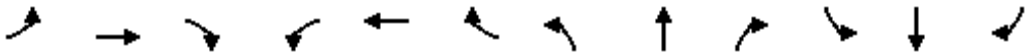
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	122	9	55	1	3	12	40	492	6	2	201	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	10	11	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.97		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	0.98	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.87		1.00	0.88		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1603	1672		1710	1422		1491	1631	1392	1649	1907	1427
Flt Permitted	0.75	1.00		0.71	1.00		0.62	1.00	1.00	0.37	1.00	1.00
Satd. Flow (perm)	1260	1672		1279	1422		971	1631	1392	648	1907	1427
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	136	10	61	1	3	13	44	547	7	2	223	56
RTOR Reduction (vph)	0	44	0	0	9	0	0	0	3	0	0	22
Lane Group Flow (vph)	136	27	0	1	7	0	44	547	4	2	223	34
Confl. Peds. (#/hr)	9					9	1		6	6		1
Heavy Vehicles (%)	5%	14%	5%	0%	67%	12%	7%	3%	0%	0%	7%	5%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	17.0	17.0		17.0	17.0		39.0	39.0	39.0	39.0	39.0	39.0
Effective Green, g (s)	18.0	18.0		18.0	18.0		39.0	39.0	39.0	39.0	39.0	39.0
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.60	0.60	0.60	0.60	0.60	0.60
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	349	463		354	394		583	979	835	389	1144	856
v/s Ratio Prot		0.02			0.00			c0.34			0.12	
v/s Ratio Perm	c0.11			0.00			0.05		0.00	0.00		0.02
v/c Ratio	0.39	0.06		0.00	0.02		0.08	0.56	0.01	0.01	0.19	0.04
Uniform Delay, d1	19.0	17.3		17.0	17.1		5.4	7.8	5.2	5.2	5.9	5.3
Progression Factor	1.47	2.41		1.00	1.00		1.17	1.10	1.32	1.00	1.00	1.00
Incremental Delay, d2	3.2	0.2		0.0	0.1		0.2	1.7	0.0	0.0	0.4	0.1
Delay (s)	31.1	41.9		17.0	17.1		6.5	10.3	6.9	5.2	6.3	5.4
Level of Service	C	D		B	B		A	B	A	A	A	A
Approach Delay (s)		34.8			17.1			10.0			6.1	
Approach LOS		C			B			A			A	

Intersection Summary			
HCM Average Control Delay	13.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	249	76	129	378	0	0	0	0	80	305	361
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)		4.0		3.0	3.0					5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	
Frpb, ped/bikes		0.99		1.00	1.00					1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Frt		0.96		1.00	1.00					1.00	0.92	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		2829		1621	3288					1574	2907	
Flt Permitted		1.00		0.49	1.00					0.95	1.00	
Satd. Flow (perm)		2829		835	3288					1574	2907	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	262	80	136	398	0	0	0	0	84	321	380
RTOR Reduction (vph)	0	29	0	0	0	0	0	0	0	0	214	0
Lane Group Flow (vph)	0	313	0	136	398	0	0	0	0	84	487	0
Confl. Peds. (#/hr)	14		32	32		14	14					14
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	9%	4%	5%	4%	0%	0%	0%	0%	5%	2%	4%
Turn Type				D.P+P						custom		
Protected Phases		8		7	7 8					6	6	
Permitted Phases				8						6		
Actuated Green, G (s)		33.0		56.0	59.0					32.0	32.0	
Effective Green, g (s)		33.0		56.0	59.0					32.0	32.0	
Actuated g/C Ratio		0.33		0.56	0.59					0.32	0.32	
Clearance Time (s)		4.0		3.0						5.0	5.0	
Lane Grp Cap (vph)		934		648	1940					504	930	
v/s Ratio Prot		c0.11		c0.05	0.12					0.05	c0.17	
v/s Ratio Perm				0.07								
v/c Ratio		0.34		0.21	0.21					0.17	0.52	
Uniform Delay, d1		25.2		10.6	9.6					24.4	27.8	
Progression Factor		1.00		1.97	2.07					1.00	1.00	
Incremental Delay, d2		1.0		0.6	0.2					0.7	2.1	
Delay (s)		26.2		21.5	19.9					25.1	29.9	
Level of Service		C		C	B					C	C	
Approach Delay (s)		26.2			20.4			0.0			29.4	
Approach LOS		C			C			A			C	

Intersection Summary			
HCM Average Control Delay	25.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

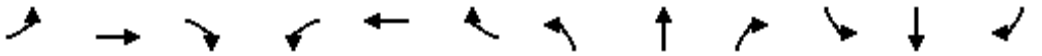
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	129	200	0	0	333	70	174	554	347	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	9	12	13	12	13	12	12	12
Total Lost time (s)	4.0	4.0			4.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.97		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1673	3054			2833		1750	1782	1514			
Flt Permitted	0.33	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	583	3054			2833		1750	1782	1514			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	136	211	0	0	351	74	183	583	365	0	0	0
RTOR Reduction (vph)	0	0	0	0	17	0	0	0	245	0	0	0
Lane Group Flow (vph)	136	211	0	0	408	0	183	583	120	0	0	0
Confl. Peds. (#/hr)	14		16	16		14			1	1		
Confl. Bikes (#/hr)	1					1			1	1		
Heavy Vehicles (%)	2%	12%	0%	0%	5%	4%	1%	1%	3%	0%	0%	0%
Turn Type	pm+pt						custom		Perm			
Protected Phases	4	1 4			1		2	2				
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	54.0	58.0			21.0		33.0	33.0	33.0			
Effective Green, g (s)	54.0	58.0			21.0		33.0	33.0	33.0			
Actuated g/C Ratio	0.54	0.58			0.21		0.33	0.33	0.33			
Clearance Time (s)	4.0				4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	675	1771			595		578	588	500			
v/s Ratio Prot	c0.07	0.07			c0.14		0.10	c0.33				
v/s Ratio Perm	0.04								0.08			
v/c Ratio	0.20	0.12			0.69		0.32	0.99	0.24			
Uniform Delay, d1	11.8	9.5			36.4		25.1	33.4	24.4			
Progression Factor	0.24	0.25			1.00		0.76	0.79	1.91			
Incremental Delay, d2	0.6	0.1			6.3		0.9	27.9	0.7			
Delay (s)	3.5	2.5			42.7		19.9	54.1	47.3			
Level of Service	A	A			D		B	D	D			
Approach Delay (s)		2.9			42.7			46.4			0.0	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM Average Control Delay	37.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

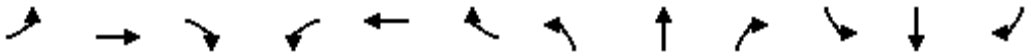
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	476	372	34	592	0	0	0	0	5	216	200
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	11	12	12	12	12	10	10	12
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	1.00
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.93		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3112		1613	3273					1596	3160	1443
Flt Permitted		1.00		0.16	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3112		268	3273					1596	3160	1443
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	496	388	35	617	0	0	0	0	5	225	208
RTOR Reduction (vph)	0	141	0	0	0	0	0	0	0	0	0	137
Lane Group Flow (vph)	0	743	0	35	617	0	0	0	0	5	225	71
Confl. Peds. (#/hr)	22		3	3		22						
Confl. Bikes (#/hr)	4					4			32	32		
Heavy Vehicles (%)	0%	2%	2%	6%	1%	0%	0%	0%	0%	0%	1%	6%
Turn Type				pm+pt						Split		Prot
Protected Phases		8		7	7 8					6	6	6
Permitted Phases				7 8								
Actuated Green, G (s)		36.0		54.0	58.0					34.0	34.0	34.0
Effective Green, g (s)		36.0		54.0	58.0					34.0	34.0	34.0
Actuated g/C Ratio		0.36		0.54	0.58					0.34	0.34	0.34
Clearance Time (s)		4.0		4.0						4.0	4.0	4.0
Lane Grp Cap (vph)		1120		387	1898					543	1074	491
v/s Ratio Prot		c0.24		0.02	c0.19					0.00	c0.07	0.05
v/s Ratio Perm				0.03								
v/c Ratio		0.66		0.09	0.33					0.01	0.21	0.14
Uniform Delay, d1		26.9		12.6	10.9					21.8	23.5	22.9
Progression Factor		1.00		0.54	0.68					0.73	0.78	0.90
Incremental Delay, d2		3.1		0.2	0.2					0.0	0.4	0.6
Delay (s)		30.0		7.0	7.6					16.0	18.7	21.3
Level of Service		C		A	A					B	B	C
Approach Delay (s)		30.0			7.5			0.0			19.9	
Approach LOS		C			A			A			B	

Intersection Summary			
HCM Average Control Delay	20.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	89.3%	ICU Level of Service	E
Analysis Period (min)	15		

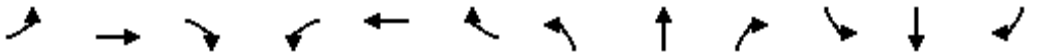
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	420	60	0	0	57	6	569	647	62	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	10	12	11	11	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	0.91	0.91			0.95		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	1.00			
Flpb, ped/bikes	0.99	0.99			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.99		1.00	1.00	0.85			
Flt Protected	0.95	0.96			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1444	3040			3070		1555	1637	1500			
Flt Permitted	0.71	0.74			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	1083	2333			3070		1555	1637	1500			
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	433	62	0	0	59	6	587	667	64	0	0	0
RTOR Reduction (vph)	0	0	0	0	5	0	0	0	38	0	0	0
Lane Group Flow (vph)	216	279	0	0	60	0	587	667	26	0	0	0
Confl. Peds. (#/hr)	30		2	2		30			4	4		
Confl. Bikes (#/hr)	3					3			2	2		
Heavy Vehicles (%)	3%	2%	0%	0%	2%	0%	1%	1%	2%	0%	0%	0%
Turn Type	pm+pt						custom		custom			
Protected Phases	4	1 4			1		2	2	2			
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Effective Green, g (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Actuated g/C Ratio	0.51	0.51			0.15		0.37	0.37	0.37			
Clearance Time (s)	4.0				4.0		4.0	4.0	4.0			
Lane Grp Cap (vph)	682	1444			461		575	606	555			
v/s Ratio Prot	c0.11	0.07			0.02		0.38	c0.41	0.02			
v/s Ratio Perm	c0.05	0.03										
v/c Ratio	0.32	0.19			0.13		1.02	1.10	0.05			
Uniform Delay, d1	14.1	13.3			36.8		31.5	31.5	20.2			
Progression Factor	0.22	0.24			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.9	0.2			0.6		42.9	67.2	0.2			
Delay (s)	4.0	3.4			37.4		74.4	98.7	20.4			
Level of Service	A	A			D		E	F	C			
Approach Delay (s)		3.6			37.4			84.1			0.0	
Approach LOS		A			D			F			A	

Intersection Summary			
HCM Average Control Delay	61.3	HCM Level of Service	E
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	89.3%	ICU Level of Service	E
Analysis Period (min)	15		

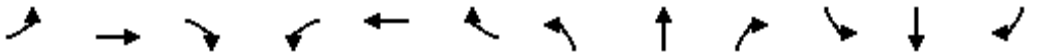
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	163	285	73	58	281	114	51	1151	62	88	476	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	9	10	9	9	10	9
Total Lost time (s)		4.0			4.0		4.0	3.5	4.0	4.0	3.5	4.0
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00			0.99		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.98			0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.98			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		2843			2815		1447	3069	1336	1494	2956	1270
Flt Permitted		0.62			0.82		0.39	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)		1801			2328		600	3069	1336	197	2956	1270
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	170	297	76	60	293	119	53	1199	65	92	496	44
RTOR Reduction (vph)	0	16	0	0	39	0	0	0	24	0	0	27
Lane Group Flow (vph)	0	527	0	0	433	0	53	1199	41	92	496	17
Confl. Peds. (#/hr)	49		20	20		49	26		8	8		26
Confl. Bikes (#/hr)	2					2						
Heavy Vehicles (%)	10%	7%	4%	9%	7%	5%	6%	4%	0%	3%	8%	5%
Turn Type	pm+pt			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		35.0			27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)		36.0			28.0		36.0	33.5	33.0	36.0	33.5	33.0
Actuated g/C Ratio		0.42			0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)		5.0			5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)		836			767		294	1210	519	144	1165	493
v/s Ratio Prot		c0.04					0.01	c0.39		c0.03	0.17	
v/s Ratio Perm		0.22			c0.19		0.07		0.03	0.24		0.01
v/c Ratio		0.63			0.56		0.18	0.99	0.08	0.64	0.43	0.03
Uniform Delay, d1		19.3			23.5		14.8	25.6	16.4	19.0	18.7	16.1
Progression Factor		1.00			1.00		1.34	0.87	1.43	1.82	1.64	3.14
Incremental Delay, d2		3.6			3.0		0.8	17.5	0.2	18.1	1.0	0.1
Delay (s)		22.9			26.5		20.6	39.8	23.6	52.5	31.8	50.8
Level of Service		C			C		C	D	C	D	C	D
Approach Delay (s)		22.9			26.5			38.2			36.1	
Approach LOS		C			C			D			D	

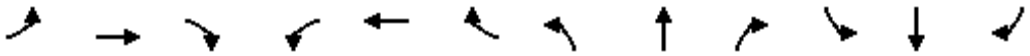
Intersection Summary			
HCM Average Control Delay	33.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	82.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	44	420	0	0	422	81	31	63	98	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.98			0.93				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		1706			1677			1583				
Flt Permitted		0.92			1.00			0.99				
Satd. Flow (perm)		1577			1677			1583				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	49	467	0	0	469	90	34	70	109	0	0	0
RTOR Reduction (vph)	0	0	0	0	10	0	0	58	0	0	0	0
Lane Group Flow (vph)	0	516	0	0	549	0	0	155	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		34.0			34.0			23.0				
Effective Green, g (s)		34.0			34.0			23.0				
Actuated g/C Ratio		0.52			0.52			0.35				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		825			877			560				
v/s Ratio Prot					0.33							
v/s Ratio Perm		c0.33						0.10				
v/c Ratio		0.63			0.63			0.28				
Uniform Delay, d1		11.0			11.0			15.0				
Progression Factor		1.00			0.63			1.00				
Incremental Delay, d2		3.6			2.8			1.2				
Delay (s)		14.6			9.7			16.3				
Level of Service		B			A			B				
Approach Delay (s)		14.6			9.7			16.3			0.0	
Approach LOS		B			A			B			A	

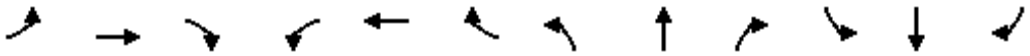
Intersection Summary			
HCM Average Control Delay	12.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	76.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	48	415	33	20	416	49	25	175	35	51	107	28
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.99			0.98			0.98	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1886			1842			3185			3126	
Flt Permitted		0.92			0.97			0.92			0.83	
Satd. Flow (perm)		1753			1794			2930			2630	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	53	461	37	22	462	54	28	194	39	57	119	31
RTOR Reduction (vph)	0	4	0	0	6	0	0	22	0	0	18	0
Lane Group Flow (vph)	0	547	0	0	532	0	0	239	0	0	189	0
Confl. Peds. (#/hr)	29		16	16		29	28		14	14		28
Confl. Bikes (#/hr)	1					1	1					1
Heavy Vehicles (%)	3%	7%	4%	12%	8%	13%	0%	4%	4%	4%	4%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0			27.0			27.0	
Effective Green, g (s)		30.0			30.0			27.0			27.0	
Actuated g/C Ratio		0.46			0.46			0.42			0.42	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		809			828			1217			1092	
v/s Ratio Prot												
v/s Ratio Perm		c0.31			0.30			c0.08			0.07	
v/c Ratio		0.68			0.64			0.20			0.17	
Uniform Delay, d1		13.7			13.4			12.1			12.0	
Progression Factor		0.63			0.56			0.98			0.61	
Incremental Delay, d2		3.7			3.7			0.4			0.3	
Delay (s)		12.4			11.1			12.2			7.6	
Level of Service		B			B			B			A	
Approach Delay (s)		12.4			11.1			12.2			7.6	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	11.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.0%	ICU Level of Service	E
Analysis Period (min)	15		

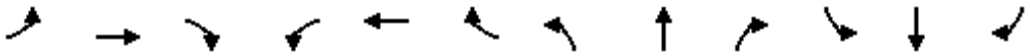
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	52	279	22	28	338	61	55	319	89	48	96	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	9	10	10	9	10	10	12	10	10	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.98		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1503	2936		1584	2944		1497	3034		1594	2899	
Flt Permitted	0.44	1.00		0.53	1.00		0.66	1.00		0.48	1.00	
Satd. Flow (perm)	697	2936		890	2944		1046	3034		809	2899	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	58	310	24	31	376	68	61	354	99	53	107	32
RTOR Reduction (vph)	0	9	0	0	22	0	0	39	0	0	15	0
Lane Group Flow (vph)	58	325	0	31	422	0	61	414	0	53	124	0
Confl. Peds. (#/hr)	25		14	14		25	12		4	4		12
Confl. Bikes (#/hr)	1					1			1	1		
Heavy Vehicles (%)	5%	7%	12%	0%	6%	2%	6%	1%	3%	0%	4%	12%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	236	994		301	996		563	1634		436	1561	
v/s Ratio Prot		0.11			c0.14			c0.14			0.04	
v/s Ratio Perm	0.08			0.03			0.06			0.07		
v/c Ratio	0.25	0.33		0.10	0.42		0.11	0.25		0.12	0.08	
Uniform Delay, d1	15.5	16.0		14.7	16.6		7.4	8.0		7.4	7.2	
Progression Factor	0.57	0.55		0.78	0.80		0.63	0.63		1.30	1.35	
Incremental Delay, d2	2.0	0.7		0.7	1.3		0.4	0.4		0.6	0.1	
Delay (s)	10.9	9.6		12.1	14.6		5.0	5.4		10.2	9.8	
Level of Service	B	A		B	B		A	A		B	A	
Approach Delay (s)		9.8			14.4			5.3			9.9	
Approach LOS		A			B			A			A	

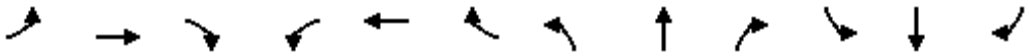
Intersection Summary			
HCM Average Control Delay	9.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	84	391	28	37	362	82	20	308	44	41	118	41
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	9	10	9	9	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00			0.99	
Flpb, ped/bikes	0.97	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.97			0.98			0.97	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1385	3013		1335	3538			3438			3303	
Flt Permitted	0.46	1.00		0.48	1.00			0.94			0.84	
Satd. Flow (perm)	674	3013		674	3538			3226			2808	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	88	412	29	39	381	86	21	324	46	43	124	43
RTOR Reduction (vph)	0	8	0	0	30	0	0	16	0	0	26	0
Lane Group Flow (vph)	88	433	0	39	437	0	0	375	0	0	184	0
Confl. Peds. (#/hr)	53		34	34		53	67		28	28		67
Heavy Vehicles (%)	8%	5%	0%	14%	6%	1%	0%	9%	20%	5%	15%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Effective Green, g (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48			0.40			0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	321	1437		321	1687			1290			1123	
v/s Ratio Prot		c0.14			0.12							
v/s Ratio Perm	0.13			0.06				c0.12			0.07	
v/c Ratio	0.27	0.30		0.12	0.26			0.29			0.16	
Uniform Delay, d1	10.2	10.4		9.4	10.1			13.2			12.5	
Progression Factor	1.60	1.65		0.79	0.78			0.46			0.64	
Incremental Delay, d2	2.1	0.5		0.7	0.3			0.6			0.3	
Delay (s)	18.4	17.6		8.2	8.2			6.7			8.3	
Level of Service	B	B		A	A			A			A	
Approach Delay (s)		17.7			8.2			6.7			8.3	
Approach LOS		B			A			A			A	

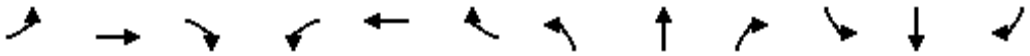
Intersection Summary			
HCM Average Control Delay	11.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	99	301	100	104	348	104	88	84	88	88	84	82
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	16	12	12	16	12
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		0.95			1.00			1.00	
Frt		1.00	0.85		0.97			0.95			0.96	
Flt Protected		0.99	1.00		0.99			0.98			0.98	
Satd. Flow (prot)		1637	1409		3032			1823			1826	
Flt Permitted		0.74	1.00		0.76			0.79			0.78	
Satd. Flow (perm)		1230	1409		2324			1456			1442	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	110	334	111	116	387	116	98	93	98	98	93	91
RTOR Reduction (vph)	0	0	53	0	31	0	0	28	0	0	26	0
Lane Group Flow (vph)	0	444	58	0	588	0	0	261	0	0	256	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		34.0	34.0		34.0			21.0			21.0	
Effective Green, g (s)		34.0	34.0		34.0			21.0			21.0	
Actuated g/C Ratio		0.52	0.52		0.52			0.32			0.32	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Grp Cap (vph)		643	737		1216			470			466	
v/s Ratio Prot												
v/s Ratio Perm		c0.36	0.04		0.25			c0.18			0.18	
v/c Ratio		0.69	0.08		0.48			0.55			0.55	
Uniform Delay, d1		11.6	7.7		9.9			18.1			18.1	
Progression Factor		2.01	5.68		0.42			1.00			1.00	
Incremental Delay, d2		5.9	0.2		1.3			4.7			4.6	
Delay (s)		29.1	44.0		5.5			22.8			22.7	
Level of Service		C	D		A			C			C	
Approach Delay (s)		32.1			5.5			22.8			22.7	
Approach LOS		C			A			C			C	

Intersection Summary			
HCM Average Control Delay	19.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	72.0%	ICU Level of Service	C
Analysis Period (min)	15		

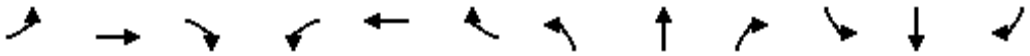
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	74	382	21	15	433	63	37	103	41	43	90	98
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	15	8	16	8	8	16	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00			0.99	
Flpb, ped/bikes	0.99	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.98			0.97			0.94	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1475	3018		1573	3001			3454			3403	
Flt Permitted	0.40	1.00		0.47	1.00			0.87			0.88	
Satd. Flow (perm)	616	3018		771	3001			3030			3014	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	82	424	23	17	481	70	41	114	46	48	100	109
RTOR Reduction (vph)	0	6	0	0	18	0	0	25	0	0	60	0
Lane Group Flow (vph)	82	441	0	17	533	0	0	176	0	0	197	0
Confl. Peds. (#/hr)	22		40	40		22	18		3	3		18
Confl. Bikes (#/hr)			2	2			1					1
Heavy Vehicles (%)	7%	5%	0%	0%	4%	2%	0%	3%	22%	0%	3%	8%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	28.0	28.0		28.0	28.0			29.0			29.0	
Effective Green, g (s)	28.0	28.0		28.0	28.0			29.0			29.0	
Actuated g/C Ratio	0.43	0.43		0.43	0.43			0.45			0.45	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	265	1300		332	1293			1352			1345	
v/s Ratio Prot		0.15			c0.18							
v/s Ratio Perm	0.13			0.02				0.06			c0.07	
v/c Ratio	0.31	0.34		0.05	0.41			0.13			0.15	
Uniform Delay, d1	12.2	12.3		10.8	12.8			10.6			10.7	
Progression Factor	0.98	1.00		1.14	0.99			0.99			0.80	
Incremental Delay, d2	2.3	0.5		0.1	0.5			0.2			0.2	
Delay (s)	14.1	12.9		12.4	13.1			10.7			8.8	
Level of Service	B	B		B	B			B			A	
Approach Delay (s)		13.1			13.1			10.7			8.8	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	12.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

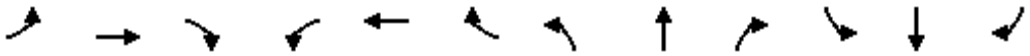


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	86	454	73	94	455	284	48	332	92	222	159	52
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.98			0.95			0.97			0.98	
Flt Protected		0.99			0.99			0.99			0.98	
Satd. Flow (prot)		3177			3073			3146			3118	
Flt Permitted		0.63			0.74			0.88			0.63	
Satd. Flow (perm)		2028			2280			2771			2008	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	96	504	81	104	506	316	53	369	102	247	177	58
RTOR Reduction (vph)	0	16	0	0	103	0	0	33	0	0	17	0
Lane Group Flow (vph)	0	665	0	0	823	0	0	491	0	0	465	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		26.0			26.0			29.0			20.0	
Effective Green, g (s)		26.0			26.0			29.0			20.0	
Actuated g/C Ratio		0.40			0.40			0.45			0.31	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		811			912			1271			618	
v/s Ratio Prot								c0.04				
v/s Ratio Perm		0.33			c0.36			0.14			c0.23	
v/c Ratio		0.82			0.90			0.39			0.96dl	
Uniform Delay, d1		17.4			18.3			12.0			20.3	
Progression Factor		1.73			1.00			1.00			0.89	
Incremental Delay, d2		8.9			13.9			0.9			8.3	
Delay (s)		39.1			32.2			12.9			26.3	
Level of Service		D			C			B			C	
Approach Delay (s)		39.1			32.2			12.9			26.3	
Approach LOS		D			C			B			C	

Intersection Summary			
HCM Average Control Delay	29.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	88.2%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

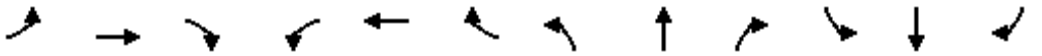
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	723	118	45	755	0	134	0	70	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	10	10	12	12	12	12	10	10	10
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			1.00				
Frt		0.98			1.00			0.95				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		2976			3031			1583				
Flt Permitted		1.00			0.84			0.80				
Satd. Flow (perm)		2976			2543			1311				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	803	131	50	839	0	149	0	78	0	0	0
RTOR Reduction (vph)	0	18	0	0	0	0	0	21	0	0	0	0
Lane Group Flow (vph)	0	916	0	0	889	0	0	206	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	custom			Perm			Perm			Perm		
Protected Phases		4 5 6 11			8			2			2	
Permitted Phases	4 6 11			8			2			2		
Actuated Green, G (s)		65.0			33.0			16.0				
Effective Green, g (s)		58.0			33.0			16.0				
Actuated g/C Ratio		0.64			0.37			0.18				
Clearance Time (s)					5.0			5.0				
Lane Grp Cap (vph)		1918			932			233				
v/s Ratio Prot		c0.31										
v/s Ratio Perm					c0.35			c0.16				
v/c Ratio		0.48			0.95			0.89				
Uniform Delay, d1		8.2			27.8			36.1				
Progression Factor		0.04			1.57			1.00				
Incremental Delay, d2		0.4			18.2			35.5				
Delay (s)		0.7			61.8			71.6				
Level of Service		A			E			E				
Approach Delay (s)		0.7			61.8			71.6			0.0	
Approach LOS		A			E			E			A	

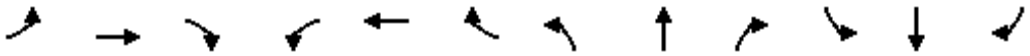
Intersection Summary			
HCM Average Control Delay	35.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	73.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	123	502	187	274	646	183	101	20	185	78	7	75
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	10	12	12	12	12	16	12	12	12	12
Total Lost time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	1.00
Frt	1.00	0.96		1.00	1.00	0.85		0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (prot)	1520	3020		1629	3257	1457		1755		1629	1714	1457
Flt Permitted	0.32	1.00		0.20	1.00	1.00		0.89		0.40	1.00	1.00
Satd. Flow (perm)	511	3020		342	3257	1457		1582		685	1714	1457
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	137	558	208	304	718	203	112	22	206	87	8	83
RTOR Reduction (vph)	0	42	0	0	0	104	0	75	0	0	0	45
Lane Group Flow (vph)	137	724	0	304	718	99	0	265	0	87	8	38
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	40.1	30.7		47.8	35.4	44.0		20.6		32.2	32.2	41.6
Effective Green, g (s)	40.1	30.7		47.8	35.4	44.0		20.6		32.2	32.2	41.6
Actuated g/C Ratio	0.45	0.34		0.53	0.39	0.49		0.23		0.36	0.36	0.46
Clearance Time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Vehicle Extension (s)	4.0	3.0		4.0	3.0	3.0		4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	333	1030		383	1281	712		362		335	613	673
v/s Ratio Prot	0.04	0.24		c0.12	0.22	0.01				c0.02	0.00	0.01
v/s Ratio Perm	0.14			c0.30		0.05		c0.17		0.07		0.02
v/c Ratio	0.41	0.70		0.79	0.56	0.14		0.73		0.26	0.01	0.06
Uniform Delay, d1	15.4	25.7		14.7	21.2	12.6		32.1		21.3	18.6	13.4
Progression Factor	1.90	1.58		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	1.0	3.6		11.4	1.8	0.1		7.9		0.4	0.0	0.0
Delay (s)	30.2	44.3		26.0	23.0	12.7		40.1		21.7	18.7	13.4
Level of Service	C	D		C	C	B		D		C	B	B
Approach Delay (s)		42.1			22.1			40.1			17.7	
Approach LOS		D			C			D			B	

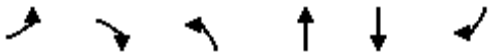
Intersection Summary			
HCM Average Control Delay	30.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	74.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	518	247	6	531	0	0	0	0	32	0	572
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	576	274	7	590	0	0	0	0	36	0	636
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		498										
pX, platoon unblocked												
vC, conflicting volume	590			576			884	1179	288	891	1179	295
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	590			576			884	1179	288	891	1179	295
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	100	100	85	100	8
cM capacity (veh/h)	961			973			19	184	700	231	184	692

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	288	288	274	203	393	36	636
Volume Left	0	0	0	7	0	36	0
Volume Right	0	0	274	0	0	0	636
cSH	1700	1700	1700	973	1700	231	692
Volume to Capacity	0.17	0.17	0.16	0.01	0.23	0.15	0.92
Queue Length 95th (ft)	0	0	0	1	0	13	307
Control Delay (s)	0.0	0.0	0.0	0.4	0.0	23.4	41.6
Lane LOS				A		C	E
Approach Delay (s)	0.0			0.1		40.6	
Approach LOS						E	

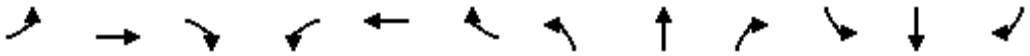
Intersection Summary				
Average Delay	12.9			
Intersection Capacity Utilization	59.7%	ICU Level of Service		B
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	550	0	537	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	611	0	597	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	306	306	597
Volume Left (vph)	306	306	597
Volume Right (vph)	0	0	0
Hadj (s)	0.58	0.58	0.29
Departure Headway (s)	7.0	7.0	5.8
Degree Utilization, x	0.59	0.59	0.95
Capacity (veh/h)	513	513	618
Control Delay (s)	18.3	18.3	49.2
Approach Delay (s)	18.3		49.2
Approach LOS	C		E

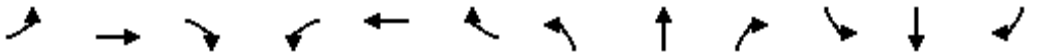
Intersection Summary			
Delay	33.5		
HCM Level of Service	D		
Intersection Capacity Utilization	54.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	340	131	126	344	0	0	0	0	72	15	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)		3.0		4.0	4.0						5.0	
Lane Util. Factor		0.95		1.00	0.95						0.95	
Frt		0.96		1.00	1.00						0.95	
Flt Protected		1.00		0.95	1.00						0.97	
Satd. Flow (prot)		3017		1574	3149						3014	
Flt Permitted		1.00		0.39	1.00						0.97	
Satd. Flow (perm)		3017		645	3149						3014	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	378	146	140	382	0	0	0	0	80	17	47
RTOR Reduction (vph)	0	48	0	0	0	0	0	0	0	0	32	0
Lane Group Flow (vph)	0	476	0	140	382	0	0	0	0	0	112	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type				pm+pt						Split		
Protected Phases		4		3	8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		36.0		49.0	49.0						27.0	
Effective Green, g (s)		36.0		49.0	49.0						27.0	
Actuated g/C Ratio		0.42		0.58	0.58						0.32	
Clearance Time (s)		3.0		4.0	4.0						5.0	
Lane Grp Cap (vph)		1278		481	1815						957	
v/s Ratio Prot		c0.16		c0.03	0.12						c0.04	
v/s Ratio Perm				0.13								
v/c Ratio		0.37		0.29	0.21						0.12	
Uniform Delay, d1		16.8		12.6	8.7						20.6	
Progression Factor		1.00		0.37	0.33						1.00	
Incremental Delay, d2		0.8		1.4	0.2						0.2	
Delay (s)		17.6		6.2	3.1						20.8	
Level of Service		B		A	A						C	
Approach Delay (s)		17.6			3.9			0.0			20.8	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	12.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	36.6%	ICU Level of Service	A
Analysis Period (min)	15		

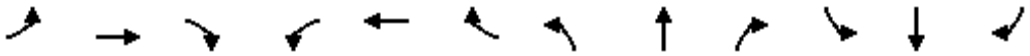
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	68	344	0	0	400	76	70	65	42	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	11	11	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0			3.0			5.0				
Lane Util. Factor	1.00	0.95			0.95			0.91				
Frt	1.00	1.00			0.98			0.96				
Flt Protected	0.95	1.00			1.00			0.98				
Satd. Flow (prot)	1629	3257			3073			4425				
Flt Permitted	0.38	1.00			1.00			0.98				
Satd. Flow (perm)	656	3257			3073			4425				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	76	382	0	0	444	84	78	72	47	0	0	0
RTOR Reduction (vph)	0	0	0	0	18	0	0	32	0	0	0	0
Lane Group Flow (vph)	76	382	0	0	510	0	0	165	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	pm+pt						Split					
Protected Phases	7	4			8		2	2				
Permitted Phases	4											
Actuated Green, G (s)	48.0	48.0			35.0			27.0				
Effective Green, g (s)	48.0	48.0			35.0			27.0				
Actuated g/C Ratio	0.56	0.56			0.41			0.32				
Clearance Time (s)	5.0	5.0			3.0			5.0				
Lane Grp Cap (vph)	485	1839			1265			1406				
v/s Ratio Prot	0.02	c0.12			c0.17			c0.04				
v/s Ratio Perm	0.07											
v/c Ratio	0.16	0.21			0.40			0.12				
Uniform Delay, d1	12.1	9.1			17.6			20.6				
Progression Factor	0.41	0.42			1.00			1.00				
Incremental Delay, d2	0.7	0.2			1.0			0.2				
Delay (s)	5.7	4.1			18.6			20.7				
Level of Service	A	A			B			C				
Approach Delay (s)		4.3			18.6			20.7			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM Average Control Delay	13.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	36.6%	ICU Level of Service	A
Analysis Period (min)	15		

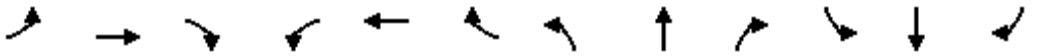
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	307	82	31	243	31	129	85	52	56	91	126
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	12	15	12	12	15	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		0.97			0.98			0.97			0.94	
Flt Protected		1.00			0.99			0.98			0.99	
Satd. Flow (prot)		2939			2979			1792			1750	
Flt Permitted		0.89			0.88			0.73			0.89	
Satd. Flow (perm)		2639			2628			1347			1565	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	43	341	91	34	270	34	143	94	58	62	101	140
RTOR Reduction (vph)	0	32	0	0	13	0	0	14	0	0	48	0
Lane Group Flow (vph)	0	443	0	0	325	0	0	281	0	0	255	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		23.0			23.0			32.0			32.0	
Effective Green, g (s)		23.0			23.0			32.0			32.0	
Actuated g/C Ratio		0.35			0.35			0.49			0.49	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		934			930			663			770	
v/s Ratio Prot												
v/s Ratio Perm		c0.17			0.12			c0.21			0.16	
v/c Ratio		0.47			0.35			0.42			0.33	
Uniform Delay, d1		16.3			15.5			10.6			10.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.7			1.0			2.0			1.2	
Delay (s)		18.0			16.5			12.6			11.2	
Level of Service		B			B			B			B	
Approach Delay (s)		18.0			16.5			12.6			11.2	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	15.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	66.8%	ICU Level of Service	C
Analysis Period (min)	15		

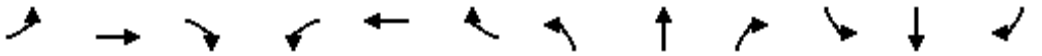
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	169	202	82	205	176	62	81	1012	109	75	471	80
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	12	10	16	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.96
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.96		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1548	2954		1593	3512		1487	3040	1347	1494	3011	1271
Flt Permitted	0.59	1.00		0.54	1.00		0.40	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	954	2954		901	3512		626	3040	1347	197	3011	1271
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	178	213	86	216	185	65	85	1065	115	79	496	84
RTOR Reduction (vph)	0	52	0	0	41	0	0	0	68	0	0	51
Lane Group Flow (vph)	178	247	0	216	209	0	85	1065	47	79	496	33
Confl. Peds. (#/hr)	31		7	7		31	37		12	12		37
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	2%	4%	0%	0%	6%	2%	3%	5%	0%	3%	6%	4%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	32.0	27.0		32.0	27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)	30.0	28.0		30.0	28.0		36.0	33.0	33.0	36.0	33.0	33.0
Actuated g/C Ratio	0.35	0.33		0.35	0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	365	973		351	1157		306	1180	523	144	1169	493
v/s Ratio Prot	0.02	0.08		c0.03	0.06		0.01	c0.35		c0.03	0.16	
v/s Ratio Perm	0.15			c0.19			0.10		0.03	0.21		0.03
v/c Ratio	0.49	0.25		0.62	0.18		0.28	0.90	0.09	0.55	0.42	0.07
Uniform Delay, d1	20.6	20.9		22.0	20.3		15.1	24.5	16.5	17.6	19.0	16.3
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.94	0.61	0.78
Incremental Delay, d2	4.6	0.6		7.8	0.3		2.2	11.2	0.3	13.0	1.0	0.2
Delay (s)	25.2	21.5		29.8	20.7		17.4	35.7	16.8	47.0	12.6	13.0
Level of Service	C	C		C	C		B	D	B	D	B	B
Approach Delay (s)		22.9			24.9			32.8			16.8	
Approach LOS		C			C			C			B	

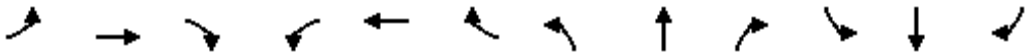
Intersection Summary			
HCM Average Control Delay	26.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	72.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	49	284	18	14	328	8	35	113	25	20	57	84
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	16	12	12	16	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00	0.99		1.00	0.98
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		0.99	1.00
Satd. Flow (prot)		1928	1382		1954	1331		1970	1452		1928	1430
Flt Permitted		0.91	1.00		0.98	1.00		0.93	1.00		0.93	1.00
Satd. Flow (perm)		1768	1382		1924	1331		1860	1452		1811	1430
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	52	299	19	15	345	8	37	119	26	21	60	88
RTOR Reduction (vph)	0	0	10	0	0	4	0	0	15	0	0	51
Lane Group Flow (vph)	0	351	9	0	360	4	0	156	11	0	81	37
Confl. Peds. (#/hr)	5		21	21		5	9		1	1		9
Heavy Vehicles (%)	5%	5%	6%	7%	4%	12%	6%	1%	4%	0%	6%	5%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Effective Green, g (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Actuated g/C Ratio		0.46	0.46		0.46	0.46		0.42	0.42		0.42	0.42
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		816	638		888	614		773	603		752	594
v/s Ratio Prot												
v/s Ratio Perm		c0.20	0.01		0.19	0.00		c0.08	0.01		0.04	0.03
v/c Ratio		0.43	0.01		0.41	0.01		0.20	0.02		0.11	0.06
Uniform Delay, d1		11.8	9.5		11.6	9.4		12.1	11.2		11.6	11.4
Progression Factor		1.00	1.00		0.47	0.45		1.33	1.73		0.96	0.93
Incremental Delay, d2		1.7	0.0		1.3	0.0		0.6	0.1		0.3	0.2
Delay (s)		13.4	9.5		6.7	4.3		16.7	19.4		11.4	10.8
Level of Service		B	A		A	A		B	B		B	B
Approach Delay (s)		13.2			6.7			17.1			11.1	
Approach LOS		B			A			B			B	

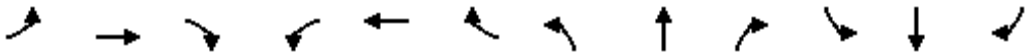
Intersection Summary			
HCM Average Control Delay	11.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	75	260	10	15	278	30	13	247	26	30	70	64
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1520	3023		1520	2996		1520	2996		1520	2823	
Flt Permitted	0.95	1.00		0.57	1.00		0.66	1.00		0.55	1.00	
Satd. Flow (perm)	1520	3023		910	2996		1052	2996		884	2823	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	83	289	11	17	309	33	14	274	29	33	78	71
RTOR Reduction (vph)	0	4	0	0	13	0	0	12	0	0	42	0
Lane Group Flow (vph)	83	296	0	17	329	0	14	291	0	33	107	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Prot			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Effective Green, g (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.11	0.49		0.34	0.34		0.42	0.42		0.42	0.42	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	164	1488		308	1014		437	1244		367	1173	
v/s Ratio Prot	c0.05	0.10			c0.11			c0.10			0.04	
v/s Ratio Perm				0.02			0.01			0.04		
v/c Ratio	0.51	0.20		0.06	0.32		0.03	0.23		0.09	0.09	
Uniform Delay, d1	27.4	9.3		14.5	16.0		11.3	12.3		11.5	11.5	
Progression Factor	0.90	0.38		0.81	0.74		0.61	0.65		1.10	1.20	
Incremental Delay, d2	10.3	0.3		0.3	0.8		0.1	0.4		0.5	0.2	
Delay (s)	34.9	3.8		12.1	12.7		7.0	8.4		13.2	14.0	
Level of Service	C	A		B	B		A	A		B	B	
Approach Delay (s)		10.5			12.7			8.3			13.8	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	38.3%	ICU Level of Service	A
Analysis Period (min)	15		

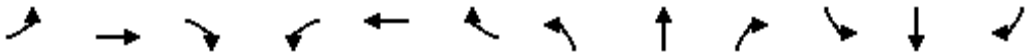
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	41	268	16	97	277	43	26	286	20	25	143	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.99		1.00	0.98			0.99			0.97	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1520	3014		1520	2979			3215			3140	
Flt Permitted	0.54	1.00		0.95	1.00			0.92			0.89	
Satd. Flow (perm)	862	3014		1520	2979			2975			2822	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	46	298	18	108	308	48	29	318	22	28	159	47
RTOR Reduction (vph)	0	7	0	0	19	0	0	7	0	0	29	0
Lane Group Flow (vph)	46	309	0	108	337	0	0	362	0	0	205	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Prot			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4						2			6		
Actuated Green, G (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Effective Green, g (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Actuated g/C Ratio	0.31	0.31		0.09	0.45			0.38			0.38	
Clearance Time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	265	927		140	1329			1144			1085	
v/s Ratio Prot		c0.10		c0.07	0.11							
v/s Ratio Perm	0.05							c0.12			0.07	
v/c Ratio	0.17	0.33		0.77	0.25			0.32			0.19	
Uniform Delay, d1	16.5	17.4		28.8	11.2			14.0			13.3	
Progression Factor	0.59	0.58		1.31	1.02			0.72			0.75	
Incremental Delay, d2	1.4	1.0		27.7	0.4			0.7			0.4	
Delay (s)	11.1	11.0		65.5	11.8			10.8			10.3	
Level of Service	B	B		E	B			B			B	
Approach Delay (s)		11.0			24.3			10.8			10.3	
Approach LOS		B			C			B			B	

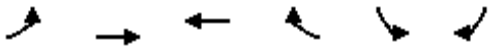
Intersection Summary			
HCM Average Control Delay	15.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	43.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	14	277	16	70	382	70	34	94	162	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	14	12	10	15	10
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			0.95				
Frt		0.99			0.98			0.92				
Flt Protected		1.00			0.99			0.99				
Satd. Flow (prot)		1585			1560			3164				
Flt Permitted		0.97			0.91			0.99				
Satd. Flow (perm)		1545			1436			3164				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	16	308	18	78	424	78	38	104	180	0	0	0
RTOR Reduction (vph)	0	2	0	0	7	0	0	138	0	0	0	0
Lane Group Flow (vph)	0	340	0	0	573	0	0	184	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		41.9			41.9			15.1				
Effective Green, g (s)		41.9			41.9			15.1				
Actuated g/C Ratio		0.64			0.64			0.23				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		3.0			3.0			8.0				
Lane Grp Cap (vph)		996			926			735				
v/s Ratio Prot												
v/s Ratio Perm		0.22			c0.40			0.06				
v/c Ratio		0.34			0.62			0.25				
Uniform Delay, d1		5.3			6.8			20.3				
Progression Factor		2.08			1.00			1.00				
Incremental Delay, d2		0.9			3.1			0.8				
Delay (s)		11.8			9.9			21.1				
Level of Service		B			A			C				
Approach Delay (s)		11.8			9.9			21.1			0.0	
Approach LOS		B			A			C			A	

Intersection Summary			
HCM Average Control Delay	13.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	85	354	427	44	66	92
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	89	373	449	46	69	97
Pedestrians		3	5		21	
Lane Width (ft)		16.0	16.0		10.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1319	491			
pX, platoon unblocked	0.87				0.87	0.87
vC, conflicting volume	517				1050	497
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	373				984	350
tC, single (s)	4.2				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	91				67	84
cM capacity (veh/h)	974				214	594

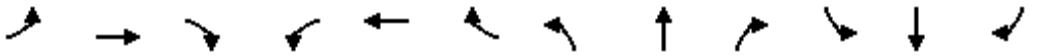
Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	462	496	69	97
Volume Left	89	0	69	0
Volume Right	0	46	0	97
cSH	974	1700	214	594
Volume to Capacity	0.09	0.29	0.33	0.16
Queue Length 95th (ft)	8	0	34	14
Control Delay (s)	2.6	0.0	29.7	12.2
Lane LOS	A		D	B
Approach Delay (s)	2.6	0.0	19.5	
Approach LOS			C	

Intersection Summary			
Average Delay	4.0		
Intersection Capacity Utilization	66.1%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	473	1	27	675	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0			4.0		
Lane Util. Factor	1.00			0.95		
Frt	1.00			1.00		
Flt Protected	1.00			1.00		
Satd. Flow (prot)	1714			3251		
Flt Permitted	1.00			0.92		
Satd. Flow (perm)	1714			3002		
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	526	1	30	750	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	527	0	0	780	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type			Perm			
Protected Phases	1 2 4			4	3	
Permitted Phases			4			
Actuated Green, G (s)	68.0			38.0		
Effective Green, g (s)	64.0			38.0		
Actuated g/C Ratio	0.71			0.42		
Clearance Time (s)				4.0		
Lane Grp Cap (vph)	1219			1268		
v/s Ratio Prot	c0.31					
v/s Ratio Perm				c0.26		
v/c Ratio	0.43			0.62		
Uniform Delay, d1	5.4			20.3		
Progression Factor	0.02			1.00		
Incremental Delay, d2	0.5			2.2		
Delay (s)	0.6			22.5		
Level of Service	A			C		
Approach Delay (s)	0.6			22.5	0.0	
Approach LOS	A			C	A	

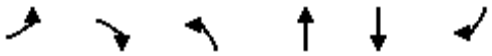
Intersection Summary			
HCM Average Control Delay	13.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	43.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	185	193	25	561	0	0	0	0	3	0	263
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	206	214	28	623	0	0	0	0	3	0	292
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	623			206			992	992	210	782	884	623
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	623			206			992	992	210	782	884	623
tC, single (s)	4.1			5.5			7.5	6.5	6.9	7.5	6.5	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.9			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			100	100	100	99	100	31
cM capacity (veh/h)	968			984			62	241	802	282	278	424

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	137	283	651	3	292
Volume Left	0	0	28	3	0
Volume Right	0	214	0	0	292
cSH	1700	1700	984	282	424
Volume to Capacity	0.08	0.17	0.03	0.01	0.69
Queue Length 95th (ft)	0	0	2	1	127
Control Delay (s)	0.0	0.0	0.7	17.9	30.3
Lane LOS			A	C	D
Approach Delay (s)	0.0		0.7	30.2	
Approach LOS				D	

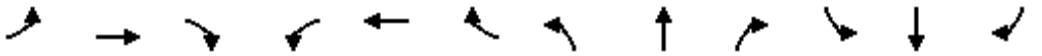
Intersection Summary			
Average Delay	6.9		
Intersection Capacity Utilization	57.9%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	188	0	586	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	209	0	651	0	0	0

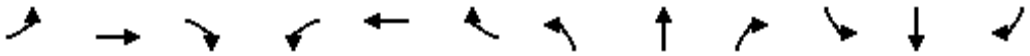
Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	104	104	651
Volume Left (vph)	104	104	651
Volume Right (vph)	0	0	0
Hadj (s)	0.58	0.58	0.29
Departure Headway (s)	6.8	6.8	4.9
Degree Utilization, x	0.20	0.20	0.88
Capacity (veh/h)	511	512	734
Control Delay (s)	10.3	10.3	32.2
Approach Delay (s)	10.3		32.2
Approach LOS	B		D

Intersection Summary			
Delay	26.9		
HCM Level of Service	D		
Intersection Capacity Utilization	46.6%	ICU Level of Service	A
Analysis Period (min)	15		



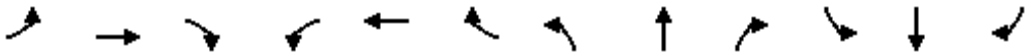
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	650	210	172	519	0	0	0	0	208	117	300
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	13	12	12	12	12	10	10	11
Total Lost time (s)		6.0	6.0		6.0					6.0	6.0	6.0
Lane Util. Factor		0.95	1.00		0.95					0.86	0.81	0.86
Frpb, ped/bikes		1.00	0.98		1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	0.94	0.85
Flt Protected		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (prot)		2978	1202		3372					1346	3704	1122
Flt Permitted		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (perm)		2978	1202		3372					1346	3704	1122
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	684	221	181	546	0	0	0	0	219	123	316
RTOR Reduction (vph)	0	0	123	0	0	0	0	0	0	0	93	92
Lane Group Flow (vph)	0	684	98	0	727	0	0	0	0	120	287	66
Confl. Peds. (#/hr)	5		3	3		5						
Heavy Vehicles (%)	0%	11%	9%	2%	4%	0%	0%	0%	0%	2%	2%	2%
Parking (#/hr)			0									0
Turn Type			Perm	Split						Split		custom
Protected Phases		2		10 12 14	10 12 14					4	4	
Permitted Phases			2									4 2
Actuated Green, G (s)		31.1	31.1		60.9					21.5	21.5	58.6
Effective Green, g (s)		31.1	31.1		60.9					21.5	21.5	58.6
Actuated g/C Ratio		0.22	0.22		0.43					0.15	0.15	0.42
Clearance Time (s)		6.0	6.0							6.0	6.0	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		662	267		1467					207	569	470
v/s Ratio Prot		c0.23			c0.22					c0.09	0.08	
v/s Ratio Perm			0.08									0.06
v/c Ratio		1.03	0.37		0.50					0.58	0.50	0.14
Uniform Delay, d1		54.5	46.1		28.5					55.1	54.4	25.1
Progression Factor		1.00	1.00		0.02					1.00	1.00	1.00
Incremental Delay, d2		43.8	3.9		0.1					3.9	0.7	0.1
Delay (s)		98.3	50.0		0.6					59.0	55.1	25.3
Level of Service		F	D		A					E	E	C
Approach Delay (s)		86.5			0.6			0.0			48.6	
Approach LOS		F			A			A			D	

Intersection Summary			
HCM Average Control Delay	48.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	28.5
Intersection Capacity Utilization	61.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



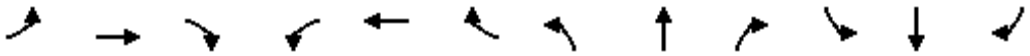
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	212	646	0	0	453	112	238	150	195	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	13	12	12	11	12	13	13	14	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0				
Lane Util. Factor	1.00	0.95			0.95	1.00	0.91	0.91				
Frt	1.00	1.00			1.00	0.85	1.00	0.92				
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00				
Satd. Flow (prot)	1574	3366			3149	1457	1531	2963				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	1.00				
Satd. Flow (perm)	1574	3366			3149	1457	1531	2963				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	236	718	0	0	503	124	264	167	217	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	98	0	135	0	0	0	0
Lane Group Flow (vph)	236	718	0	0	503	26	222	291	0	0	0	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Split					Perm	Split					
Protected Phases	2 4 8	2 4 8			10		12	12				
Permitted Phases						10						
Actuated Green, G (s)	71.1	71.1			24.5	24.5	18.4	18.4				
Effective Green, g (s)	71.1	71.1			24.5	24.5	18.4	18.4				
Actuated g/C Ratio	0.51	0.51			0.18	0.18	0.13	0.13				
Clearance Time (s)					6.0	6.0	6.0	6.0				
Vehicle Extension (s)					3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	799	1709			551	255	201	389				
v/s Ratio Prot	0.15	c0.21			c0.16		c0.14	0.10				
v/s Ratio Perm						0.02						
v/c Ratio	0.30	0.42			0.91	0.10	1.10	0.75				
Uniform Delay, d1	19.9	21.6			56.7	48.5	60.8	58.6				
Progression Factor	0.07	0.07			1.00	1.00	1.00	1.00				
Incremental Delay, d2	0.1	0.1			19.6	0.2	94.2	7.6				
Delay (s)	1.5	1.5			76.3	48.7	155.0	66.2				
Level of Service	A	A			E	D	F	E				
Approach Delay (s)		1.5			70.8			96.6			0.0	
Approach LOS		A			E			F			A	

Intersection Summary			
HCM Average Control Delay	48.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	28.0
Intersection Capacity Utilization	52.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	220	326	75	35	356	45	88	824	62	59	749	104
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	14	12	10	10	12	9	10	12
Total Lost time (s)	4.0	4.0	5.0	4.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1546	1556	1328	1595	1760		1532	2990		1509	2919	
Flt Permitted	0.23	1.00	1.00	0.42	1.00		0.17	1.00		0.15	1.00	
Satd. Flow (perm)	374	1556	1328	703	1760		267	2990		238	2919	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	232	343	79	37	375	47	93	867	65	62	788	109
RTOR Reduction (vph)	0	0	52	0	5	0	0	6	0	0	12	0
Lane Group Flow (vph)	232	343	27	37	417	0	93	926	0	62	885	0
Confl. Peds. (#/hr)	33		3	3		33	42		8	8		42
Confl. Bikes (#/hr)							1					1
Heavy Vehicles (%)	3%	8%	6%	0%	7%	5%	4%	5%	11%	2%	6%	9%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	38.2	31.2	31.2	32.4	28.3		39.6	34.1		39.6	34.1	
Effective Green, g (s)	36.2	32.2	31.2	30.4	28.3		37.6	34.1		37.6	34.1	
Actuated g/C Ratio	0.40	0.36	0.35	0.34	0.31		0.42	0.38		0.42	0.38	
Clearance Time (s)	3.0	5.0	5.0	3.0	5.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	229	557	461	268	554		175	1134		163	1107	
v/s Ratio Prot	c0.07	0.22		0.00	0.24		c0.03	c0.31		0.02	0.30	
v/s Ratio Perm	c0.34		0.02	0.04			0.20			0.14		
v/c Ratio	1.01	0.62	0.06	0.14	0.75		0.53	0.82		0.38	0.80	
Uniform Delay, d1	26.3	23.8	19.6	20.4	27.7		17.9	25.1		17.7	24.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	62.9	5.0	0.2	0.2	9.2		3.1	6.5		1.5	6.1	
Delay (s)	89.2	28.8	19.8	20.7	36.8		21.0	31.6		19.2	30.9	
Level of Service	F	C	B	C	D		C	C		B	C	
Approach Delay (s)		49.1			35.5			30.7			30.2	
Approach LOS		D			D			C			C	

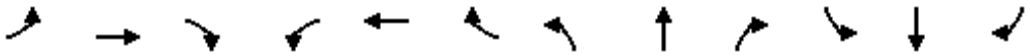
Intersection Summary			
HCM Average Control Delay	35.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	89.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	82.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	54	301	26	5	311	19	78	80	16	11	44	82
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	10	10	10	12	15	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Frpb, ped/bikes		1.00	0.97		1.00	0.97		1.00			0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.99			0.92	
Flt Protected		0.99	1.00		1.00	1.00		0.98			1.00	
Satd. Flow (prot)		1910	1482		1600	1198		1904			1792	
Flt Permitted		0.91	1.00		1.00	1.00		0.83			0.98	
Satd. Flow (perm)		1761	1482		1595	1198		1624			1762	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	57	317	27	5	327	20	82	84	17	12	46	86
RTOR Reduction (vph)	0	0	14	0	0	10	0	6	0	0	50	0
Lane Group Flow (vph)	0	374	13	0	332	10	0	177	0	0	94	0
Confl. Peds. (#/hr)	6		11	11		6	4		8	8		4
Confl. Bikes (#/hr)	1		1	1		1			1	1		
Heavy Vehicles (%)	0%	7%	0%	0%	5%	16%	0%	0%	0%	10%	0%	3%
Turn Type	Perm		Perm	Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Effective Green, g (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Actuated g/C Ratio		0.49	0.49		0.49	0.49		0.42			0.42	
Clearance Time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		867	730		785	590		675			732	
v/s Ratio Prot												
v/s Ratio Perm		c0.21	0.01		0.21	0.01		c0.11			0.05	
v/c Ratio		0.43	0.02		0.42	0.02		0.26			0.13	
Uniform Delay, d1		10.6	8.5		10.6	8.4		12.5			11.7	
Progression Factor		1.00	1.00		1.67	2.20		1.00			1.51	
Incremental Delay, d2		1.6	0.0		1.6	0.0		0.9			0.4	
Delay (s)		12.2	8.5		19.3	18.6		13.4			18.1	
Level of Service		B	A		B	B		B			B	
Approach Delay (s)		12.0			19.2			13.4			18.1	
Approach LOS		B			B			B			B	

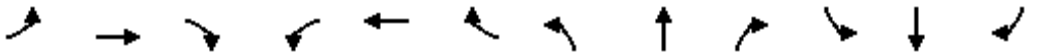
Intersection Summary			
HCM Average Control Delay	15.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	77.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	86	219	35	6	176	6	84	228	22	9	53	73
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.98		1.00	0.96		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.93	
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		1.00	
Satd. Flow (prot)		1664	1392		1608	1497		1734	1390		1571	
Flt Permitted		0.85	1.00		0.99	1.00		0.88	1.00		0.98	
Satd. Flow (perm)		1439	1392		1592	1497		1553	1390		1541	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	91	231	37	6	185	6	88	240	23	9	56	77
RTOR Reduction (vph)	0	0	24	0	0	4	0	0	12	0	39	0
Lane Group Flow (vph)	0	322	13	0	191	2	0	328	11	0	103	0
Confl. Peds. (#/hr)	11		17	17		11	4		17	17		4
Confl. Bikes (#/hr)	1		1	1		1	1					1
Heavy Vehicles (%)	0%	9%	5%	33%	11%	0%	6%	1%	6%	0%	0%	8%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Effective Green, g (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Actuated g/C Ratio		0.35	0.35		0.35	0.35		0.49	0.49		0.49	
Clearance Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Grp Cap (vph)		509	493		563	530		765	684		759	
v/s Ratio Prot												
v/s Ratio Perm		c0.22	0.01		0.12	0.00		c0.21	0.01		0.07	
v/c Ratio		0.63	0.03		0.34	0.00		0.43	0.02		0.14	
Uniform Delay, d1		17.5	13.7		15.4	13.6		10.6	8.4		9.0	
Progression Factor		1.87	3.33		0.96	0.96		0.32	0.25		1.14	
Incremental Delay, d2		5.5	0.1		1.6	0.0		0.2	0.0		0.4	
Delay (s)		38.3	45.7		16.4	13.1		3.6	2.1		10.6	
Level of Service		D	D		B	B		A	A		B	
Approach Delay (s)		39.0			16.3			3.5			10.6	
Approach LOS		D			B			A			B	

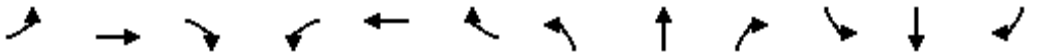
Intersection Summary			
HCM Average Control Delay	19.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	78.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	166	23	35	9	27	6	43	286	19	6	201	115
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.97		0.99			1.00			1.00	0.95
Flpb, ped/bikes		0.98	1.00		1.00			1.00			1.00	1.00
Frt		1.00	0.85		0.98			0.99			1.00	0.85
Flt Protected		0.96	1.00		0.99			0.99			1.00	1.00
Satd. Flow (prot)		1772	1390		1835			1970			1873	1328
Flt Permitted		0.79	1.00		0.94			0.95			0.99	1.00
Satd. Flow (perm)		1466	1390		1749			1874			1858	1328
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	184	26	39	10	30	7	48	318	21	7	223	128
RTOR Reduction (vph)	0	0	23	0	5	0	0	3	0	0	0	65
Lane Group Flow (vph)	0	210	16	0	42	0	0	384	0	0	230	63
Confl. Peds. (#/hr)	49		22	22		49	34		17	17		34
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	9%	0%	7%	0%	0%	0%	0%	2%	0%	0%	9%	9%
Turn Type	pm+pt		Perm	Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		27.0	27.0		17.0			32.0			32.0	32.0
Effective Green, g (s)		27.0	27.0		17.0			32.0			32.0	32.0
Actuated g/C Ratio		0.42	0.42		0.26			0.49			0.49	0.49
Clearance Time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		647	577		457			923			915	654
v/s Ratio Prot		c0.04										
v/s Ratio Perm		0.09	0.01		0.02			c0.20			0.12	0.05
v/c Ratio		0.32	0.03		0.09			0.42			0.25	0.10
Uniform Delay, d1		12.8	11.2		18.2			10.5			9.6	8.8
Progression Factor		0.85	1.52		1.00			0.42			0.53	0.31
Incremental Delay, d2		1.1	0.1		0.4			1.1			0.6	0.3
Delay (s)		12.1	17.2		18.6			5.6			5.7	3.0
Level of Service		B	B		B			A			A	A
Approach Delay (s)		12.9			18.6			5.6			4.7	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	7.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	60.7%	ICU Level of Service	B
Analysis Period (min)	15		

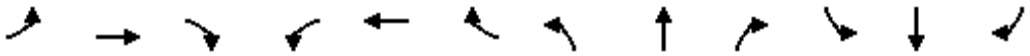
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	990	222	333	1149	0	0	0	0	275	201	376
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	11	8	8	8	11	12	14
Total Lost time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Lane Util. Factor		0.91		0.97	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00		1.00	1.00					1.00	0.99	0.99
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.97		1.00	1.00					1.00	0.94	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.99	1.00
Satd. Flow (prot)		4322		3083	3226					1419	2711	1355
Flt Permitted		1.00		0.16	1.00					0.95	0.99	1.00
Satd. Flow (perm)		4322		526	3226					1419	2711	1355
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1042	234	351	1209	0	0	0	0	289	212	396
RTOR Reduction (vph)	0	34	0	0	0	0	0	0	0	0	46	46
Lane Group Flow (vph)	0	1242	0	351	1209	0	0	0	0	234	407	164
Confl. Peds. (#/hr)	6		4	4		6	2					2
Heavy Vehicles (%)	0%	11%	7%	4%	6%	0%	0%	0%	0%	6%	4%	8%
Turn Type				pm+pt						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Actuated Green, G (s)		43.2		58.1	56.6					21.4	21.4	21.4
Effective Green, g (s)		43.2		58.1	56.6					21.4	21.4	21.4
Actuated g/C Ratio		0.48		0.65	0.63					0.24	0.24	0.24
Clearance Time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Vehicle Extension (s)		7.0		3.5	7.0					3.5	3.5	3.5
Lane Grp Cap (vph)		2075		592	2029					337	645	322
v/s Ratio Prot		0.29		0.06	c0.37							
v/s Ratio Perm				0.32						c0.16	0.15	0.12
v/c Ratio		0.60		0.59	0.60					0.69	0.63	0.51
Uniform Delay, d1		17.1		19.3	9.9					31.3	30.8	29.7
Progression Factor		1.00		0.65	0.61					1.00	1.00	1.00
Incremental Delay, d2		1.3		0.7	0.5					6.3	2.1	1.5
Delay (s)		18.4		13.3	6.6					37.6	32.9	31.2
Level of Service		B		B	A					D	C	C
Approach Delay (s)		18.4			8.1			0.0			33.7	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	17.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	109.9%	ICU Level of Service	H
Analysis Period (min)	15		

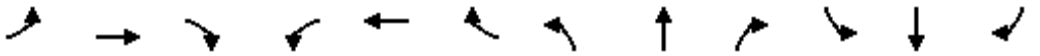
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	311	954	0	0	933	234	549	365	681	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	11	12	12	12	12	12	12	12
Total Lost time (s)	6.0	6.0			6.0			6.0				
Lane Util. Factor	1.00	0.95			0.91			0.91				
Frpb, ped/bikes	1.00	1.00			1.00			1.00				
Flpb, ped/bikes	1.00	1.00			1.00			1.00				
Frt	1.00	1.00			0.97			0.94				
Flt Protected	0.95	1.00			1.00			0.98				
Satd. Flow (prot)	1503	3138			4349			4339				
Flt Permitted	0.12	1.00			1.00			0.98				
Satd. Flow (perm)	192	3138			4349			4339				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	327	1004	0	0	982	246	578	384	717	0	0	0
RTOR Reduction (vph)	0	0	0	0	48	0	0	31	0	0	0	0
Lane Group Flow (vph)	327	1004	0	0	1180	0	0	1648	0	0	0	0
Confl. Peds. (#/hr)	4					4						
Heavy Vehicles (%)	10%	9%	0%	0%	6%	4%	4%	3%	5%	0%	0%	0%
Turn Type	pm+pt						Perm					
Protected Phases	5	2			6			8				
Permitted Phases	2						8					
Actuated Green, G (s)	40.0	40.0			27.0			38.0				
Effective Green, g (s)	40.0	40.0			27.0			38.0				
Actuated g/C Ratio	0.44	0.44			0.30			0.42				
Clearance Time (s)	6.0	6.0			6.0			6.0				
Vehicle Extension (s)	3.5	7.0			7.0			5.0				
Lane Grp Cap (vph)	187	1395			1305			1832				
v/s Ratio Prot	c0.14	0.32			0.27							
v/s Ratio Perm	c0.64							0.38				
v/c Ratio	1.75	0.72			0.90			1.09dr				
Uniform Delay, d1	19.9	20.4			30.3			24.2				
Progression Factor	1.31	0.49			0.63			1.00				
Incremental Delay, d2	354.2	2.6			8.2			6.8				
Delay (s)	380.2	12.6			27.3			31.0				
Level of Service	F	B			C			C				
Approach Delay (s)		102.9			27.3			31.0			0.0	
Approach LOS		F			C			C			A	

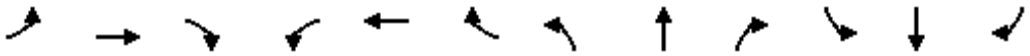
Intersection Summary			
HCM Average Control Delay	52.5	HCM Level of Service	D
HCM Volume to Capacity ratio	1.27		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	109.9%	ICU Level of Service	H
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	105	941	226	78	874	51	226	178	40	76	111	91
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	11	12	12	10	10	13	10	10	10
Total Lost time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.97		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1565	3061	1291	1604	3231		1446	3008		1544	2784	
Flt Permitted	0.20	1.00	1.00	0.20	1.00		0.55	1.00		0.61	1.00	
Satd. Flow (perm)	331	3061	1291	331	3231		835	3008		990	2784	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	111	991	238	82	920	54	238	187	42	80	117	96
RTOR Reduction (vph)	0	0	105	0	4	0	0	22	0	0	78	0
Lane Group Flow (vph)	111	991	133	82	970	0	238	207	0	80	135	0
Confl. Peds. (#/hr)	3		12	12		3	9		6	6		9
Heavy Vehicles (%)	2%	8%	5%	3%	5%	3%	10%	3%	2%	3%	7%	4%
Parking (#/hr)			0									
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	51.6	43.7	50.2	44.4	40.1		25.1	18.6		20.9	16.5	
Effective Green, g (s)	51.6	43.7	50.2	44.4	40.1		25.1	18.6		20.9	16.5	
Actuated g/C Ratio	0.57	0.49	0.56	0.49	0.45		0.28	0.21		0.23	0.18	
Clearance Time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0		3.0	7.0		3.0	7.0	
Lane Grp Cap (vph)	298	1486	720	224	1440		277	622		257	510	
v/s Ratio Prot	c0.03	c0.32	0.01	0.02	0.30		c0.06	0.07		0.02	0.05	
v/s Ratio Perm	0.18		0.09	0.16			c0.18			0.06		
v/c Ratio	0.37	0.67	0.18	0.37	0.67		0.86	0.33		0.31	0.26	
Uniform Delay, d1	19.7	17.6	9.8	22.8	19.8		29.8	30.4		28.0	31.5	
Progression Factor	0.80	0.66	0.89	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.1	1.4	0.1	1.0	2.5		22.3	1.1		0.7	1.0	
Delay (s)	17.7	13.1	8.8	23.9	22.3		52.1	31.5		28.7	32.5	
Level of Service	B	B	A	C	C		D	C		C	C	
Approach Delay (s)		12.7			22.4			42.0			31.5	
Approach LOS		B			C			D			C	

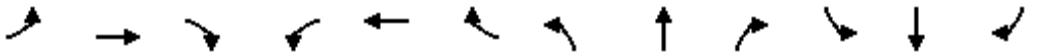
Intersection Summary			
HCM Average Control Delay	22.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	76.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	62	329	286	81	215	102	329	382	161	91	258	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	12	11	12	12	11	13	12	10	11	12
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.93		1.00	0.95		1.00	0.96		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1635	2916		1463	3047		1589	3182		1549	3135	
Flt Permitted	0.52	1.00		0.23	1.00		0.46	1.00		0.44	1.00	
Satd. Flow (perm)	888	2916		359	3047		772	3182		713	3135	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	65	346	301	85	226	107	346	402	169	96	272	57
RTOR Reduction (vph)	0	144	0	0	52	0	0	43	0	0	17	0
Lane Group Flow (vph)	65	503	0	85	281	0	346	528	0	96	312	0
Confl. Peds. (#/hr)	20					20	1		2	2		1
Heavy Vehicles (%)	4%	5%	6%	13%	6%	5%	4%	6%	5%	3%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	35.4	28.4		36.2	28.8		53.2	41.9		38.6	31.3	
Effective Green, g (s)	35.4	28.4		36.2	28.8		53.2	41.9		38.6	31.3	
Actuated g/C Ratio	0.34	0.27		0.34	0.27		0.51	0.40		0.37	0.30	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.5	7.0		3.5	7.0		3.5	7.0		3.5	7.0	
Lane Grp Cap (vph)	349	789		202	836		530	1270		320	935	
v/s Ratio Prot	0.01	c0.17		c0.03	0.09		c0.11	0.17		0.02	0.10	
v/s Ratio Perm	0.05			0.12			c0.22			0.09		
v/c Ratio	0.19	0.64		0.42	0.34		0.65	0.42		0.30	0.33	
Uniform Delay, d1	24.0	33.8		24.8	30.5		16.6	22.7		22.4	28.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	3.9		1.7	1.1		3.0	1.0		0.6	1.0	
Delay (s)	24.3	37.7		26.4	31.6		19.6	23.7		23.0	29.7	
Level of Service	C	D		C	C		B	C		C	C	
Approach Delay (s)		36.4			30.5			22.2			28.2	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM Average Control Delay	28.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	73.3%	ICU Level of Service	D
Analysis Period (min)	15		

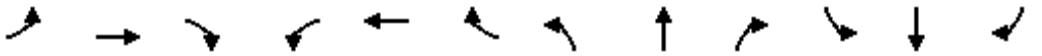
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	169	402	612	6	409	110	201	617	7	84	385	105
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	9	11	12	9	9	12
Total Lost time (s)	3.0	4.0			4.0		3.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95			0.95		0.97	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.91			0.97		1.00	1.00		1.00	0.97	
Flt Protected	0.95	1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1659	2533			2888		2786	3187		1451	2800	
Flt Permitted	0.25	1.00			0.94		0.35	1.00		0.28	1.00	
Satd. Flow (perm)	440	2533			2714		1032	3187		421	2800	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	188	447	680	7	454	122	223	686	8	93	428	117
RTOR Reduction (vph)	0	200	0	0	24	0	0	1	0	0	20	0
Lane Group Flow (vph)	188	927	0	0	559	0	223	693	0	93	525	0
Confl. Peds. (#/hr)	9		11	11		9	11		14	14		11
Heavy Vehicles (%)	3%	6%	18%	50%	6%	6%	7%	3%	50%	6%	7%	2%
Turn Type	pm+pt			Perm			pm+pt			pm+pt		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	47.2	47.2			32.7		52.4	43.4		50.2	42.8	
Effective Green, g (s)	47.2	47.2			32.7		52.4	43.4		50.2	42.8	
Actuated g/C Ratio	0.43	0.43			0.30		0.48	0.39		0.46	0.39	
Clearance Time (s)	3.0	4.0			4.0		3.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	316	1087			807		635	1257		261	1089	
v/s Ratio Prot	0.06	c0.37					c0.03	c0.22		0.02	0.19	
v/s Ratio Perm	0.19				0.21		0.14			0.14		
v/c Ratio	0.59	0.95dr			0.69		0.35	0.55		0.36	0.48	
Uniform Delay, d1	21.6	28.3			34.2		16.9	25.8		18.2	25.3	
Progression Factor	1.00	1.00			1.00		0.92	0.72		1.00	1.00	
Incremental Delay, d2	3.0	6.6			2.6		0.3	1.5		0.8	1.5	
Delay (s)	24.6	34.9			36.8		15.8	20.0		19.0	26.8	
Level of Service	C	C			D		B	C		B	C	
Approach Delay (s)		33.4			36.8			19.0			25.7	
Approach LOS		C			D			B			C	

Intersection Summary			
HCM Average Control Delay	28.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	85.7%	ICU Level of Service	E
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	52	117	343	858	132	13	112	809	278	10	968	45
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)	4.0	5.0	4.0	4.0	5.0		4.0	5.0	4.0	4.0	5.0	4.0
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.98	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1676	1962	1435	3159	1939		1660	3288	1395	1139	3257	1425
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.10	1.00	1.00	0.33	1.00	1.00
Satd. Flow (perm)	1676	1962	1435	3159	1939		183	3288	1395	401	3257	1425
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	54	121	354	885	136	13	115	834	287	10	998	46
RTOR Reduction (vph)	0	0	9	0	3	0	0	0	84	0	0	29
Lane Group Flow (vph)	54	121	345	885	146	0	115	834	203	10	998	17
Confl. Peds. (#/hr)	10		16	16		10	4		6	6		4
Confl. Bikes (#/hr)			4	4								
Heavy Vehicles (%)	2%	4%	5%	5%	4%	0%	3%	4%	8%	50%	5%	6%
Turn Type	Prot		pm+ov	Prot			pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases			4				2		2	6		6
Actuated Green, G (s)	6.9	12.9	28.7	29.0	35.0		54.1	48.7	77.7	35.7	34.3	41.2
Effective Green, g (s)	6.9	12.9	28.7	29.0	35.0		54.1	48.7	77.7	35.7	34.3	41.2
Actuated g/C Ratio	0.06	0.12	0.26	0.26	0.32		0.49	0.44	0.71	0.32	0.31	0.37
Clearance Time (s)	4.0	5.0	4.0	4.0	5.0		4.0	5.0	4.0	4.0	5.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	105	230	374	833	617		302	1456	985	140	1016	534
v/s Ratio Prot	0.03	0.06	c0.13	c0.28	0.08		0.05	0.25	0.05	0.00	c0.31	0.00
v/s Ratio Perm			0.11				0.13		0.09	0.02		0.01
v/c Ratio	0.51	0.53	0.92	1.06	0.24		0.38	0.57	0.21	0.07	0.98	0.03
Uniform Delay, d1	49.9	45.7	39.6	40.5	27.6		20.0	22.9	5.5	25.3	37.5	21.8
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.13	1.12	1.12
Incremental Delay, d2	4.2	2.2	27.8	49.1	0.2		0.8	1.6	0.1	0.2	20.5	0.0
Delay (s)	54.1	47.8	67.4	89.6	27.8		20.8	24.5	5.7	28.8	62.6	24.5
Level of Service	D	D	E	F	C		C	C	A	C	E	C
Approach Delay (s)		61.6			80.7			19.8			60.6	
Approach LOS		E			F			B			E	

Intersection Summary			
HCM Average Control Delay	53.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	88.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

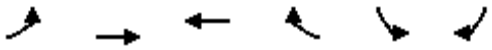
Movement	EBT	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR	SBR2
Lane Configurations												
Volume (vph)	427	952	570	14	3	14	3	47	10	0	2	4
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	12	12	16	12	12	16	12	12
Total Lost time (s)	5.5	4.0	5.0				4.5			4.5		
Lane Util. Factor	0.95	1.00	1.00				1.00			1.00		
Frpb, ped/bikes	1.00	1.00	1.00				1.00			0.98		
Flpb, ped/bikes	1.00	1.00	1.00				1.00			1.00		
Frt	1.00	1.00	1.00				0.91			0.95		
Flt Protected	1.00	0.95	1.00				0.99			0.97		
Satd. Flow (prot)	2956	1477	1580				1727			1852		
Flt Permitted	1.00	0.23	1.00				0.91			0.76		
Satd. Flow (perm)	2956	350	1580				1586			1449		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	449	1002	600	15	3	15	3	49	11	0	2	4
RTOR Reduction (vph)	0	0	1	0	0	0	46	0	0	4	0	0
Lane Group Flow (vph)	449	1002	614	0	0	0	24	0	0	13	0	0
Confl. Peds. (#/hr)		7		6		3					3	
Confl. Bikes (#/hr)		1										
Heavy Vehicles (%)	8%	8%	6%	0%	0%	8%	0%	5%	0%	0%	0%	0%
Turn Type		pm+pt			Perm	Perm			Perm			
Protected Phases	8	7	4				2			6		
Permitted Phases		4			2	2			6			
Actuated Green, G (s)	16.5	86.2	86.2				6.1			6.1		
Effective Green, g (s)	16.5	86.2	86.2				6.1			6.1		
Actuated g/C Ratio	0.16	0.85	0.85				0.06			0.06		
Clearance Time (s)	5.5	4.0	5.0				4.5			4.5		
Vehicle Extension (s)	3.0	3.0	3.0				3.0			3.0		
Lane Grp Cap (vph)	479	1018	1338				95			87		
v/s Ratio Prot	0.15	c0.63	0.39									
v/s Ratio Perm		c0.20					c0.02			0.01		
v/c Ratio	0.94	0.98	0.46				0.25			0.15		
Uniform Delay, d1	42.1	14.0	2.0				45.7			45.4		
Progression Factor	1.00	1.00	1.00				1.00			1.00		
Incremental Delay, d2	28.1	24.2	1.1				1.4			0.8		
Delay (s)	70.3	38.2	3.1				47.1			46.2		
Level of Service	E	D	A				D			D		
Approach Delay (s)	70.3		24.8				47.1			46.2		
Approach LOS	E		C				D			D		

Intersection Summary			
HCM Average Control Delay	30.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	101.8	Sum of lost time (s)	8.5
Intersection Capacity Utilization	85.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



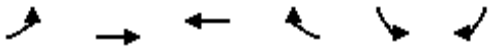
Movement	NER
Lane Configurations	
Volume (vph)	421
Ideal Flow (vphpl)	1800
Lane Width	12
Total Lost time (s)	4.0
Lane Util. Factor	0.88
Frpb, ped/bikes	1.00
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	2470
Flt Permitted	1.00
Satd. Flow (perm)	2470
Peak-hour factor, PHF	0.95
Adj. Flow (vph)	443
RTOR Reduction (vph)	0
Lane Group Flow (vph)	443
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Heavy Vehicles (%)	9%
Turn Type	Over
Protected Phases	7
Permitted Phases	
Actuated Green, G (s)	65.2
Effective Green, g (s)	65.2
Actuated g/C Ratio	0.64
Clearance Time (s)	4.0
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	1582
v/s Ratio Prot	0.18
v/s Ratio Perm	
v/c Ratio	0.28
Uniform Delay, d1	8.0
Progression Factor	1.00
Incremental Delay, d2	0.1
Delay (s)	8.1
Level of Service	A
Approach Delay (s)	
Approach LOS	

Intersection Summary



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	214	758	1303	66	41	235
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.99		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1629	3257	3234		1629	1457
Flt Permitted	0.11	1.00	1.00		0.95	1.00
Satd. Flow (perm)	191	3257	3234		1629	1457
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	238	842	1448	73	46	261
RTOR Reduction (vph)	0	0	6	0	0	42
Lane Group Flow (vph)	238	842	1515	0	46	219
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)	42.0	42.0	42.0		15.0	15.0
Effective Green, g (s)	42.0	42.0	42.0		15.0	15.0
Actuated g/C Ratio	0.65	0.65	0.65		0.23	0.23
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Lane Grp Cap (vph)	123	2105	2090		376	336
v/s Ratio Prot		0.26	0.47		0.03	
v/s Ratio Perm	c1.25					c0.15
v/c Ratio	1.93	0.40	0.73		0.12	0.65
Uniform Delay, d1	11.5	5.5	7.7		19.8	22.6
Progression Factor	1.00	1.00	0.77		1.07	1.05
Incremental Delay, d2	449.1	0.6	1.3		0.7	9.5
Delay (s)	460.6	6.1	7.2		21.8	33.4
Level of Service	F	A	A		C	C
Approach Delay (s)		106.2	7.2		31.6	
Approach LOS		F	A		C	

Intersection Summary			
HCM Average Control Delay	46.6	HCM Level of Service	D
HCM Volume to Capacity ratio	1.59		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	58	714	1287	196	135	76
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	12	10	11	12	10	10
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frpb, ped/bikes		1.00	1.00		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.98		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2928	2977		1464	1373
Flt Permitted		0.70	1.00		0.95	1.00
Satd. Flow (perm)		2068	2977		1464	1373
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	61	752	1355	206	142	80
RTOR Reduction (vph)	0	0	19	0	0	34
Lane Group Flow (vph)	0	813	1542	0	142	46
Confl. Peds. (#/hr)	1			1		
Confl. Bikes (#/hr)	1			1		
Heavy Vehicles (%)	4%	9%	8%	12%	9%	4%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		38.0	38.0		19.0	19.0
Effective Green, g (s)		38.0	38.0		19.0	19.0
Actuated g/C Ratio		0.58	0.58		0.29	0.29
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		1209	1740		428	401
v/s Ratio Prot			c0.52		c0.10	
v/s Ratio Perm		0.39				0.03
v/c Ratio		0.67	0.89		0.33	0.11
Uniform Delay, d1		9.2	11.6		18.0	16.8
Progression Factor		0.69	1.00		0.96	1.05
Incremental Delay, d2		2.8	7.1		2.0	0.6
Delay (s)		9.2	18.7		19.3	18.2
Level of Service		A	B		B	B
Approach Delay (s)		9.2	18.7		18.9	
Approach LOS		A	B		B	

Intersection Summary			
HCM Average Control Delay	15.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.2%	ICU Level of Service	E
Analysis Period (min)	15		

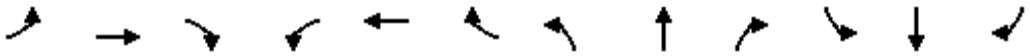
c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	686	175	107	1182	482	83
Ideal Flow (vphpl)	2300	1800	1800	2300	1800	1800
Lane Width	15	12	14	16	15	12
Total Lost time (s)	5.0		5.0	5.0	5.0	5.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.97		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	2222		1770	2436	1844	1471
Flt Permitted	1.00		0.12	1.00	0.95	1.00
Satd. Flow (perm)	2222		233	2436	1844	1471
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	700	179	109	1206	492	85
RTOR Reduction (vph)	12	0	0	0	0	59
Lane Group Flow (vph)	867	0	109	1206	492	26
Confl. Peds. (#/hr)		4	4			8
Heavy Vehicles (%)	11%	7%	3%	7%	2%	2%
Turn Type			Perm			Perm
Protected Phases	4			8	2	
Permitted Phases			8			2
Actuated Green, G (s)	44.2		44.2	44.2	24.4	24.4
Effective Green, g (s)	44.2		44.2	44.2	24.4	24.4
Actuated g/C Ratio	0.56		0.56	0.56	0.31	0.31
Clearance Time (s)	5.0		5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1250		131	1370	572	457
v/s Ratio Prot	0.39			c0.50	c0.27	
v/s Ratio Perm			0.47			0.02
v/c Ratio	0.69		0.83	0.88	0.86	0.06
Uniform Delay, d1	12.3		14.1	14.9	25.5	19.0
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	1.7		34.1	6.9	15.5	0.2
Delay (s)	14.0		48.3	21.8	41.0	19.3
Level of Service	B		D	C	D	B
Approach Delay (s)	14.0			24.0	37.8	
Approach LOS	B			C	D	

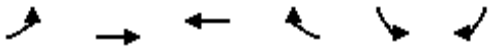
Intersection Summary			
HCM Average Control Delay	23.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	78.6	Sum of lost time (s)	10.0
Intersection Capacity Utilization	87.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	738	99	258	1220	9	111	0	187	1	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	15	13	11	11	12	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0	4.0	3.0	3.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00		0.95	
Satd. Flow (prot)	1881	3213	1422	1589	3138	1366		1642	1443		969	
Flt Permitted	0.20	1.00	1.00	0.26	1.00	1.00		0.76	1.00		0.61	
Satd. Flow (perm)	397	3213	1422	430	3138	1366		1309	1443		626	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	820	110	287	1356	10	123	0	208	1	0	0
RTOR Reduction (vph)	0	0	53	0	0	3	0	0	175	0	0	0
Lane Group Flow (vph)	1	820	57	287	1356	7	0	123	33	0	1	0
Heavy Vehicles (%)	0%	10%	4%	4%	9%	12%	18%	0%	6%	100%	0%	0%
Turn Type	Perm		Perm	custom		custom	Perm		Perm	Perm		
Protected Phases		4		3	3 8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)	44.4	44.4	44.4	63.7	63.7	63.7		13.3	13.3		13.3	
Effective Green, g (s)	44.4	44.4	44.4	63.7	63.7	63.7		13.3	13.3		13.3	
Actuated g/C Ratio	0.52	0.52	0.52	0.75	0.75	0.75		0.16	0.16		0.16	
Clearance Time (s)	4.0	4.0	4.0	3.0		4.0		4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0		3.0	
Lane Grp Cap (vph)	207	1678	743	545	2352	1024		205	226		98	
v/s Ratio Prot		0.26		0.10	c0.43							
v/s Ratio Perm	0.00		0.04	0.29		0.01		c0.09	0.02		0.00	
v/c Ratio	0.00	0.49	0.08	0.53	0.58	0.01		0.60	0.14		0.01	
Uniform Delay, d1	9.7	13.0	10.1	4.9	4.7	2.7		33.4	30.9		30.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	0.0	1.0	0.2	0.9	0.3	0.0		4.7	0.3		0.0	
Delay (s)	9.8	14.0	10.3	5.8	5.0	2.7		38.0	31.2		30.3	
Level of Service	A	B	B	A	A	A		D	C		C	
Approach Delay (s)		13.6			5.2			33.8			30.3	
Approach LOS		B			A			C			C	

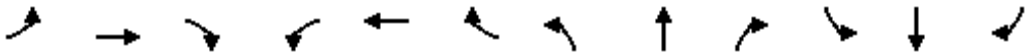
Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	55.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	13	817	844	45	24	9
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	12	10	10
Total Lost time (s)		5.0	5.0		3.0	
Lane Util. Factor		0.95	0.95		1.00	
Frt		1.00	0.99		0.96	
Flt Protected		1.00	1.00		0.96	
Satd. Flow (prot)		3038	3017		1487	
Flt Permitted		0.93	1.00		0.96	
Satd. Flow (perm)		2835	3017		1487	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	14	908	938	50	27	10
RTOR Reduction (vph)	0	0	4	0	9	0
Lane Group Flow (vph)	0	922	984	0	28	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Turn Type	Perm					
Protected Phases		4	8 2 11		5	
Permitted Phases	4					
Actuated Green, G (s)		33.0	64.0		7.0	
Effective Green, g (s)		33.0	64.0		7.0	
Actuated g/C Ratio		0.37	0.71		0.08	
Clearance Time (s)		5.0			3.0	
Lane Grp Cap (vph)		1040	2145		116	
v/s Ratio Prot			c0.33		c0.02	
v/s Ratio Perm		c0.33				
v/c Ratio		0.89	0.46		0.24	
Uniform Delay, d1		26.7	5.6		39.0	
Progression Factor		1.00	0.00		1.00	
Incremental Delay, d2		11.1	0.2		4.8	
Delay (s)		37.9	0.3		43.8	
Level of Service		D	A		D	
Approach Delay (s)		37.9	0.3		43.8	
Approach LOS		D	A		D	

Intersection Summary			
HCM Average Control Delay	18.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	44.4%	ICU Level of Service	A
Analysis Period (min)	15		

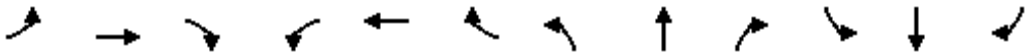
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	79	431	1	27	568	80	0	0	1	45	3	94
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12	12	11	12	11
Total Lost time (s)		4.0			4.0			3.0			3.0	3.0
Lane Util. Factor		1.00			0.95			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			0.92			1.00	0.96
Flpb, ped/bikes		1.00			1.00			1.00			0.98	1.00
Frt		1.00			0.98			0.86			1.00	0.85
Flt Protected		0.99			1.00			1.00			0.95	1.00
Satd. Flow (prot)		1729			3232			1427			1606	1277
Flt Permitted		0.79			0.93			1.00			0.90	1.00
Satd. Flow (perm)		1380			3013			1427			1513	1277
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	88	479	1	30	631	89	0	0	1	50	3	104
RTOR Reduction (vph)	0	0	0	0	12	0	0	1	0	0	0	74
Lane Group Flow (vph)	0	568	0	0	738	0	0	0	0	0	53	30
Confl. Peds. (#/hr)	33		13	13		33	29		13	13		29
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	4%	3%	0%	0%	4%	0%	0%	0%	0%	5%	0%	11%
Turn Type	Perm			Prot			Perm			pm+pt		Perm
Protected Phases		4		3	3 4			1		2	1 2	
Permitted Phases	4				3		1	1		1 2		1 2
Actuated Green, G (s)		38.0			52.0			9.0			23.0	26.0
Effective Green, g (s)		38.0			52.0			9.0			23.0	26.0
Actuated g/C Ratio		0.42			0.58			0.10			0.26	0.29
Clearance Time (s)		4.0						3.0				
Lane Grp Cap (vph)		583			1775			143			401	369
v/s Ratio Prot					c0.06			0.00			c0.02	
v/s Ratio Perm		c0.41			0.18						c0.01	0.02
v/c Ratio		0.97			0.42			0.00			0.13	0.08
Uniform Delay, d1		25.5			10.6			36.5			25.8	23.3
Progression Factor		1.00			2.17			1.00			1.00	1.00
Incremental Delay, d2		31.5			0.6			0.0			0.7	0.4
Delay (s)		57.0			23.5			36.5			26.5	23.7
Level of Service		E			C			D			C	C
Approach Delay (s)		57.0			23.5			36.5			24.7	
Approach LOS		E			C			D			C	

Intersection Summary			
HCM Average Control Delay	36.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	72.4%	ICU Level of Service	C
Analysis Period (min)	15		

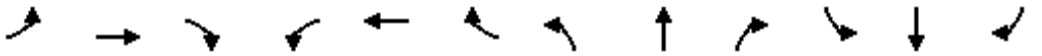
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	598	28	35	1014	58	36	35	48	23	26	87
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	16	10	10	16	8	15	8	8	14	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			0.98	
Flpb, ped/bikes	0.98	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.99			0.95			0.91	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1557	3022		1587	3021			1816			1706	
Flt Permitted	0.17	1.00		0.36	1.00			0.89			0.95	
Satd. Flow (perm)	277	3022		604	3021			1649			1630	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	41	629	29	37	1067	61	38	37	51	24	27	92
RTOR Reduction (vph)	0	5	0	0	6	0	0	33	0	0	21	0
Lane Group Flow (vph)	41	653	0	37	1122	0	0	93	0	0	122	0
Confl. Peds. (#/hr)	145		16	16		145	17		19	19		17
Confl. Bikes (#/hr)	5					5			2	2		
Heavy Vehicles (%)	0%	5%	0%	0%	4%	2%	0%	0%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.0	34.0		34.0	34.0			22.0			22.0	
Effective Green, g (s)	34.0	34.0		34.0	34.0			23.0			23.0	
Actuated g/C Ratio	0.52	0.52		0.52	0.52			0.35			0.35	
Clearance Time (s)	4.0	4.0		4.0	4.0			5.0			5.0	
Lane Grp Cap (vph)	145	1581		316	1580			583			577	
v/s Ratio Prot		0.22			c0.37							
v/s Ratio Perm	0.15			0.06				0.06			c0.07	
v/c Ratio	0.28	0.41		0.12	0.71			0.16			0.21	
Uniform Delay, d1	8.7	9.4		7.9	11.8			14.4			14.7	
Progression Factor	1.00	1.00		0.70	1.41			1.00			1.00	
Incremental Delay, d2	4.8	0.8		0.7	2.4			0.6			0.8	
Delay (s)	13.5	10.2		6.2	19.1			15.0			15.5	
Level of Service	B	B		A	B			B			B	
Approach Delay (s)		10.4			18.6			15.0			15.5	
Approach LOS		B			B			B			B	

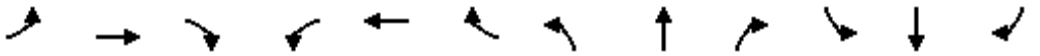
Intersection Summary			
HCM Average Control Delay	15.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	789	5	32	637	41	0	0	0	586	89	379
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00				0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.67				1.00	1.00	0.98
Flpb, ped/bikes	0.93	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	793	3379		1710	3226	514				3285	1731	1481
Flt Permitted	0.40	1.00		0.14	1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	331	3379		248	3226	514				3285	1731	1481
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	26	831	5	34	671	43	0	0	0	617	94	399
RTOR Reduction (vph)	0	0	0	0	0	19	0	0	0	0	0	166
Lane Group Flow (vph)	26	836	0	34	671	24	0	0	0	617	94	233
Confl. Peds. (#/hr)	350		4	4		350	8		6	6		8
Confl. Bikes (#/hr)	7		1	1		7						
Heavy Vehicles (%)	100%	1%	20%	0%	6%	100%	0%	0%	0%	1%	4%	1%
Turn Type	pm+pt			pm+pt		Perm				Split		Perm
Protected Phases	7	4		3	8					6	6	
Permitted Phases	4			8		8						6
Actuated Green, G (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Effective Green, g (s)	43.0	43.0		73.0	73.0	73.0				30.0	30.0	30.0
Actuated g/C Ratio	0.33	0.33		0.56	0.56	0.56				0.23	0.23	0.23
Clearance Time (s)	5.0	5.0		3.0	3.0	3.0				5.0	5.0	5.0
Lane Grp Cap (vph)	159	1118		634	1812	289				758	399	342
v/s Ratio Prot	0.02	c0.25		0.02	c0.21					c0.19	0.05	
v/s Ratio Perm	0.04			0.01		0.05						0.16
v/c Ratio	0.16	0.75		0.05	0.37	0.08				0.81	0.24	0.68
Uniform Delay, d1	31.6	38.7		15.2	15.8	13.1				47.4	40.7	45.6
Progression Factor	0.85	0.86		0.33	0.75	1.24				1.00	1.00	1.00
Incremental Delay, d2	2.1	4.4		0.1	0.4	0.4				9.3	1.4	10.5
Delay (s)	28.9	37.6		5.1	12.2	16.6				56.7	42.1	56.1
Level of Service	C	D		A	B	B				E	D	E
Approach Delay (s)		37.3			12.2			0.0			55.2	
Approach LOS		D			B			A			E	

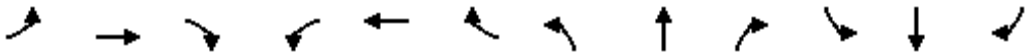
Intersection Summary			
HCM Average Control Delay	37.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	53.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	340	815	220	54	578	287	102	251	55	39	0	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.67		1.00	0.91	1.00		0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.97		1.00	1.00	0.85		1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (prot)	3285	3262		1710	3138	1018		3301	1359	855		734
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99	1.00	0.95		1.00
Satd. Flow (perm)	3285	3262		1710	3138	1018		3301	1359	855		734
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	358	858	232	57	608	302	107	264	58	41	0	32
RTOR Reduction (vph)	0	18	0	0	0	228	0	0	42	0	0	30
Lane Group Flow (vph)	358	1072	0	57	608	74	0	371	16	41	0	2
Confl. Peds. (#/hr)	327		13	13		327	6		60	60		6
Confl. Bikes (#/hr)	6					6						
Heavy Vehicles (%)	1%	1%	0%	0%	9%	1%	0%	3%	2%	100%	0%	100%
Turn Type	Prot			Prot		Perm	Split		Perm	Prot		custom
Protected Phases	7	4		3	8		2	2		6		
Permitted Phases						8			2			6
Actuated Green, G (s)	44.0	68.0		8.0	32.0	32.0		28.0	28.0	8.0		8.0
Effective Green, g (s)	44.0	68.0		8.0	32.0	32.0		28.0	28.0	8.0		8.0
Actuated g/C Ratio	0.34	0.52		0.06	0.25	0.25		0.22	0.22	0.06		0.06
Clearance Time (s)	3.0	3.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	1112	1706		105	772	251		711	293	53		45
v/s Ratio Prot	0.11	c0.33		0.03	c0.19			c0.11		c0.05		
v/s Ratio Perm						0.07			0.01			0.00
v/c Ratio	0.32	0.63		0.54	0.79	0.30		0.52	0.06	0.77		0.04
Uniform Delay, d1	31.9	22.0		59.2	45.8	39.8		45.1	40.5	60.1		57.4
Progression Factor	0.95	0.16		1.00	1.00	1.00		0.94	0.99	1.00		1.00
Incremental Delay, d2	0.5	1.1		18.7	8.0	3.0		2.7	0.4	49.7		0.4
Delay (s)	30.7	4.7		77.9	53.8	42.8		45.3	40.6	109.9		57.8
Level of Service	C	A		E	D	D		D	D	F		E
Approach Delay (s)		11.1			51.8			44.7			87.0	
Approach LOS		B			D			D			F	

Intersection Summary			
HCM Average Control Delay	31.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	68.3%	ICU Level of Service	C
Analysis Period (min)	15		

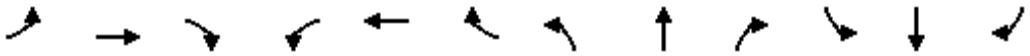
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	893	166	105	839	0	74	0	89	9	15	7
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	11	11	8	12	12	12	14	15	12
Total Lost time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frpb, ped/bikes		0.99		1.00	1.00		1.00		0.98	1.00	0.98	
Flpb, ped/bikes		1.00		1.00	1.00		0.97		1.00	0.99	1.00	
Frt		0.98		1.00	1.00		1.00		0.85	1.00	0.95	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		2997		1649	3149		1388		1451	1803	1857	
Flt Permitted		1.00		0.17	1.00		0.74		1.00	0.95	1.00	
Satd. Flow (perm)		2997		299	3149		1082		1451	1803	1857	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	992	184	117	932	0	82	0	99	10	17	8
RTOR Reduction (vph)	0	15	0	0	0	0	0	0	67	0	5	0
Lane Group Flow (vph)	0	1161	0	117	932	0	82	0	32	10	20	0
Confl. Peds. (#/hr)	67		19	19		67	38		12	12		38
Confl. Bikes (#/hr)			1	1								
Heavy Vehicles (%)	0%	2%	11%	0%	5%	0%	19%	0%	3%	0%	0%	0%
Turn Type				Perm			custom		custom	Perm		
Protected Phases		4			8						6	
Permitted Phases				8			2		2	6		
Actuated Green, G (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Effective Green, g (s)		60.0		60.0	60.0		32.0		32.0	32.0	32.0	
Actuated g/C Ratio		0.60		0.60	0.60		0.32		0.32	0.32	0.32	
Clearance Time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)		1798		179	1889		346		464	577	594	
v/s Ratio Prot		0.39			0.30						0.01	
v/s Ratio Perm				c0.39			c0.08		0.02	0.01		
v/c Ratio		0.65		0.65	0.49		0.24		0.07	0.02	0.03	
Uniform Delay, d1		13.1		13.2	11.4		25.0		23.6	23.2	23.4	
Progression Factor		1.00		1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		1.8		17.1	0.9		1.6		0.3	0.1	0.1	
Delay (s)		14.9		30.3	12.3		26.6		23.9	23.3	23.5	
Level of Service		B		C	B		C		C	C	C	
Approach Delay (s)		14.9			14.3			25.1			23.4	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	15.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.4%	ICU Level of Service	B
Analysis Period (min)	15		

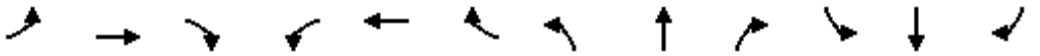
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	301	0	1230	215	686	0	0	792	490
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	12	12	10	10	12	12	11	12
Total Lost time (s)				4.0		5.0	3.0	4.0			4.0	
Lane Util. Factor				0.95		1.00	1.00	0.91			0.91	
Frpb, ped/bikes				1.00		1.00	1.00	1.00			0.98	
Flpb, ped/bikes				1.00		1.00	1.00	1.00			1.00	
Frt				1.00		0.85	1.00	1.00			0.94	
Flt Protected				0.95		1.00	0.95	1.00			1.00	
Satd. Flow (prot)				1540		1530	1535	4327			4271	
Flt Permitted				0.95		1.00	0.95	1.00			1.00	
Satd. Flow (perm)				1540		1530	1535	4327			4271	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	307	0	1255	219	700	0	0	808	500
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	307	0	1255	219	700	0	0	1308	0
Confl. Peds. (#/hr)	2					2	18		3	3		18
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%	4%	6%	0%	0%	4%	1%
Turn Type				Split		Prot	Prot					
Protected Phases				8	8	8	5	2			6	
Permitted Phases												
Actuated Green, G (s)				30.0		30.0	32.0	66.0			31.0	
Effective Green, g (s)				31.0		30.0	32.0	66.0			31.0	
Actuated g/C Ratio				0.30		0.29	0.30	0.63			0.30	
Clearance Time (s)				5.0		5.0	3.0	4.0			4.0	
Lane Grp Cap (vph)				455		437	468	2720			1261	
v/s Ratio Prot				0.20		c0.82	c0.14	0.16			c0.31	
v/s Ratio Perm												
v/c Ratio				0.67		2.87	0.47	0.26			1.16dr	
Uniform Delay, d1				32.6		37.5	29.6	8.6			37.0	
Progression Factor				1.00		1.00	0.64	2.11			1.00	
Incremental Delay, d2				7.8		848.6	2.8	0.2			35.5	
Delay (s)				40.4		886.1	21.8	18.4			72.5	
Level of Service				D		F	C	B			E	
Approach Delay (s)		0.0			719.9			19.2			72.5	
Approach LOS		A			F			B			E	

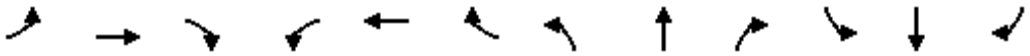
Intersection Summary			
HCM Average Control Delay	326.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.43		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	102.1%	ICU Level of Service	G
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	322	770	146	0	0	0	0	579	410	359	734	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	13	12	12	12	12	12	10	10	8	12	12	12
Total Lost time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Util. Factor	0.91	0.91						0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00						1.00	1.00	1.00	1.00	
Flpb, ped/bikes	0.99	1.00						1.00	1.00	1.00	1.00	
Frt	1.00	0.98						1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1509	3156						4368	2244	1598	4680	
Flt Permitted	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1509	3156						4368	2244	1598	4680	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	332	794	151	0	0	0	0	597	423	370	757	0
RTOR Reduction (vph)	0	14	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	299	964	0	0	0	0	0	597	423	370	757	0
Confl. Peds. (#/hr)	6		1	1		6	6					6
Heavy Vehicles (%)	6%	1%	0%	0%	0%	0%	0%	5%	4%	7%	5%	0%
Turn Type	Perm								Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Actuated Green, G (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Effective Green, g (s)	34.0	34.0						28.0	28.0	31.0	62.0	
Actuated g/C Ratio	0.32	0.32						0.27	0.27	0.30	0.59	
Clearance Time (s)	5.0	5.0						4.0	4.0	3.0	4.0	
Lane Grp Cap (vph)	489	1022						1165	598	472	2763	
v/s Ratio Prot								0.14		c0.23	0.16	
v/s Ratio Perm	0.20	0.31							c0.19			
v/c Ratio	0.61	0.94						0.51	0.71	0.78	0.27	
Uniform Delay, d1	29.9	34.6						32.7	34.8	33.9	10.5	
Progression Factor	1.00	1.00						1.17	1.17	0.86	0.22	
Incremental Delay, d2	5.6	17.5						1.4	5.9	4.8	0.1	
Delay (s)	35.5	52.0						39.7	46.6	34.1	2.4	
Level of Service	D	D						D	D	C	A	
Approach Delay (s)		48.2			0.0			42.5			12.8	
Approach LOS		D			A			D			B	

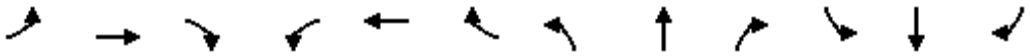
Intersection Summary			
HCM Average Control Delay	34.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	102.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	290	25	24	11	164	0	0	149	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	14	12	12	16	12
Total Lost time (s)				4.0	4.0		4.0	4.0			-3.0	
Lane Util. Factor				1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes				1.00	0.99		1.00	1.00			1.00	
Flpb, ped/bikes				1.00	1.00		1.00	1.00			1.00	
Frt				1.00	0.93		1.00	1.00			1.00	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1688	3132		1710	1846			1955	
Flt Permitted				0.95	1.00		0.54	1.00			1.00	
Satd. Flow (perm)				1688	3132		974	1846			1955	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	322	28	27	12	182	0	0	166	6
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	322	37	0	12	182	0	0	171	0
Confl. Peds. (#/hr)	2		2	2		2			6	6		
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	0%	4%	0%	0%	4%	0%
Turn Type				Perm			pm+pt					
Protected Phases					8		7	2			6	
Permitted Phases				8			2					
Actuated Green, G (s)				27.0	27.0		50.0	50.0			40.0	
Effective Green, g (s)				27.0	27.0		50.0	50.0			46.0	
Actuated g/C Ratio				0.32	0.32		0.59	0.59			0.54	
Clearance Time (s)				4.0	4.0		4.0	4.0			3.0	
Lane Grp Cap (vph)				536	995		634	1086			1058	
v/s Ratio Prot					0.01		0.00	c0.10			0.09	
v/s Ratio Perm				c0.19			0.01					
v/c Ratio				0.60	0.04		0.02	0.17			0.16	
Uniform Delay, d1				24.5	20.0		10.5	8.0			9.8	
Progression Factor				1.00	1.00		1.04	1.18			1.00	
Incremental Delay, d2				4.9	0.1		0.1	0.3			0.3	
Delay (s)				29.4	20.1		11.0	9.8			10.1	
Level of Service				C	C		B	A			B	
Approach Delay (s)		0.0			28.0			9.8			10.1	
Approach LOS		A			C			A			B	

Intersection Summary			
HCM Average Control Delay	19.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	37.0%	ICU Level of Service	A
Analysis Period (min)	15		

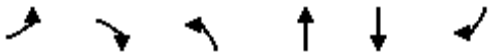
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	12	11	23	5	0	14	0	149	45	46	393	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	16	15	12	8	12	8	12	12	12	10	13	12
Total Lost time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.97			0.98			0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00			1.00		1.00	1.00	
Frt	1.00	0.90			0.90			0.97		1.00	1.00	
Flt Protected	0.95	1.00			0.99			1.00		0.95	1.00	
Satd. Flow (prot)	1935	1735			1565			1718		1590	1860	
Flt Permitted	0.74	1.00			0.97			1.00		0.59	1.00	
Satd. Flow (perm)	1516	1735			1531			1718		987	1860	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	13	12	24	5	0	15	0	157	47	48	414	0
RTOR Reduction (vph)	0	16	0	0	10	0	0	13	0	0	0	0
Lane Group Flow (vph)	13	20	0	0	10	0	0	191	0	48	414	0
Confl. Peds. (#/hr)	1		11	11		1	1		10	10		1
Confl. Bikes (#/hr)			2	2			1		2	2		1
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Turn Type	Perm			Perm						pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Effective Green, g (s)	27.0	27.0			27.0			40.0		50.0	50.0	
Actuated g/C Ratio	0.32	0.32			0.32			0.47		0.59	0.59	
Clearance Time (s)	4.0	4.0			4.0			3.0		4.0	4.0	
Lane Grp Cap (vph)	482	551			486			808		630	1094	
v/s Ratio Prot		c0.01						0.11		0.01	c0.22	
v/s Ratio Perm	0.01				0.01					0.04		
v/c Ratio	0.03	0.04			0.02			0.24		0.08	0.38	
Uniform Delay, d1	20.0	20.0			19.9			13.4		8.8	9.3	
Progression Factor	1.00	1.00			1.00			1.00		0.98	0.87	
Incremental Delay, d2	0.1	0.1			0.1			0.7		0.2	0.9	
Delay (s)	20.1	20.1			20.0			14.1		8.8	9.0	
Level of Service	C	C			B			B		A	A	
Approach Delay (s)		20.1			20.0			14.1			9.0	
Approach LOS		C			B			B			A	

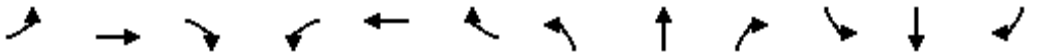
Intersection Summary			
HCM Average Control Delay	11.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	41.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



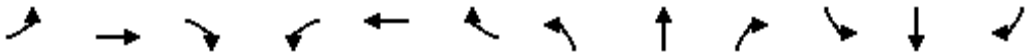
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	48	42	12	193	288	28
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	14	12	13	12	10	12
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.94		1.00	1.00	0.99	
Flt Protected	0.97		0.95	1.00	1.00	
Satd. Flow (prot)	1752		1765	1782	1657	
Flt Permitted	0.97		0.50	1.00	1.00	
Satd. Flow (perm)	1752		937	1782	1657	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	53	47	13	214	320	31
RTOR Reduction (vph)	32	0	0	0	5	0
Lane Group Flow (vph)	68	0	13	214	346	0
Confl. Peds. (#/hr)			2			2
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.0		36.0	36.0	36.0	
Effective Green, g (s)	21.0		36.0	36.0	36.0	
Actuated g/C Ratio	0.32		0.55	0.55	0.55	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	566		519	987	918	
v/s Ratio Prot	c0.04			0.12	c0.21	
v/s Ratio Perm			0.01			
v/c Ratio	0.12		0.03	0.22	0.38	
Uniform Delay, d1	15.5		6.6	7.4	8.2	
Progression Factor	1.00		0.51	0.61	1.43	
Incremental Delay, d2	0.4		0.1	0.5	1.0	
Delay (s)	15.9		3.4	5.0	12.7	
Level of Service	B		A	A	B	
Approach Delay (s)	15.9			4.9	12.7	
Approach LOS	B			A	B	

Intersection Summary			
HCM Average Control Delay	10.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	30.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



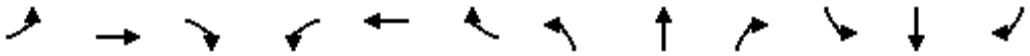
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	31	268	9	258	132	0	0	283	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	14	16	12	12	15	12	12	13	10
Total Lost time (s)					4.0		4.0	4.0			3.0	3.0
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Frt					1.00		1.00	1.00			1.00	0.85
Flt Protected					1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3772		1693	1678			1738	1428
Flt Permitted					1.00		0.47	1.00			1.00	1.00
Satd. Flow (perm)					3772		844	1678			1738	1428
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	34	298	10	287	147	0	0	314	19
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	0	0	0	11
Lane Group Flow (vph)	0	0	0	0	339	0	287	147	0	0	314	8
Confl. Peds. (#/hr)	1					1			5	5		
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	1%	18%	0%	0%	7%	0%
Turn Type				Split			pm+pt					Perm
Protected Phases				8	8		7	2			6	
Permitted Phases							2					6
Actuated Green, G (s)					26.0		51.0	51.0			38.0	38.0
Effective Green, g (s)					26.0		51.0	51.0			38.0	38.0
Actuated g/C Ratio					0.31		0.60	0.60			0.45	0.45
Clearance Time (s)					4.0		4.0	4.0			3.0	3.0
Lane Grp Cap (vph)					1154		606	1007			777	638
v/s Ratio Prot					c0.09		c0.06	0.09			0.18	
v/s Ratio Perm							c0.23					0.01
v/c Ratio					0.29		0.47	0.15			0.40	0.01
Uniform Delay, d1					22.5		13.7	7.5			15.9	13.1
Progression Factor					1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2					0.6		2.6	0.3			1.6	0.0
Delay (s)					23.1		16.4	7.8			17.4	13.1
Level of Service					C		B	A			B	B
Approach Delay (s)		0.0			23.1			13.5			17.2	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM Average Control Delay	17.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	95	94	38	133	205	30	59	703	44
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	15	12	12	12	12	12	13	12
Total Lost time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.98		1.00	0.98		1.00	0.99	
Flt Protected					0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1896		1710	3287		1707	3467	
Flt Permitted					0.98		0.25	1.00		0.59	1.00	
Satd. Flow (perm)					1896		446	3287		1061	3467	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	106	104	42	148	228	33	66	781	49
RTOR Reduction (vph)	0	0	0	0	10	0	0	15	0	0	6	0
Lane Group Flow (vph)	0	0	0	0	242	0	148	246	0	66	824	0
Confl. Peds. (#/hr)							5		5	5		5
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	1%	0%
Turn Type				Split			pm+pt			pm+pt		
Protected Phases				8	8		5	2		1	6	
Permitted Phases							2			6		
Actuated Green, G (s)					23.0		41.0	34.0		41.0	34.0	
Effective Green, g (s)					23.0		41.0	34.0		41.0	34.0	
Actuated g/C Ratio					0.31		0.55	0.45		0.55	0.45	
Clearance Time (s)					4.0		3.0	4.0		3.0	4.0	
Lane Grp Cap (vph)					581		362	1490		640	1572	
v/s Ratio Prot					c0.13		c0.04	0.07		0.01	c0.24	
v/s Ratio Perm							0.19			0.05		
v/c Ratio					0.42		0.41	0.16		0.10	0.52	
Uniform Delay, d1					20.7		16.4	12.1		8.2	14.7	
Progression Factor					1.00		0.84	0.82		1.00	1.00	
Incremental Delay, d2					2.2		3.4	0.2		0.3	1.3	
Delay (s)					22.9		17.1	10.2		8.5	16.0	
Level of Service					C		B	B		A	B	
Approach Delay (s)		0.0			22.9			12.7			15.4	
Approach LOS		A			C			B			B	

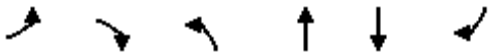
Intersection Summary			
HCM Average Control Delay	15.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	53.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	32	49	13	9	63	63	7	273	24	159	589	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	16	12	12	10	11	12	12	11	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.94		1.00	0.99		1.00	0.99	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1964			1655		1595	3172		1704	3231	
Flt Permitted		0.89			0.99		0.36	1.00		0.56	1.00	
Satd. Flow (perm)		1775			1637		600	3172		1008	3231	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	34	52	14	9	66	66	7	287	25	167	620	53
RTOR Reduction (vph)	0	8	0	0	42	0	0	9	0	0	8	0
Lane Group Flow (vph)	0	92	0	0	99	0	7	303	0	167	665	0
Confl. Peds. (#/hr)	2					2	1		6	6		1
Confl. Bikes (#/hr)			1	1			3					3
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	0%	3%	0%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Effective Green, g (s)		25.0			25.0		42.0	42.0		42.0	42.0	
Actuated g/C Ratio		0.33			0.33		0.56	0.56		0.56	0.56	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		592			546		336	1776		564	1809	
v/s Ratio Prot								0.10			c0.21	
v/s Ratio Perm		0.05			c0.06		0.01			0.17		
v/c Ratio		0.16			0.18		0.02	0.17		0.30	0.37	
Uniform Delay, d1		17.6			17.7		7.3	8.0		8.7	9.1	
Progression Factor		1.00			1.00		1.00	1.00		0.27	0.25	
Incremental Delay, d2		0.6			0.7		0.1	0.2		1.2	0.5	
Delay (s)		18.1			18.5		7.5	8.2		3.5	2.8	
Level of Service		B			B		A	A		A	A	
Approach Delay (s)		18.1			18.5			8.2			2.9	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	6.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	48.4%	ICU Level of Service	A
Analysis Period (min)	15		

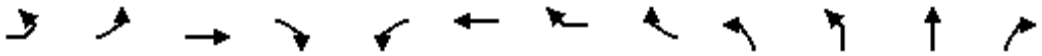
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	37	192	67	251	588	81
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	41	213	74	279	653	90

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	254	167	186	436	308
Volume Left (vph)	41	74	0	0	0
Volume Right (vph)	213	0	0	0	90
Hadj (s)	-0.42	0.27	0.05	0.05	-0.15
Departure Headway (s)	5.7	6.6	6.3	5.9	5.7
Degree Utilization, x	0.41	0.30	0.33	0.71	0.48
Capacity (veh/h)	592	528	546	602	622
Control Delay (s)	12.6	11.2	11.2	20.8	12.7
Approach Delay (s)	12.6	11.2		17.4	
Approach LOS	B	B		C	

Intersection Summary			
Delay	14.9		
HCM Level of Service	B		
Intersection Capacity Utilization	53.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	32	35	378	18	24	414	78	82	55	68	354	32
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	0.95	
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.92			1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Frt		1.00	1.00	0.85	1.00	1.00	0.85			1.00	0.99	
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	
Satd. Flow (prot)		1612	1731	1530	1710	1731	1412			1710	3251	
Flt Permitted		0.13	1.00	1.00	0.45	1.00	1.00			0.16	1.00	
Satd. Flow (perm)		215	1731	1530	812	1731	1412			280	3251	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	36	39	420	20	27	460	87	91	61	76	393	36
RTOR Reduction (vph)	0	0	0	13	0	0	29	0	0	0	5	0
Lane Group Flow (vph)	0	75	420	7	27	460	149	0	0	137	424	0
Confl. Peds. (#/hr)		25					25					3
Heavy Vehicles (%)	6%	6%	4%	0%	0%	4%	0%	0%	0%	0%	4%	0%
Turn Type	Perm	pm+pt		Perm	Perm		Perm		Perm	Perm		
Protected Phases		7	4			8					2	
Permitted Phases	4	4		4	8		8		2	2		
Actuated Green, G (s)		46.0	46.0	46.0	28.0	28.0	28.0			44.0	44.0	
Effective Green, g (s)		46.0	46.0	46.0	28.0	28.0	28.0			44.0	44.0	
Actuated g/C Ratio		0.35	0.35	0.35	0.22	0.22	0.22			0.34	0.34	
Clearance Time (s)		3.5	4.0	4.0	4.0	4.0	4.0			4.0	4.0	
Lane Grp Cap (vph)		232	613	541	175	373	304			95	1100	
v/s Ratio Prot		0.04	c0.24			c0.27					0.13	
v/s Ratio Perm		0.08		0.00	0.03		0.11			c0.49		
v/c Ratio		0.32	0.69	0.01	0.15	1.23	0.49			1.44	0.39	
Uniform Delay, d1		31.5	35.8	27.3	41.4	51.0	44.7			43.0	32.7	
Progression Factor		1.00	1.00	1.00	0.89	0.90	0.86			1.00	1.00	
Incremental Delay, d2		3.7	6.1	0.0	1.7	124.1	4.9			248.4	1.0	
Delay (s)		35.2	41.9	27.3	38.4	169.9	43.2			291.4	33.7	
Level of Service		D	D	C	D	F	D			F	C	
Approach Delay (s)			40.4			130.6					96.1	
Approach LOS			D			F					F	

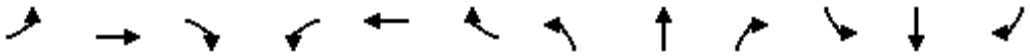
Intersection Summary			
HCM Average Control Delay	131.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.34		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	104.2%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations								
Volume (vph)	107	571	82	103	4	114	607	197
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5				4.5	4.5	
Lane Util. Factor	1.00	0.95				1.00	0.88	
Frpb, ped/bikes	1.00	1.00				1.00	1.00	
Flpb, ped/bikes	1.00	1.00				1.00	1.00	
Frt	1.00	0.96				1.00	0.85	
Flt Protected	0.95	1.00				0.95	1.00	
Satd. Flow (prot)	1706	3246				1710	2633	
Flt Permitted	0.41	1.00				0.95	1.00	
Satd. Flow (perm)	729	3246				1710	2633	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	119	634	91	114	4	127	674	219
RTOR Reduction (vph)	0	9	0	0	0	0	21	0
Lane Group Flow (vph)	119	830	0	0	0	131	872	0
Confl. Peds. (#/hr)	3							
Heavy Vehicles (%)	0%	2%	0%	0%	0%	0%	3%	0%
Turn Type	Perm				Split		Perm	
Protected Phases		6			9	9		
Permitted Phases	6						9	
Actuated Green, G (s)	43.5	43.5				27.5	27.5	
Effective Green, g (s)	43.5	43.5				27.5	27.5	
Actuated g/C Ratio	0.33	0.33				0.21	0.21	
Clearance Time (s)	4.5	4.5				4.5	4.5	
Lane Grp Cap (vph)	244	1086				362	557	
v/s Ratio Prot		0.26				0.08		
v/s Ratio Perm	0.16						c0.33	
v/c Ratio	0.49	0.76				0.36	1.57	
Uniform Delay, d1	34.4	38.7				43.8	51.2	
Progression Factor	1.00	1.00				1.00	1.00	
Incremental Delay, d2	6.8	5.1				2.8	262.9	
Delay (s)	41.2	43.8				46.6	314.2	
Level of Service	D	D				D	F	
Approach Delay (s)		43.5				279.9		
Approach LOS		D				F		

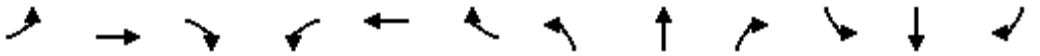
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	65	602	0	0	506	50	85	52	18	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	11	11	16	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.99			0.98				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		1681			1956			1842				
Flt Permitted		0.90			1.00			0.97				
Satd. Flow (perm)		1523			1956			1842				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	72	669	0	0	562	56	94	58	20	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	741	0	0	618	0	0	172	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		40.0			40.0			17.0				
Effective Green, g (s)		40.0			40.0			17.0				
Actuated g/C Ratio		0.62			0.62			0.26				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		937			1204			482				
v/s Ratio Prot					0.32							
v/s Ratio Perm		c0.49						0.09				
v/c Ratio		0.79			0.51			0.36				
Uniform Delay, d1		9.4			7.0			19.5				
Progression Factor		0.99			1.00			1.00				
Incremental Delay, d2		5.8			1.6			2.1				
Delay (s)		15.1			8.6			21.6				
Level of Service		B			A			C				
Approach Delay (s)		15.1			8.6			21.6			0.0	
Approach LOS		B			A			C			A	

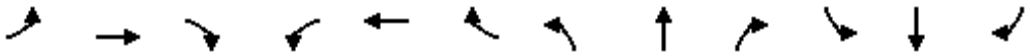
Intersection Summary			
HCM Average Control Delay	13.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	87.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	71	427	162	117	335	125	106	639	84	137	759	94
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	9	9	10	9
Total Lost time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.97	1.00	1.00	0.94	1.00	1.00	0.93
Flpb, ped/bikes		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1985	1443		1953	1457	1547	3040	1285	1506	3069	1237
Flt Permitted		0.69	1.00		0.66	1.00	0.17	1.00	1.00	0.23	1.00	1.00
Satd. Flow (perm)		1373	1443		1299	1457	282	3040	1285	357	3069	1237
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	75	449	171	123	353	132	112	673	88	144	799	99
RTOR Reduction (vph)	0	0	83	0	0	74	0	0	53	0	0	50
Lane Group Flow (vph)	0	524	88	0	476	58	112	673	35	144	799	49
Confl. Peds. (#/hr)	24		45	45		24	36		24	24		36
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	2%	2%	2%	2%	3%	2%	3%	5%	1%	2%	4%	3%
Turn Type	pm+pt		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		54.0	54.0		46.0	46.0	39.0	33.0	33.0	41.0	34.0	34.0
Effective Green, g (s)		54.0	54.0		46.0	46.0	39.0	33.0	33.0	41.0	34.0	34.0
Actuated g/C Ratio		0.51	0.51		0.44	0.44	0.37	0.31	0.31	0.39	0.32	0.32
Clearance Time (s)		4.0	4.0		4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		735	742		569	638	177	955	404	216	994	401
v/s Ratio Prot		c0.03					0.04	0.22		c0.04	c0.26	
v/s Ratio Perm		0.33	0.06		c0.37	0.04	0.20		0.03	0.22		0.04
v/c Ratio		0.71	0.12		0.84	0.09	0.63	0.70	0.09	0.67	0.80	0.12
Uniform Delay, d1		19.6	13.2		26.2	17.3	24.0	31.7	25.4	22.9	32.5	25.0
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.50	1.34	2.07
Incremental Delay, d2		5.8	0.3		13.7	0.3	7.2	4.4	0.4	7.3	6.6	0.6
Delay (s)		25.4	13.5		39.8	17.5	31.2	36.1	25.8	41.6	50.1	52.3
Level of Service		C	B		D	B	C	D	C	D	D	D
Approach Delay (s)		22.5			35.0			34.4			49.1	
Approach LOS		C			C			C			D	

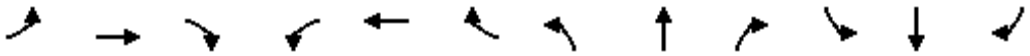
Intersection Summary			
HCM Average Control Delay	36.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	95.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	85	486	99	94	468	94	55	61	69	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	15	12	12	15	12
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		0.98			0.98			0.95				
Flt Protected		0.99			0.99			0.99				
Satd. Flow (prot)		1645			1645			1799				
Flt Permitted		0.85			0.83			0.99				
Satd. Flow (perm)		1411			1381			1799				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	94	540	110	104	520	104	61	68	77	0	0	0
RTOR Reduction (vph)	0	10	0	0	9	0	0	33	0	0	0	0
Lane Group Flow (vph)	0	734	0	0	719	0	0	173	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		40.0			40.0			17.0				
Effective Green, g (s)		40.0			40.0			17.0				
Actuated g/C Ratio		0.62			0.62			0.26				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		868			850			471				
v/s Ratio Prot												
v/s Ratio Perm		c0.52			0.52			0.10				
v/c Ratio		0.85			0.85			0.37				
Uniform Delay, d1		10.0			10.0			19.6				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		10.0			10.1			2.2				
Delay (s)		20.0			20.1			21.8				
Level of Service		B			C			C				
Approach Delay (s)		20.0			20.1			21.8			0.0	
Approach LOS		B			C			C			A	

Intersection Summary			
HCM Average Control Delay	20.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.7%	ICU Level of Service	C
Analysis Period (min)	15		

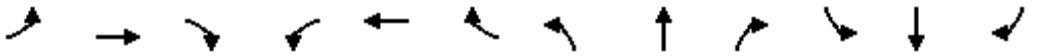
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	53	485	82	76	525	37	39	76	72	54	238	55
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	11	12	12	15	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.96		1.00	0.96		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		0.99	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.98	
Flt Protected		1.00	1.00		0.99	1.00		0.98	1.00		0.99	
Satd. Flow (prot)		1685	1382		1713	1417		1685	1455		1879	
Flt Permitted		0.89	1.00		0.85	1.00		0.82	1.00		0.94	
Satd. Flow (perm)		1505	1382		1459	1417		1404	1455		1774	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	56	511	86	80	553	39	41	80	76	57	251	58
RTOR Reduction (vph)	0	0	37	0	0	12	0	0	52	0	9	0
Lane Group Flow (vph)	0	567	49	0	633	27	0	121	24	0	357	0
Confl. Peds. (#/hr)	25		19	19		25	36		30	30		36
Confl. Bikes (#/hr)	1		2	2		1	3					3
Heavy Vehicles (%)	0%	3%	3%	0%	1%	0%	0%	1%	1%	0%	1%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Effective Green, g (s)		43.0	43.0		43.0	43.0		24.0	24.0		24.0	
Actuated g/C Ratio		0.57	0.57		0.57	0.57		0.32	0.32		0.32	
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	
Lane Grp Cap (vph)		863	792		836	812		449	466		568	
v/s Ratio Prot												
v/s Ratio Perm		0.38	0.04		c0.43	0.02		0.09	0.02		c0.20	
v/c Ratio		0.66	0.06		0.76	0.03		0.27	0.05		0.63	
Uniform Delay, d1		11.0	7.1		12.1	7.0		19.0	17.6		21.7	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		3.9	0.2		6.3	0.1		1.5	0.2		5.2	
Delay (s)		14.8	7.2		18.4	7.0		20.4	17.8		26.9	
Level of Service		B	A		B	A		C	B		C	
Approach Delay (s)		13.8			17.7			19.4			26.9	
Approach LOS		B			B			B			C	

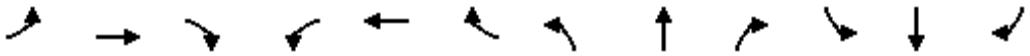
Intersection Summary			
HCM Average Control Delay	18.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	100.7%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	483	34	45	537	54	45	165	55	123	210	33
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	11	16	8	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	0.98	1.00		1.00	1.00		0.99	1.00	1.00	0.99	1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1533	3066		1652	3730		1585	1663	1370	1568	1680	1397
Flt Permitted	0.35	1.00		0.40	1.00		0.57	1.00	1.00	0.63	1.00	1.00
Satd. Flow (perm)	563	3066		687	3730		953	1663	1370	1043	1680	1397
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	66	537	38	50	597	60	50	183	61	137	233	37
RTOR Reduction (vph)	0	8	0	0	12	0	0	0	37	0	0	22
Lane Group Flow (vph)	66	567	0	50	645	0	50	183	24	137	233	15
Confl. Peds. (#/hr)	51		3	3		51	13		13	13		13
Heavy Vehicles (%)	2%	3%	3%	0%	2%	0%	0%	1%	2%	1%	0%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Effective Green, g (s)	31.0	31.0		31.0	31.0		26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	269	1462		328	1779		381	665	548	417	672	559
v/s Ratio Prot		c0.19			0.17			0.11			c0.14	
v/s Ratio Perm	0.12			0.07			0.05		0.02	0.13		0.01
v/c Ratio	0.25	0.39		0.15	0.36		0.13	0.28	0.04	0.33	0.35	0.03
Uniform Delay, d1	10.1	10.9		9.6	10.8		12.3	13.1	11.9	13.5	13.6	11.8
Progression Factor	1.00	1.00		1.00	1.00		0.83	0.89	0.73	0.59	0.59	0.26
Incremental Delay, d2	2.2	0.8		1.0	0.6		0.7	1.0	0.2	2.0	1.4	0.1
Delay (s)	12.2	11.7		10.6	11.3		11.0	12.7	8.8	9.9	9.4	3.1
Level of Service	B	B		B	B		B	B	A	A	A	A
Approach Delay (s)		11.7			11.3			11.6			9.0	
Approach LOS		B			B			B			A	

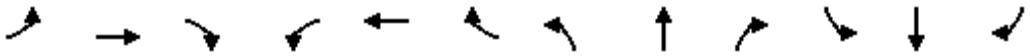
Intersection Summary			
HCM Average Control Delay	11.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	409	81	73	394	67	57	180	64	89	245	80
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	11	10	11	11	10	11	11	10	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	0.97	1.00		0.95	1.00		0.99	1.00		0.96	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.96		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1329	3134		1519	3128		1580	2919		1452	2997	
Flt Permitted	0.44	1.00		0.42	1.00		0.53	1.00		0.59	1.00	
Satd. Flow (perm)	619	3134		678	3128		882	2919		907	2997	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	63	431	85	77	415	71	60	189	67	94	258	84
RTOR Reduction (vph)	0	0	0	0	0	0	0	39	0	0	42	0
Lane Group Flow (vph)	63	516	0	77	486	0	60	217	0	94	300	0
Confl. Peds. (#/hr)	112		99	99		112	23		53	53		23
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	16%	1%	0%	0%	1%	9%	0%	8%	2%	5%	5%	7%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)	36.0	36.0		36.0	36.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.41	0.41		0.41	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	297	1504		325	1501		365	1207		375	1239	
v/s Ratio Prot		c0.16			0.16			0.07			0.10	
v/s Ratio Perm	0.10			0.11			0.07			c0.10		
v/c Ratio	0.21	0.34		0.24	0.32		0.16	0.18		0.25	0.24	
Uniform Delay, d1	11.3	12.1		11.4	12.0		13.8	13.9		14.4	14.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.6	0.6		1.7	0.6		1.0	0.3		1.6	0.5	
Delay (s)	12.9	12.8		13.2	12.6		14.8	14.3		16.0	14.8	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		12.8			12.7			14.4			15.1	
Approach LOS		B			B			B			B	

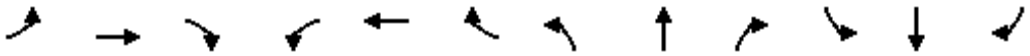
Intersection Summary			
HCM Average Control Delay	13.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	96	439	62	32	522	48	86	203	60	76	473	109
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	8	16	12	9	10	10	9	10	10
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1595	1652		1370	1973		1534	2998		1535	3013	
Flt Permitted	0.24	1.00		0.31	1.00		0.28	1.00		0.58	1.00	
Satd. Flow (perm)	405	1652		447	1973		453	2998		939	3013	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	101	462	65	34	549	51	91	214	63	80	498	115
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	101	527	0	34	600	0	91	277	0	80	613	0
Confl. Peds. (#/hr)	21		95	95		21	36		8	8		36
Confl. Bikes (#/hr)	2		3	3		2	2					2
Heavy Vehicles (%)	0%	2%	0%	7%	2%	0%	0%	3%	0%	0%	2%	1%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	43.9	39.3		40.7	37.7		26.7	21.8		26.7	21.8	
Effective Green, g (s)	43.9	37.3		40.7	35.7		26.7	19.8		26.7	19.8	
Actuated g/C Ratio	0.52	0.44		0.48	0.42		0.31	0.23		0.31	0.23	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	274	725		247	829		205	698		329	702	
v/s Ratio Prot	c0.02	c0.32		0.00	0.30		c0.03	0.09		0.01	c0.20	
v/s Ratio Perm	0.17			0.06			0.11			0.06		
v/c Ratio	0.37	0.73		0.14	0.72		0.44	0.40		0.24	0.87	
Uniform Delay, d1	23.5	19.7		20.2	20.5		29.2	27.6		21.9	31.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.8	6.3		0.3	5.5		1.5	1.7		0.4	14.2	
Delay (s)	24.4	25.9		20.4	26.0		30.7	29.2		22.2	45.5	
Level of Service	C	C		C	C		C	C		C	D	
Approach Delay (s)		25.7			25.7			29.6			42.9	
Approach LOS		C			C			C			D	

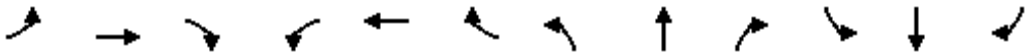
Intersection Summary			
HCM Average Control Delay	31.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	79.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	75	393	65	117	509	118	67	158	58	127	367	82
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	11	11	11	11	12	12	10	10	12
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		0.99	1.00	
Frt		0.98			0.98		1.00	0.96		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3681			3131		1652	3237		1549	3027	
Flt Permitted		0.71			0.72		0.42	1.00		0.60	1.00	
Satd. Flow (perm)		2643			2282		737	3237		983	3027	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	83	437	72	130	566	131	74	176	64	141	408	91
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	592	0	0	827	0	74	240	0	141	499	0
Confl. Peds. (#/hr)	23		30	30		23	1		20	20		1
Confl. Bikes (#/hr)	3					3						
Heavy Vehicles (%)	0%	3%	0%	2%	2%	0%	0%	1%	0%	2%	2%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.0			33.0		32.0	32.0		32.0	32.0	
Effective Green, g (s)		34.0			34.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio		0.45			0.45		0.44	0.44		0.44	0.44	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		1198			1035		324	1424		433	1332	
v/s Ratio Prot								0.07			c0.16	
v/s Ratio Perm		0.22			c0.36		0.10			0.14		
v/c Ratio		0.49			0.80		0.23	0.17		0.33	0.37	
Uniform Delay, d1		14.4			17.6		13.1	12.7		13.7	14.1	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.5			6.5		1.6	0.3		2.0	0.8	
Delay (s)		15.9			24.0		14.7	13.0		15.7	14.9	
Level of Service		B			C		B	B		B	B	
Approach Delay (s)		15.9			24.0			13.4			15.1	
Approach LOS		B			C			B			B	

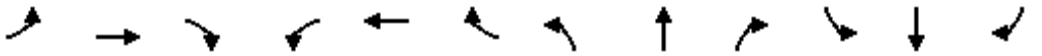
Intersection Summary			
HCM Average Control Delay	18.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	98	871	6	20	584	249	1	1	9	213	1	80
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	12	12	12	12	12	13	13	13
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			0.95	
Frt	1.00	1.00		1.00	1.00	0.85		0.89			0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00		1.00			0.97	
Satd. Flow (prot)	1605	3206		1660	3320	1485		1545			3176	
Flt Permitted	0.38	1.00		0.25	1.00	1.00		0.98			0.77	
Satd. Flow (perm)	648	3206		436	3320	1485		1519			2533	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	109	968	7	22	649	277	1	1	10	237	1	89
RTOR Reduction (vph)	0	0	0	0	0	103	0	7	0	0	52	0
Lane Group Flow (vph)	109	975	0	22	649	174	0	5	0	0	275	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	46.1	46.1		46.1	46.1	46.1		19.5			19.5	
Effective Green, g (s)	46.1	46.1		46.1	46.1	46.1		19.5			19.5	
Actuated g/C Ratio	0.63	0.63		0.63	0.63	0.63		0.26			0.26	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		8.0			8.0	
Lane Grp Cap (vph)	406	2008		273	2080	930		402			671	
v/s Ratio Prot		c0.30			0.20							
v/s Ratio Perm	0.17			0.05		0.12		0.00			c0.11	
v/c Ratio	0.27	0.49		0.08	0.31	0.19		0.01			0.41	
Uniform Delay, d1	6.2	7.4		5.4	6.4	5.8		19.9			22.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	1.6	0.8		0.6	0.4	0.4		0.0			1.7	
Delay (s)	7.8	8.2		6.0	6.8	6.3		20.0			24.0	
Level of Service	A	A		A	A	A		B			C	
Approach Delay (s)		8.2			6.6			20.0			24.0	
Approach LOS		A			A			B			C	

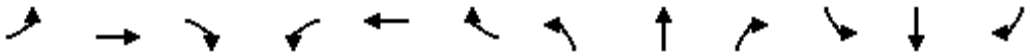
Intersection Summary			
HCM Average Control Delay	9.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	73.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	131	228	125	94	163	56	144	907	90	129	825	98
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	9	12	10	10	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.95		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1560	1504		1563	1585		1493	3069	1337	1523	3099	1318
Flt Permitted	0.45	1.00		0.20	1.00		0.20	1.00	1.00	0.16	1.00	1.00
Satd. Flow (perm)	743	1504		337	1585		317	3069	1337	263	3099	1318
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	138	240	132	99	172	59	152	955	95	136	868	103
RTOR Reduction (vph)	0	23	0	0	15	0	0	0	40	0	0	48
Lane Group Flow (vph)	138	349	0	99	216	0	152	955	55	136	868	55
Confl. Peds. (#/hr)	10		13	13		10	18		7	7		18
Confl. Bikes (#/hr)	2					2	2		1	1		2
Heavy Vehicles (%)	2%	1%	1%	2%	1%	2%	3%	4%	0%	1%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	28.0	21.0		28.0	21.0		42.0	35.0	35.0	42.0	35.0	35.0
Effective Green, g (s)	26.0	22.0		26.0	22.0		40.0	35.0	35.0	40.0	35.0	35.0
Actuated g/C Ratio	0.31	0.26		0.31	0.26		0.47	0.41	0.41	0.47	0.41	0.41
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	285	389		190	410		232	1264	551	213	1276	543
v/s Ratio Prot	0.03	c0.23		c0.04	0.14		c0.05	c0.31		0.05	0.28	
v/s Ratio Perm	0.11			0.12			0.26		0.04	0.26		0.04
v/c Ratio	0.48	0.90		0.52	0.53		0.66	0.76	0.10	0.64	0.68	0.10
Uniform Delay, d1	22.7	30.4		22.9	27.0		14.7	21.3	15.3	15.0	20.4	15.4
Progression Factor	1.00	1.00		1.00	1.00		0.67	0.79	0.53	1.00	1.00	1.00
Incremental Delay, d2	5.8	25.9		9.9	4.8		12.3	3.8	0.3	13.8	2.9	0.4
Delay (s)	28.4	56.3		32.7	31.8		22.1	20.7	8.5	28.8	23.4	15.7
Level of Service	C	E		C	C		C	C	A	C	C	B
Approach Delay (s)		48.8			32.1			19.9			23.3	
Approach LOS		D			C			B			C	

Intersection Summary			
HCM Average Control Delay	27.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	74.0%	ICU Level of Service	D
Analysis Period (min)	15		

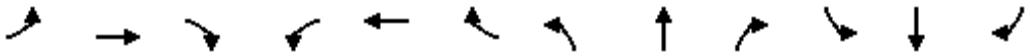
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	22	181	37	20	173	22	33	149	40	46	255	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	14	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.99			1.00			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.99			0.98			0.98	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1837			1848			1938			1975	
Flt Permitted		0.97			0.96			0.92			0.94	
Satd. Flow (perm)		1781			1790			1800			1869	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	23	187	38	21	178	23	34	154	41	47	263	52
RTOR Reduction (vph)	0	10	0	0	6	0	0	12	0	0	9	0
Lane Group Flow (vph)	0	238	0	0	216	0	0	217	0	0	353	0
Confl. Peds. (#/hr)	18		34	34		18	16		19	19		16
Confl. Bikes (#/hr)			6	6			1		4	4		1
Heavy Vehicles (%)	0%	1%	0%	5%	1%	0%	0%	2%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.42			0.42			0.46			0.46	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		740			744			831			863	
v/s Ratio Prot												
v/s Ratio Perm		c0.13			0.12			0.12			c0.19	
v/c Ratio		0.32			0.29			0.26			0.41	
Uniform Delay, d1		12.8			12.6			10.7			11.6	
Progression Factor		1.00			0.70			1.22			1.00	
Incremental Delay, d2		1.1			1.0			0.7			1.4	
Delay (s)		14.0			9.8			13.8			13.0	
Level of Service		B			A			B			B	
Approach Delay (s)		14.0			9.8			13.8			13.0	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	12.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.2%	ICU Level of Service	A
Analysis Period (min)	15		

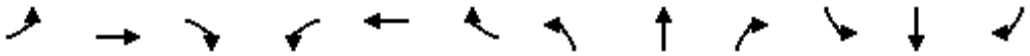
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	193	39	25	180	19	49	200	31	43	214	39
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.97	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.99		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1496	3057		1577	3119		1518	3119		1550	3076	
Flt Permitted	0.61	1.00		0.59	1.00		0.58	1.00		0.59	1.00	
Satd. Flow (perm)	966	3057		984	3119		926	3119		968	3076	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	214	43	28	200	21	54	222	34	48	238	43
RTOR Reduction (vph)	0	26	0	0	12	0	0	14	0	0	18	0
Lane Group Flow (vph)	27	231	0	28	209	0	54	242	0	48	263	0
Confl. Peds. (#/hr)	20		17	17		20	2					2
Confl. Bikes (#/hr)	32		36	36		32	22		25	25		22
Heavy Vehicles (%)	4%	1%	0%	0%	0%	0%	5%	0%	0%	3%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0		39.0	39.0		39.0	39.0	
Effective Green, g (s)	19.0	19.0		19.0	19.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.58	0.58		0.58	0.58	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	282	894		288	912		541	1823		566	1798	
v/s Ratio Prot		c0.08			0.07			0.08			c0.09	
v/s Ratio Perm	0.03			0.03			0.06			0.05		
v/c Ratio	0.10	0.26		0.10	0.23		0.10	0.13		0.08	0.15	
Uniform Delay, d1	16.7	17.6		16.8	17.4		6.0	6.1		5.9	6.1	
Progression Factor	0.93	0.97		0.73	0.73		1.32	1.32		0.38	0.34	
Incremental Delay, d2	0.6	0.7		0.7	0.6		0.4	0.1		0.3	0.2	
Delay (s)	16.2	17.7		12.9	13.3		8.2	8.2		2.5	2.3	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		17.5			13.2			8.2			2.3	
Approach LOS		B			B			A			A	

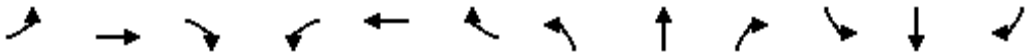
Intersection Summary			
HCM Average Control Delay	9.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.18		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



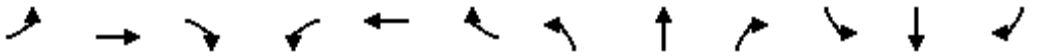
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	67	168	42	25	159	38	27	247	16	40	322	33
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	9	9	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.97		1.00	0.97			0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1555	3056		1525	2937			1922			1938	
Flt Permitted	0.61	1.00		0.61	1.00			0.94			0.94	
Satd. Flow (perm)	1007	3056		973	2937			1823			1840	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	74	187	47	28	177	42	30	274	18	44	358	37
RTOR Reduction (vph)	0	28	0	0	25	0	0	3	0	0	5	0
Lane Group Flow (vph)	74	206	0	28	194	0	0	319	0	0	434	0
Confl. Peds. (#/hr)	11		17	17		11	26		7	7		26
Heavy Vehicles (%)	2%	1%	0%	0%	1%	3%	4%	5%	0%	0%	4%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Effective Green, g (s)	26.0	26.0		26.0	26.0			31.0			31.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40			0.48			0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	403	1222		389	1175			869			878	
v/s Ratio Prot		0.07			0.07							
v/s Ratio Perm	c0.07			0.03				0.17			c0.24	
v/c Ratio	0.18	0.17		0.07	0.16			0.37			0.49	
Uniform Delay, d1	12.6	12.5		12.0	12.5			10.8			11.6	
Progression Factor	1.04	0.99		0.80	0.80			1.08			1.00	
Incremental Delay, d2	1.0	0.3		0.3	0.3			1.2			2.0	
Delay (s)	14.1	12.7		10.0	10.3			12.8			13.6	
Level of Service	B	B		A	B			B			B	
Approach Delay (s)		13.0			10.2			12.8			13.6	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	12.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



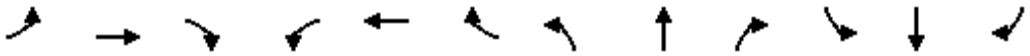
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	47	111	28	20	161	27	41	235	11	33	364	57
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	16	12	10	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00			1.00	
Frt	1.00	0.97		1.00	0.98			0.99			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			1.00	
Satd. Flow (prot)	1652	1970		1584	1975			1981			1979	
Flt Permitted	0.57	1.00		0.65	1.00			0.90			0.96	
Satd. Flow (perm)	986	1970		1087	1975			1792			1912	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	52	123	31	22	179	30	46	261	12	37	404	63
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	52	154	0	22	209	0	0	319	0	0	504	0
Confl. Peds. (#/hr)	1		10	10		1	2		5	5		2
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	2%	0%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Effective Green, g (s)	20.0	20.0		20.0	20.0			37.0			37.0	
Actuated g/C Ratio	0.31	0.31		0.31	0.31			0.57			0.57	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	303	606		334	608			1020			1088	
v/s Ratio Prot		0.08			c0.11							
v/s Ratio Perm	0.05			0.02				0.18			c0.26	
v/c Ratio	0.17	0.25		0.07	0.34			0.31			0.46	
Uniform Delay, d1	16.4	16.9		15.9	17.4			7.3			8.2	
Progression Factor	0.83	0.81		0.96	0.98			0.82			1.00	
Incremental Delay, d2	1.2	1.0		0.4	1.5			0.8			1.4	
Delay (s)	14.8	14.6		15.6	18.7			6.8			9.6	
Level of Service	B	B		B	B			A			A	
Approach Delay (s)		14.7			18.4			6.8			9.6	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



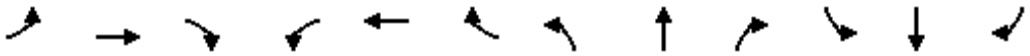
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	54	13	97	2	5	10	62	235	5	5	466	76
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	10	10	10	11	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98		1.00	0.98		1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.87		1.00	0.90		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1695	1727		1702	1808		1594	1647	1428	1653	2000	1496
Flt Permitted	0.75	1.00		0.68	1.00		0.39	1.00	1.00	0.59	1.00	1.00
Satd. Flow (perm)	1332	1727		1216	1808		660	1647	1428	1030	2000	1496
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	60	14	108	2	6	11	69	261	6	6	518	84
RTOR Reduction (vph)	0	78	0	0	8	0	0	0	2	0	0	28
Lane Group Flow (vph)	60	44	0	2	9	0	69	261	4	6	518	56
Confl. Peds. (#/hr)	5		5	5		5	3					3
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	0%	2%	0%	0%	2%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	17.0	17.0		17.0	17.0		39.0	39.0	39.0	39.0	39.0	39.0
Effective Green, g (s)	18.0	18.0		18.0	18.0		39.0	39.0	39.0	39.0	39.0	39.0
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.60	0.60	0.60	0.60	0.60	0.60
Clearance Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	369	478		337	501		396	988	857	618	1200	898
v/s Ratio Prot		0.03			0.01			0.16			c0.26	
v/s Ratio Perm	c0.05			0.00			0.10		0.00	0.01		0.04
v/c Ratio	0.16	0.09		0.01	0.02		0.17	0.26	0.00	0.01	0.43	0.06
Uniform Delay, d1	17.8	17.4		17.0	17.1		5.8	6.2	5.2	5.2	7.0	5.4
Progression Factor	1.39	2.73		1.00	1.00		1.18	1.10	1.46	1.00	1.00	1.00
Incremental Delay, d2	0.9	0.4		0.0	0.1		0.7	0.5	0.0	0.0	1.1	0.1
Delay (s)	25.7	48.0		17.1	17.1		7.6	7.3	7.6	5.3	8.2	5.5
Level of Service	C	D		B	B		A	A	A	A	A	A
Approach Delay (s)		40.6			17.1			7.4			7.8	
Approach LOS		D			B			A			A	

Intersection Summary			
HCM Average Control Delay	13.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	255	163	198	215	0	0	0	0	111	470	377
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)		4.0		3.0	3.0					5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	
Frpb, ped/bikes		0.99		1.00	1.00					1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Frt		0.94		1.00	1.00					1.00	0.93	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		2905		1693	3288					1503	3021	
Flt Permitted		1.00		0.40	1.00					0.95	1.00	
Satd. Flow (perm)		2905		719	3288					1503	3021	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	268	172	208	226	0	0	0	0	117	495	397
RTOR Reduction (vph)	0	101	0	0	0	0	0	0	0	0	141	0
Lane Group Flow (vph)	0	339	0	208	226	0	0	0	0	117	751	0
Confl. Peds. (#/hr)	18		3	3		18	1					1
Heavy Vehicles (%)	0%	4%	1%	1%	4%	0%	0%	0%	0%	10%	2%	1%
Turn Type				D.P+P						Split		
Protected Phases		8		7	7 8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		33.0		53.0	56.0					37.0	37.0	
Effective Green, g (s)		33.0		53.0	56.0					37.0	37.0	
Actuated g/C Ratio		0.32		0.52	0.55					0.36	0.36	
Clearance Time (s)		4.0		3.0						5.0	5.0	
Lane Grp Cap (vph)		940		565	1805					545	1096	
v/s Ratio Prot		0.12		c0.07	0.07					0.08	c0.25	
v/s Ratio Perm				c0.12								
v/c Ratio		0.36		0.37	0.13					0.21	0.68	
Uniform Delay, d1		26.4		13.7	11.1					22.5	27.6	
Progression Factor		1.00		2.23	2.15					1.00	1.00	
Incremental Delay, d2		1.1		1.6	0.1					0.9	3.5	
Delay (s)		27.5		32.0	24.0					23.4	31.0	
Level of Service		C		C	C					C	C	
Approach Delay (s)		27.5			27.9			0.0			30.1	
Approach LOS		C			C			A			C	

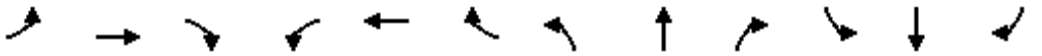
Intersection Summary			
HCM Average Control Delay	29.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	102.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	62.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	141	225	0	0	336	119	77	539	236	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	9	12	13	12	13	12	12	12
Total Lost time (s)	4.0	4.0			4.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.96		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1675	3196			2855		1767	1782	1560			
Flt Permitted	0.32	1.00			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	571	3196			2855		1767	1782	1560			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	148	237	0	0	354	125	81	567	248	0	0	0
RTOR Reduction (vph)	0	0	0	0	35	0	0	0	170	0	0	0
Lane Group Flow (vph)	148	237	0	0	444	0	81	567	78	0	0	0
Confl. Peds. (#/hr)	9		13	13		9			1	1		
Confl. Bikes (#/hr)	3					3						
Heavy Vehicles (%)	2%	7%	0%	0%	3%	1%	0%	1%	0%	0%	0%	0%
Turn Type	pm+pt						custom		Perm			
Protected Phases	4	1 4			1		2	2				
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	59.0	63.0			26.0		30.0	30.0	30.0			
Effective Green, g (s)	59.0	63.0			26.0		30.0	30.0	30.0			
Actuated g/C Ratio	0.58	0.62			0.25		0.29	0.29	0.29			
Clearance Time (s)	4.0				4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	687	1974			728		520	524	459			
v/s Ratio Prot	c0.07	0.07			c0.16		0.05	c0.32				
v/s Ratio Perm	0.05								0.05			
v/c Ratio	0.22	0.12			0.61		0.16	1.08	0.17			
Uniform Delay, d1	10.4	8.1			33.5		26.6	36.0	26.7			
Progression Factor	0.42	0.43			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.7	0.1			3.8		0.6	63.3	0.8			
Delay (s)	5.0	3.6			37.3		27.3	99.3	27.5			
Level of Service	A	A			D		C	F	C			
Approach Delay (s)		4.1			37.3			73.0			0.0	
Approach LOS		A			D			E			A	

Intersection Summary			
HCM Average Control Delay	48.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	102.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	63.1%	ICU Level of Service	B
Analysis Period (min)	15		

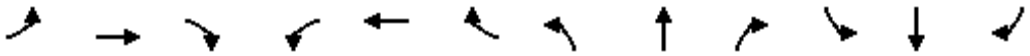
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	517	479	81	534	0	0	0	0	13	436	301
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	11	12	12	12	12	10	10	12
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		1.00	0.95					1.00	0.95	1.00
Frpb, ped/bikes		0.99		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.93		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3099		1710	3306					1596	3192	1530
Flt Permitted		1.00		0.11	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3099		200	3306					1596	3192	1530
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	539	499	84	556	0	0	0	0	14	454	314
RTOR Reduction (vph)	0	168	0	0	0	0	0	0	0	0	0	200
Lane Group Flow (vph)	0	870	0	84	556	0	0	0	0	14	454	114
Confl. Peds. (#/hr)	8		8	8		8	3					3
Confl. Bikes (#/hr)	9					9			61	61		
Heavy Vehicles (%)	0%	1%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type				pm+pt						Split		Prot
Protected Phases		8		7	7 8					6	6	6
Permitted Phases				7 8								
Actuated Green, G (s)		36.0		54.0	58.0					34.0	34.0	34.0
Effective Green, g (s)		36.0		54.0	58.0					34.0	34.0	34.0
Actuated g/C Ratio		0.36		0.54	0.58					0.34	0.34	0.34
Clearance Time (s)		4.0		4.0						4.0	4.0	4.0
Lane Grp Cap (vph)		1116		380	1917					543	1085	520
v/s Ratio Prot		c0.28		0.04	c0.17					0.01	c0.14	0.07
v/s Ratio Perm				0.08								
v/c Ratio		0.78		0.22	0.29					0.03	0.42	0.22
Uniform Delay, d1		28.5		14.4	10.6					22.0	25.4	23.5
Progression Factor		1.00		1.01	1.19					1.00	1.00	1.00
Incremental Delay, d2		5.4		0.9	0.3					0.1	1.2	1.0
Delay (s)		33.9		15.5	12.9					22.1	26.6	24.5
Level of Service		C		B	B					C	C	C
Approach Delay (s)		33.9			13.2			0.0			25.7	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM Average Control Delay	25.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	93.6%	ICU Level of Service	F
Analysis Period (min)	15		

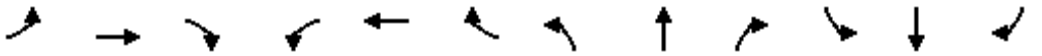
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	422	104	0	0	150	6	465	480	58	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	12	12	12	10	12	11	11	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	0.91	0.91			0.95		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.99		1.00	1.00	0.85			
Flt Protected	0.95	0.97			1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1469	3109			3170		1555	1653	1530			
Flt Permitted	0.64	0.71			1.00		0.95	1.00	1.00			
Satd. Flow (perm)	992	2286			3170		1555	1653	1530			
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	435	107	0	0	155	6	479	495	60	0	0	0
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	38	0	0	0
Lane Group Flow (vph)	217	325	0	0	158	0	479	495	22	0	0	0
Confl. Peds. (#/hr)	13		6	6		13			8	8		
Confl. Bikes (#/hr)	1					1			2	2		
Heavy Vehicles (%)	2%	1%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%
Turn Type	pm+pt						custom		custom			
Protected Phases	4	1 4			1		2	2	2			
Permitted Phases	1 4						2		2			
Actuated Green, G (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Effective Green, g (s)	51.0	51.0			15.0		37.0	37.0	37.0			
Actuated g/C Ratio	0.51	0.51			0.15		0.37	0.37	0.37			
Clearance Time (s)	4.0				4.0		4.0	4.0	4.0			
Lane Grp Cap (vph)	678	1462			476		575	612	566			
v/s Ratio Prot	c0.12	0.08			c0.05		c0.31	0.30	0.01			
v/s Ratio Perm	0.05	0.03										
v/c Ratio	0.32	0.22			0.33		0.83	0.81	0.04			
Uniform Delay, d1	14.1	13.5			38.0		28.7	28.3	20.1			
Progression Factor	0.25	0.26			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.7	0.2			1.9		13.3	11.0	0.1			
Delay (s)	4.2	3.7			39.9		42.0	39.3	20.3			
Level of Service	A	A			D		D	D	C			
Approach Delay (s)		3.9			39.9			39.5			0.0	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM Average Control Delay	28.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	93.6%	ICU Level of Service	F
Analysis Period (min)	15		

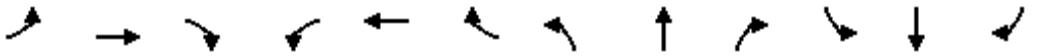
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	78	316	117	109	270	111	87	699	76	100	884	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	9	10	9	9	10	9
Total Lost time (s)		4.0			4.0		4.0	3.5	4.0	4.0	3.5	4.0
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		0.99			0.99		1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.97			0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		2955			2935		1508	3069	1309	1508	3099	1298
Flt Permitted		0.77			0.72		0.16	1.00	1.00	0.25	1.00	1.00
Satd. Flow (perm)		2281			2151		254	3069	1309	401	3099	1298
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	81	329	122	114	281	116	91	728	79	104	921	68
RTOR Reduction (vph)	0	33	0	0	32	0	0	0	48	0	0	33
Lane Group Flow (vph)	0	499	0	0	479	0	91	728	31	104	921	35
Confl. Peds. (#/hr)	35		30	30		35	34		8	8		34
Confl. Bikes (#/hr)	1					1	1					1
Heavy Vehicles (%)	1%	4%	0%	1%	3%	3%	2%	4%	2%	2%	3%	2%
Turn Type	pm+pt			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		35.0			27.0		38.0	33.0	33.0	38.0	33.0	33.0
Effective Green, g (s)		36.0			28.0		36.0	33.5	33.0	36.0	33.5	33.0
Actuated g/C Ratio		0.42			0.33		0.42	0.39	0.39	0.42	0.39	0.39
Clearance Time (s)		5.0			5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)		1014			709		167	1210	508	222	1221	504
v/s Ratio Prot		c0.03					c0.03	0.24		0.02	c0.30	
v/s Ratio Perm		0.17			c0.22		0.21		0.02	0.18		0.03
v/c Ratio		0.49			0.68		0.54	0.60	0.06	0.47	0.75	0.07
Uniform Delay, d1		17.8			24.6		16.8	20.5	16.3	15.9	22.2	16.3
Progression Factor		1.00			1.00		1.48	0.68	0.77	1.11	1.16	1.74
Incremental Delay, d2		1.7			5.1		11.1	2.0	0.2	5.0	3.1	0.2
Delay (s)		19.6			29.7		36.0	16.0	12.8	22.6	29.0	28.6
Level of Service		B			C		D	B	B	C	C	C
Approach Delay (s)		19.6			29.7			17.8			28.3	
Approach LOS		B			C			B			C	

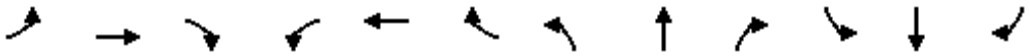
Intersection Summary			
HCM Average Control Delay	23.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	76.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	76	410	0	0	367	84	54	44	33	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.97			0.97				
Flt Protected		0.99			1.00			0.98				
Satd. Flow (prot)		1734			1704			1654				
Flt Permitted		0.87			1.00			0.98				
Satd. Flow (perm)		1519			1704			1654				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	84	456	0	0	408	93	60	49	37	0	0	0
RTOR Reduction (vph)	0	0	0	0	12	0	0	19	0	0	0	0
Lane Group Flow (vph)	0	540	0	0	489	0	0	127	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		38.0			38.0			19.0				
Effective Green, g (s)		38.0			38.0			19.0				
Actuated g/C Ratio		0.58			0.58			0.29				
Clearance Time (s)		4.0			4.0			4.0				
Lane Grp Cap (vph)		888			996			483				
v/s Ratio Prot					0.29							
v/s Ratio Perm		c0.36						0.08				
v/c Ratio		0.61			0.49			0.26				
Uniform Delay, d1		8.7			7.9			17.6				
Progression Factor		1.00			0.76			1.00				
Incremental Delay, d2		3.1			1.5			1.3				
Delay (s)		11.8			7.5			19.0				
Level of Service		B			A			B				
Approach Delay (s)		11.8			7.5			19.0			0.0	
Approach LOS		B			A			B			A	

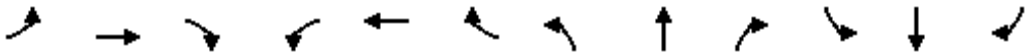
Intersection Summary			
HCM Average Control Delay	10.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	70.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	29	374	37	39	369	50	31	118	39	53	150	45
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	10	12	12	10	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			0.99			0.98	
Flpb, ped/bikes		1.00			1.00			0.99			1.00	
Frt		0.99			0.99			0.97			0.97	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1954			1941			2969			2981	
Flt Permitted		0.95			0.94			0.88			0.86	
Satd. Flow (perm)		1869			1825			2646			2589	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	32	416	41	43	410	56	34	131	43	59	167	50
RTOR Reduction (vph)	0	5	0	0	7	0	0	25	0	0	29	0
Lane Group Flow (vph)	0	484	0	0	502	0	0	183	0	0	247	0
Confl. Peds. (#/hr)	32		25	25		32	59		24	24		59
Confl. Bikes (#/hr)	3		2	2		3	4		2	2		4
Heavy Vehicles (%)	0%	3%	0%	3%	3%	0%	0%	0%	7%	4%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0			27.0			27.0	
Effective Green, g (s)		30.0			30.0			27.0			27.0	
Actuated g/C Ratio		0.46			0.46			0.42			0.42	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		863			842			1099			1075	
v/s Ratio Prot												
v/s Ratio Perm		0.26			c0.28			0.07			c0.10	
v/c Ratio		0.56			0.60			0.17			0.23	
Uniform Delay, d1		12.7			13.0			11.9			12.3	
Progression Factor		0.56			0.40			1.30			0.44	
Incremental Delay, d2		2.2			2.7			0.3			0.5	
Delay (s)		9.2			7.9			15.8			5.9	
Level of Service		A			A			B			A	
Approach Delay (s)		9.2			7.9			15.8			5.9	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM Average Control Delay	9.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.0%	ICU Level of Service	D
Analysis Period (min)	15		

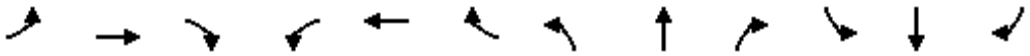
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	51	320	49	81	464	86	46	219	98	83	227	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	9	10	10	9	10	10	12	10	10	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		0.99	1.00		0.99	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.95		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1510	3034		1572	3077		1587	2962		1585	3071	
Flt Permitted	0.32	1.00		0.47	1.00		0.56	1.00		0.54	1.00	
Satd. Flow (perm)	505	3034		775	3077		928	2962		903	3071	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	57	356	54	90	516	96	51	243	109	92	252	72
RTOR Reduction (vph)	0	19	0	0	24	0	0	50	0	0	33	0
Lane Group Flow (vph)	57	391	0	90	588	0	51	302	0	92	291	0
Confl. Peds. (#/hr)	20		31	31		20	16		20	20		16
Confl. Bikes (#/hr)							1		3	3		1
Heavy Vehicles (%)	5%	3%	0%	0%	1%	0%	0%	2%	2%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)	22.0	22.0		22.0	22.0		35.0	35.0		35.0	35.0	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	171	1027		262	1041		500	1595		486	1654	
v/s Ratio Prot		0.13			c0.19			0.10			0.09	
v/s Ratio Perm	0.11			0.12			0.05			c0.10		
v/c Ratio	0.33	0.38		0.34	0.57		0.10	0.19		0.19	0.18	
Uniform Delay, d1	16.0	16.3		16.1	17.6		7.3	7.7		7.7	7.6	
Progression Factor	0.67	0.64		0.95	0.95		0.74	0.64		1.09	1.08	
Incremental Delay, d2	4.6	0.9		3.5	2.2		0.4	0.3		0.9	0.2	
Delay (s)	15.3	11.4		18.8	19.0		5.8	5.2		9.3	8.5	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		11.9			19.0			5.3			8.7	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	12.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.6%	ICU Level of Service	A
Analysis Period (min)	15		

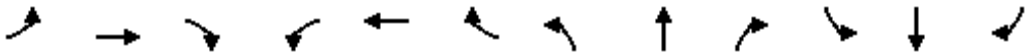
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	338	78	87	414	50	46	231	58	46	279	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	9	10	9	9	16	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			0.98	
Flpb, ped/bikes	0.98	1.00		0.99	1.00			0.99			1.00	
Frt	1.00	0.97		1.00	0.98			0.97			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1509	3016		1430	3722			3485			3519	
Flt Permitted	0.45	1.00		0.48	1.00			0.86			0.88	
Satd. Flow (perm)	712	3016		725	3722			3028			3118	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	62	356	82	92	436	53	48	243	61	48	294	68
RTOR Reduction (vph)	0	30	0	0	15	0	0	27	0	0	25	0
Lane Group Flow (vph)	62	408	0	92	474	0	0	325	0	0	385	0
Confl. Peds. (#/hr)	38		17	17		38	125		53	53		125
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	0%	3%	0%	7%	2%	0%	0%	6%	10%	2%	5%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Effective Green, g (s)	31.0	31.0		31.0	31.0			26.0			26.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48			0.40			0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	340	1438		346	1775			1211			1247	
v/s Ratio Prot		c0.14			0.13							
v/s Ratio Perm	0.09			0.13				0.11			c0.12	
v/c Ratio	0.18	0.28		0.27	0.27			0.27			0.31	
Uniform Delay, d1	9.7	10.3		10.2	10.2			13.1			13.3	
Progression Factor	1.59	1.74		1.12	1.11			0.52			0.74	
Incremental Delay, d2	1.1	0.5		1.7	0.3			0.5			0.6	
Delay (s)	16.6	18.3		13.1	11.6			7.3			10.4	
Level of Service	B	B		B	B			A			B	
Approach Delay (s)		18.1			11.9			7.3			10.4	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM Average Control Delay	12.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.4%	ICU Level of Service	B
Analysis Period (min)	15		

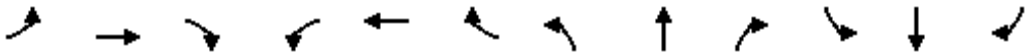
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	86	284	91	92	289	92	120	82	47	47	82	119
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	16	12	12	16	12
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		0.95			1.00			1.00	
Frt		1.00	0.85		0.97			0.97			0.94	
Flt Protected		0.99	1.00		0.99			0.98			0.99	
Satd. Flow (prot)		1670	1436		3086			1885			1835	
Flt Permitted		0.79	1.00		0.79			0.68			0.90	
Satd. Flow (perm)		1332	1436		2469			1303			1674	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	96	316	101	102	321	102	133	91	52	52	91	132
RTOR Reduction (vph)	0	0	48	0	32	0	0	13	0	0	51	0
Lane Group Flow (vph)	0	412	53	0	493	0	0	263	0	0	224	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		34.0	34.0		34.0			21.0			21.0	
Effective Green, g (s)		34.0	34.0		34.0			21.0			21.0	
Actuated g/C Ratio		0.52	0.52		0.52			0.32			0.32	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Grp Cap (vph)		697	751		1291			421			541	
v/s Ratio Prot												
v/s Ratio Perm		c0.31	0.04		0.20			c0.20			0.13	
v/c Ratio		0.59	0.07		0.38			0.63			0.41	
Uniform Delay, d1		10.7	7.7		9.2			18.7			17.2	
Progression Factor		1.85	6.02		0.52			1.00			1.00	
Incremental Delay, d2		3.6	0.2		0.8			6.8			2.3	
Delay (s)		23.3	46.4		5.7			25.5			19.5	
Level of Service		C	D		A			C			B	
Approach Delay (s)		27.9			5.7			25.5			19.5	
Approach LOS		C			A			C			B	

Intersection Summary			
HCM Average Control Delay	18.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	79.2%	ICU Level of Service	D
Analysis Period (min)	15		

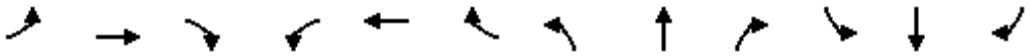
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	55	271	28	26	323	60	26	133	47	62	146	63
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	15	8	16	8	8	16	8
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			0.99			1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.98			0.97			0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1443	3025		1565	3018			3582			3599	
Flt Permitted	0.49	1.00		0.55	1.00			0.90			0.84	
Satd. Flow (perm)	740	3025		909	3018			3238			3069	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	61	301	31	29	359	67	29	148	52	69	162	70
RTOR Reduction (vph)	0	12	0	0	24	0	0	30	0	0	41	0
Lane Group Flow (vph)	61	320	0	29	402	0	0	199	0	0	260	0
Confl. Peds. (#/hr)	24		47	47		24	9		36	36		9
Confl. Bikes (#/hr)			4	4			1					1
Heavy Vehicles (%)	9%	4%	0%	0%	3%	0%	0%	1%	10%	0%	0%	8%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	30.0	30.0		30.0	30.0			27.0			27.0	
Effective Green, g (s)	30.0	30.0		30.0	30.0			27.0			27.0	
Actuated g/C Ratio	0.46	0.46		0.46	0.46			0.42			0.42	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	342	1396		420	1393			1345			1275	
v/s Ratio Prot		0.11			c0.13							
v/s Ratio Perm	0.08			0.03				0.06			c0.08	
v/c Ratio	0.18	0.23		0.07	0.29			0.15			0.20	
Uniform Delay, d1	10.3	10.5		9.7	10.9			11.8			12.1	
Progression Factor	0.69	0.69		1.31	1.19			1.02			0.41	
Incremental Delay, d2	0.9	0.3		0.1	0.2			0.2			0.3	
Delay (s)	8.0	7.6		12.9	13.2			12.3			5.4	
Level of Service	A	A		B	B			B			A	
Approach Delay (s)		7.7			13.2			12.3			5.4	
Approach LOS		A			B			B			A	

Intersection Summary			
HCM Average Control Delay	9.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.7%	ICU Level of Service	B
Analysis Period (min)	15		

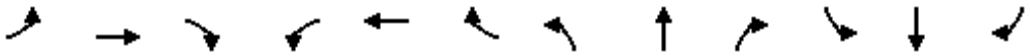
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	47	440	26	86	503	222	24	124	115	340	261	82
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.99			0.96			0.93			0.98	
Flt Protected		1.00			0.99			1.00			0.98	
Satd. Flow (prot)		3280			3167			3089			3181	
Flt Permitted		0.75			0.79			0.88			0.70	
Satd. Flow (perm)		2462			2502			2739			2269	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	52	489	29	96	559	247	27	138	128	378	290	91
RTOR Reduction (vph)	0	6	0	0	60	0	0	67	0	0	16	0
Lane Group Flow (vph)	0	564	0	0	842	0	0	226	0	0	743	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		24.0			24.0			31.0			23.0	
Effective Green, g (s)		24.0			24.0			31.0			23.0	
Actuated g/C Ratio		0.37			0.37			0.48			0.35	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		909			924			1333			803	
v/s Ratio Prot								c0.01				
v/s Ratio Perm		0.23			c0.34			0.07			c0.33	
v/c Ratio		0.62			0.91			0.17			1.02dl	
Uniform Delay, d1		16.8			19.5			9.7			20.2	
Progression Factor		1.63			1.00			1.00			0.77	
Incremental Delay, d2		3.2			14.6			0.3			17.5	
Delay (s)		30.5			34.1			10.0			33.1	
Level of Service		C			C			A			C	
Approach Delay (s)		30.5			34.1			10.0			33.1	
Approach LOS		C			C			A			C	

Intersection Summary			
HCM Average Control Delay	30.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	85.7%	ICU Level of Service	E
Analysis Period (min)	15		

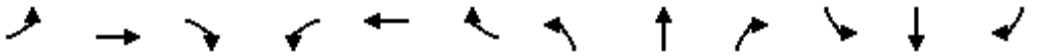
dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	895	128	48	792	0	81	0	36	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	10	10	12	12	12	12	12	12	12
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			1.00				
Frt		0.98			1.00			0.96				
Flt Protected		1.00			1.00			0.97				
Satd. Flow (prot)		3041			3090			1619				
Flt Permitted		1.00			0.80			0.79				
Satd. Flow (perm)		3041			2489			1329				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	994	142	53	880	0	90	0	40	0	0	0
RTOR Reduction (vph)	0	15	0	0	0	0	0	18	0	0	0	0
Lane Group Flow (vph)	0	1121	0	0	933	0	0	112	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	custom			Perm			Perm			Perm		
Protected Phases		4 5 6 11			8			2			2	
Permitted Phases	4 6 11			8			2			2		
Actuated Green, G (s)		65.0			33.0			16.0				
Effective Green, g (s)		58.0			33.0			16.0				
Actuated g/C Ratio		0.64			0.37			0.18				
Clearance Time (s)					5.0			5.0				
Lane Grp Cap (vph)		1960			913			236				
v/s Ratio Prot		c0.37										
v/s Ratio Perm					c0.37			c0.08				
v/c Ratio		0.57			1.02			0.47				
Uniform Delay, d1		9.0			28.5			33.2				
Progression Factor		0.14			1.42			1.00				
Incremental Delay, d2		0.3			34.2			6.7				
Delay (s)		1.6			74.8			39.9				
Level of Service		A			E			D				
Approach Delay (s)		1.6			74.8			39.9			0.0	
Approach LOS		A			E			D			A	

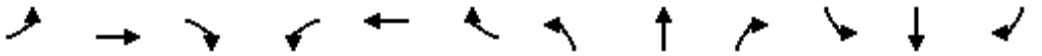
Intersection Summary			
HCM Average Control Delay	35.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	74.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	222	642	22	112	614	185	60	4	107	212	10	212
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	10	12	12	12	12	16	12	12	12	12
Total Lost time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85		0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (prot)	1550	3194		1660	3320	1485		1782		1660	1748	1485
Flt Permitted	0.29	1.00		0.33	1.00	1.00		0.88		0.43	1.00	1.00
Satd. Flow (perm)	472	3194		585	3320	1485		1593		758	1748	1485
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	247	713	24	124	682	206	67	4	119	236	11	236
RTOR Reduction (vph)	0	2	0	0	0	95	0	92	0	0	0	135
Lane Group Flow (vph)	247	735	0	124	682	111	0	98	0	236	11	101
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	55.0	42.6		47.8	38.4	48.4		12.0		25.0	25.0	38.6
Effective Green, g (s)	55.0	42.6		47.8	38.4	48.4		12.0		25.0	25.0	38.6
Actuated g/C Ratio	0.61	0.47		0.53	0.43	0.54		0.13		0.28	0.28	0.43
Clearance Time (s)	3.0	5.0		3.0	5.0	3.0		5.0		3.0	5.0	3.0
Vehicle Extension (s)	4.0	3.0		4.0	3.0	3.0		4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	451	1512		423	1417	799		212		311	486	637
v/s Ratio Prot	c0.08	0.23		0.03	0.21	0.02				c0.08	0.01	0.02
v/s Ratio Perm	c0.25			0.13		0.06		0.06		c0.13		0.04
v/c Ratio	0.55	0.49		0.29	0.48	0.14		0.46		0.76	0.02	0.16
Uniform Delay, d1	9.2	16.2		10.8	18.6	10.4		36.0		28.7	23.6	15.8
Progression Factor	2.65	1.87		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	1.5	1.0		0.5	1.2	0.1		2.2		10.2	0.0	0.2
Delay (s)	25.7	31.3		11.3	19.8	10.5		38.2		38.9	23.6	15.9
Level of Service	C	C		B	B	B		D		D	C	B
Approach Delay (s)		29.9			16.9			38.2			27.3	
Approach LOS		C			B			D			C	

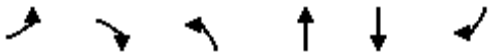
Intersection Summary			
HCM Average Control Delay	25.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	61.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	518	443	2	333	0	0	0	0	19	0	578
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	576	492	2	370	0	0	0	0	21	0	642
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		498										
pX, platoon unblocked												
vC, conflicting volume	370			576			765	950	288	662	950	185
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	370			576			765	950	288	662	950	185
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	94	100	22
cM capacity (veh/h)	1178			987			64	256	706	345	256	823

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	288	288	492	126	247	21	642
Volume Left	0	0	0	2	0	21	0
Volume Right	0	0	492	0	0	0	642
cSH	1700	1700	1700	987	1700	345	823
Volume to Capacity	0.17	0.17	0.29	0.00	0.15	0.06	0.78
Queue Length 95th (ft)	0	0	0	0	0	5	198
Control Delay (s)	0.0	0.0	0.0	0.2	0.0	16.1	23.1
Lane LOS				A		C	C
Approach Delay (s)	0.0			0.1		22.8	
Approach LOS						C	

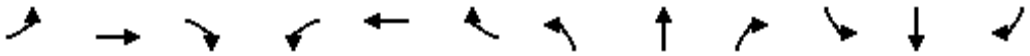
Intersection Summary				
Average Delay	7.2			
Intersection Capacity Utilization	54.2%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	537	0	335	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	597	0	372	0	0	0

Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	298	298	372
Volume Left (vph)	298	298	372
Volume Right (vph)	0	0	0
Hadj (s)	0.55	0.55	0.25
Departure Headway (s)	6.2	6.2	5.6
Degree Utilization, x	0.51	0.51	0.58
Capacity (veh/h)	568	570	619
Control Delay (s)	14.3	14.3	16.0
Approach Delay (s)	14.3		16.0
Approach LOS	B		C

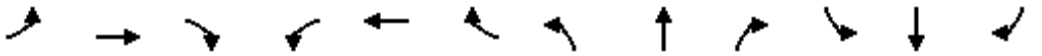
Intersection Summary			
Delay	14.9		
HCM Level of Service	B		
Intersection Capacity Utilization	42.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	472	90	192	594	0	0	0	0	101	21	58
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)		3.0		4.0	4.0						5.0	
Lane Util. Factor		0.95		1.00	0.95						0.95	
Frt		0.98		1.00	1.00						0.95	
Flt Protected		1.00		0.95	1.00						0.97	
Satd. Flow (prot)		3133		1605	3210						3074	
Flt Permitted		1.00		0.33	1.00						0.97	
Satd. Flow (perm)		3133		559	3210						3074	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	524	100	213	660	0	0	0	0	112	23	64
RTOR Reduction (vph)	0	18	0	0	0	0	0	0	0	0	44	0
Lane Group Flow (vph)	0	606	0	213	660	0	0	0	0	0	155	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type				pm+pt						Split		
Protected Phases		4		3	8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		36.0		49.0	49.0						27.0	
Effective Green, g (s)		36.0		49.0	49.0						27.0	
Actuated g/C Ratio		0.42		0.58	0.58						0.32	
Clearance Time (s)		3.0		4.0	4.0						5.0	
Lane Grp Cap (vph)		1327		445	1850						976	
v/s Ratio Prot		0.19		c0.06	0.21						c0.05	
v/s Ratio Perm				c0.22								
v/c Ratio		0.46		0.48	0.36						0.16	
Uniform Delay, d1		17.5		16.3	9.6						20.8	
Progression Factor		1.00		0.49	0.41						1.00	
Incremental Delay, d2		1.1		3.1	0.5						0.3	
Delay (s)		18.6		11.0	4.4						21.2	
Level of Service		B		B	A						C	
Approach Delay (s)		18.6			6.0			0.0			21.2	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	12.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	46.5%	ICU Level of Service	A
Analysis Period (min)	15		

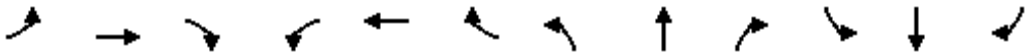
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	95	478	0	0	624	129	162	90	58	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	11	11	12	12	12	12	12	12
Total Lost time (s)	5.0	5.0			3.0			5.0				
Lane Util. Factor	1.00	0.95			0.95			0.91				
Frt	1.00	1.00			0.97			0.97				
Flt Protected	0.95	1.00			1.00			0.97				
Satd. Flow (prot)	1660	3320			3127			4519				
Flt Permitted	0.22	1.00			1.00			0.97				
Satd. Flow (perm)	385	3320			3127			4519				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	106	531	0	0	693	143	180	100	64	0	0	0
RTOR Reduction (vph)	0	0	0	0	21	0	0	44	0	0	0	0
Lane Group Flow (vph)	106	531	0	0	815	0	0	300	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt						Split					
Protected Phases	7	4			8		2	2				
Permitted Phases	4											
Actuated Green, G (s)	48.0	48.0			35.0			27.0				
Effective Green, g (s)	48.0	48.0			35.0			27.0				
Actuated g/C Ratio	0.56	0.56			0.41			0.32				
Clearance Time (s)	5.0	5.0			3.0			5.0				
Lane Grp Cap (vph)	367	1875			1288			1435				
v/s Ratio Prot	0.03	c0.16			c0.26			c0.07				
v/s Ratio Perm	0.13											
v/c Ratio	0.29	0.28			0.63			0.21				
Uniform Delay, d1	18.1	9.6			19.9			21.2				
Progression Factor	0.41	0.33			1.00			1.00				
Incremental Delay, d2	1.8	0.4			2.4			0.3				
Delay (s)	9.3	3.5			22.3			21.5				
Level of Service	A	A			C			C				
Approach Delay (s)		4.4			22.3			21.5			0.0	
Approach LOS		A			C			C			A	

Intersection Summary			
HCM Average Control Delay	15.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.5%	ICU Level of Service	A
Analysis Period (min)	15		

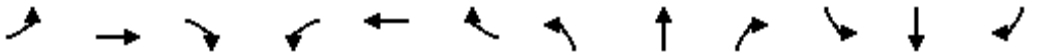
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	114	342	126	79	366	79	178	78	27	30	87	144
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	12	15	12	12	15	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		0.97			0.98			0.99			0.93	
Flt Protected		0.99			0.99			0.97			0.99	
Satd. Flow (prot)		2969			3006			1840			1769	
Flt Permitted		0.68			0.72			0.65			0.94	
Satd. Flow (perm)		2025			2179			1242			1676	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	127	380	140	88	407	88	198	87	30	33	97	160
RTOR Reduction (vph)	0	39	0	0	22	0	0	6	0	0	68	0
Lane Group Flow (vph)	0	608	0	0	561	0	0	309	0	0	222	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		23.0			23.0			32.0			32.0	
Effective Green, g (s)		23.0			23.0			32.0			32.0	
Actuated g/C Ratio		0.35			0.35			0.49			0.49	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		717			771			611			825	
v/s Ratio Prot												
v/s Ratio Perm		c0.30			0.26			c0.25			0.13	
v/c Ratio		0.85			0.73			0.51			0.27	
Uniform Delay, d1		19.4			18.3			11.2			9.7	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		11.9			5.9			3.0			0.8	
Delay (s)		31.3			24.2			14.1			10.5	
Level of Service		C			C			B			B	
Approach Delay (s)		31.3			24.2			14.1			10.5	
Approach LOS		C			C			B			B	

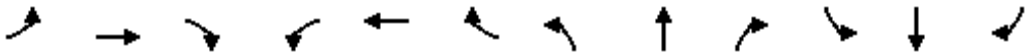
Intersection Summary			
HCM Average Control Delay	22.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	82.5%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	106	201	100	203	311	65	174	589	246	95	953	146
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	12	10	16	12	9	10	9	9	10	9
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.95		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1559	2967		1574	3683		1508	3069	1333	1521	3099	1336
Flt Permitted	0.45	1.00		0.52	1.00		0.13	1.00	1.00	0.31	1.00	1.00
Satd. Flow (perm)	739	2967		862	3683		212	3069	1333	490	3099	1336
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	112	212	105	214	327	68	183	620	259	100	1003	154
RTOR Reduction (vph)	0	70	0	0	21	0	0	0	165	0	0	98
Lane Group Flow (vph)	112	247	0	214	374	0	183	620	94	100	1003	56
Confl. Peds. (#/hr)	19		16	16		19	22		25	25		22
Heavy Vehicles (%)	2%	2%	0%	1%	2%	2%	2%	4%	0%	1%	3%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	32.0	27.0		32.0	27.0		38.0	31.0	31.0	38.0	31.0	31.0
Effective Green, g (s)	30.0	28.0		30.0	28.0		36.0	31.0	31.0	36.0	31.0	31.0
Actuated g/C Ratio	0.35	0.33		0.35	0.33		0.42	0.36	0.36	0.42	0.36	0.36
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	4.0	4.0	3.0	4.0	4.0
Lane Grp Cap (vph)	299	977		338	1213		181	1119	486	280	1130	487
v/s Ratio Prot	0.02	0.08		c0.03	0.10		c0.07	0.20		0.03	0.32	
v/s Ratio Perm	0.11			c0.19			c0.36		0.07	0.13		0.04
v/c Ratio	0.37	0.25		0.63	0.31		1.01	0.55	0.19	0.36	0.89	0.12
Uniform Delay, d1	19.4	20.8		22.2	21.3		20.7	21.5	18.5	15.6	25.4	17.9
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.41	1.05	2.36
Incremental Delay, d2	3.6	0.6		8.7	0.7		69.8	2.0	0.9	2.6	8.0	0.4
Delay (s)	23.0	21.5		30.9	21.9		90.5	23.5	19.4	24.6	34.6	42.7
Level of Service	C	C		C	C		F	C	B	C	C	D
Approach Delay (s)		21.9			25.1			34.0			34.8	
Approach LOS		C			C			C			C	

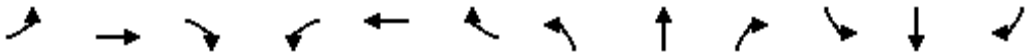
Intersection Summary			
HCM Average Control Delay	31.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	76.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	97	424	30	33	425	24	33	100	41	36	124	76
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	16	12	12	16	12
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00	0.98		1.00	0.99
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected		0.99	1.00		1.00	1.00		0.99	1.00		0.99	1.00
Satd. Flow (prot)		1957	1466		1994	1480		2015	1506		2001	1511
Flt Permitted		0.72	1.00		0.94	1.00		0.91	1.00		0.92	1.00
Satd. Flow (perm)		1426	1466		1888	1480		1863	1506		1870	1511
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	102	446	32	35	447	25	35	105	43	38	131	80
RTOR Reduction (vph)	0	0	17	0	0	13	0	0	25	0	0	47
Lane Group Flow (vph)	0	548	15	0	482	12	0	140	18	0	169	33
Confl. Peds. (#/hr)	11		20	20		11	1		4	4		1
Confl. Bikes (#/hr)	1		1	1		1			1	1		
Heavy Vehicles (%)	4%	3%	0%	0%	2%	0%	0%	0%	0%	0%	1%	0%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Effective Green, g (s)		30.0	30.0		30.0	30.0		27.0	27.0		27.0	27.0
Actuated g/C Ratio		0.46	0.46		0.46	0.46		0.42	0.42		0.42	0.42
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		658	677		871	683		774	626		777	628
v/s Ratio Prot												
v/s Ratio Perm		c0.38	0.01		0.26	0.01		0.08	0.01		c0.09	0.02
v/c Ratio		0.83	0.02		0.55	0.02		0.18	0.03		0.22	0.05
Uniform Delay, d1		15.3	9.5		12.7	9.5		12.0	11.2		12.2	11.4
Progression Factor		1.00	1.00		0.62	0.53		0.91	1.11		1.02	0.92
Incremental Delay, d2		11.8	0.1		2.5	0.0		0.5	0.1		0.6	0.2
Delay (s)		27.1	9.6		10.3	5.1		11.4	12.5		13.1	10.6
Level of Service		C	A		B	A		B	B		B	B
Approach Delay (s)		26.1			10.0			11.7			12.3	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM Average Control Delay	16.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	94.8%	ICU Level of Service	F
Analysis Period (min)	15		

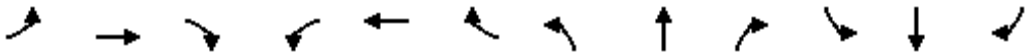
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	115	394	20	41	271	31	10	109	21	110	214	75
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	10	10	10	10	10	10
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.98		1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1550	3077		1550	3052		1550	3025		1550	2979	
Flt Permitted	0.95	1.00		0.49	1.00		0.54	1.00		0.66	1.00	
Satd. Flow (perm)	1550	3077		795	3052		878	3025		1078	2979	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	128	438	22	46	301	34	11	121	23	122	238	83
RTOR Reduction (vph)	0	6	0	0	13	0	0	13	0	0	49	0
Lane Group Flow (vph)	128	454	0	46	322	0	11	131	0	122	272	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Prot			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Effective Green, g (s)	7.0	32.0		22.0	22.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.11	0.49		0.34	0.34		0.42	0.42		0.42	0.42	
Clearance Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	167	1515		269	1033		365	1257		448	1237	
v/s Ratio Prot	c0.08	c0.15			0.11			0.04			0.09	
v/s Ratio Perm				0.06			0.01			c0.11		
v/c Ratio	0.77	0.30		0.17	0.31		0.03	0.10		0.27	0.22	
Uniform Delay, d1	28.2	9.8		15.1	15.9		11.2	11.6		12.5	12.2	
Progression Factor	1.17	0.39		0.75	0.72		1.05	1.16		1.12	1.13	
Incremental Delay, d2	22.1	0.4		1.3	0.8		0.1	0.1		1.5	0.4	
Delay (s)	55.0	4.2		12.6	12.2		12.0	13.6		15.5	14.2	
Level of Service	D	A		B	B		B	B		B	B	
Approach Delay (s)		15.3			12.3			13.4			14.5	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	14.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	41.1%	ICU Level of Service	A
Analysis Period (min)	15		

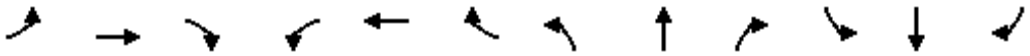
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	84	336	69	203	347	63	25	245	20	55	270	55
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.97		1.00	0.98			0.99			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1550	3019		1550	3028			3272			3225	
Flt Permitted	0.49	1.00		0.95	1.00			0.90			0.86	
Satd. Flow (perm)	798	3019		1550	3028			2966			2803	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	93	373	77	226	386	70	28	272	22	61	300	61
RTOR Reduction (vph)	0	26	0	0	23	0	0	8	0	0	21	0
Lane Group Flow (vph)	93	424	0	226	433	0	0	314	0	0	401	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Prot			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4						2			6		
Actuated Green, G (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Effective Green, g (s)	20.0	20.0		6.0	29.0			25.0			25.0	
Actuated g/C Ratio	0.31	0.31		0.09	0.45			0.38			0.38	
Clearance Time (s)	4.0	4.0		3.0	4.0			4.0			4.0	
Lane Grp Cap (vph)	246	929		143	1351			1141			1078	
v/s Ratio Prot		c0.14		c0.15	0.14							
v/s Ratio Perm	0.12							0.11			c0.14	
v/c Ratio	0.38	0.46		1.58	0.32			0.28			0.37	
Uniform Delay, d1	17.6	18.1		29.5	11.6			13.8			14.4	
Progression Factor	0.85	0.80		1.28	1.15			0.96			0.67	
Incremental Delay, d2	4.3	1.6		277.2	0.3			0.6			1.0	
Delay (s)	19.2	16.0		314.9	13.7			13.8			10.6	
Level of Service	B	B		F	B			B			B	
Approach Delay (s)		16.6			113.5			13.8			10.6	
Approach LOS		B			F			B			B	

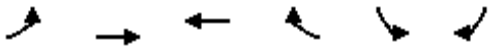
Intersection Summary			
HCM Average Control Delay	48.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	57.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	16	355	26	75	620	75	55	110	165	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10	12	14	12	10	15	10
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			0.95				
Frt		0.99			0.99			0.93				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		1613			1602			3249				
Flt Permitted		0.96			0.92			0.99				
Satd. Flow (perm)		1557			1484			3249				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	18	394	29	83	689	83	61	122	183	0	0	0
RTOR Reduction (vph)	0	3	0	0	5	0	0	139	0	0	0	0
Lane Group Flow (vph)	0	438	0	0	850	0	0	227	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm			Perm			Perm					
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)		41.5			41.5			15.5				
Effective Green, g (s)		41.5			41.5			15.5				
Actuated g/C Ratio		0.64			0.64			0.24				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		3.0			3.0			8.0				
Lane Grp Cap (vph)		994			947			775				
v/s Ratio Prot												
v/s Ratio Perm		0.28			c0.57			0.07				
v/c Ratio		0.44			0.90			0.29				
Uniform Delay, d1		5.9			9.9			20.3				
Progression Factor		1.98			1.00			1.00				
Incremental Delay, d2		1.3			13.0			0.9				
Delay (s)		13.0			22.9			21.2				
Level of Service		B			C			C				
Approach Delay (s)		13.0			22.9			21.2			0.0	
Approach LOS		B			C			C			A	

Intersection Summary			
HCM Average Control Delay	19.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	86.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	93	415	598	39	119	164
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	98	437	629	41	125	173
Pedestrians		5	6		17	
Lane Width (ft)		12.0	12.0		10.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1319	491			
pX, platoon unblocked	0.85				0.85	0.85
vC, conflicting volume	688				1306	672
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	540				1270	522
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	88				9	63
cM capacity (veh/h)	848				138	465

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	535	671	125	173
Volume Left	98	0	125	0
Volume Right	0	41	0	173
cSH	848	1700	138	465
Volume to Capacity	0.12	0.39	0.91	0.37
Queue Length 95th (ft)	10	0	153	42
Control Delay (s)	3.0	0.0	115.9	17.2
Lane LOS	A		F	C
Approach Delay (s)	3.0	0.0	58.7	
Approach LOS			F	

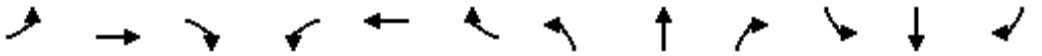
Intersection Summary			
Average Delay	12.7		
Intersection Capacity Utilization	82.2%	ICU Level of Service	E
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	690	0	1	619	3	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frt	1.00			1.00	0.88	
Flt Protected	1.00			1.00	1.00	
Satd. Flow (prot)	1748			1747	1525	
Flt Permitted	1.00			1.00	1.00	
Satd. Flow (perm)	1748			1747	1525	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	767	0	1	688	3	32
RTOR Reduction (vph)	0	0	0	0	27	0
Lane Group Flow (vph)	767	0	0	689	8	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type			Perm			
Protected Phases	1 2 4			4	3	
Permitted Phases			4			
Actuated Green, G (s)	68.4			38.4	13.6	
Effective Green, g (s)	64.4			38.4	13.6	
Actuated g/C Ratio	0.72			0.43	0.15	
Clearance Time (s)				4.0	4.0	
Vehicle Extension (s)				3.0	3.0	
Lane Grp Cap (vph)	1251			745	230	
v/s Ratio Prot	c0.44				c0.01	
v/s Ratio Perm				0.39		
v/c Ratio	0.61			0.92	0.03	
Uniform Delay, d1	6.5			24.4	32.6	
Progression Factor	0.05			1.00	1.00	
Incremental Delay, d2	0.5			19.0	0.1	
Delay (s)	0.9			43.5	32.7	
Level of Service	A			D	C	
Approach Delay (s)	0.9			43.5	32.7	
Approach LOS	A			D	C	

Intersection Summary			
HCM Average Control Delay	21.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	48.3%	ICU Level of Service	A
Analysis Period (min)	15		

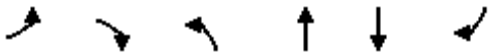
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	243	606	32	407	0	0	0	0	17	6	248
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	270	673	36	452	0	0	0	0	19	7	276
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	452			270			1133	1130	472	658	793	452
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	452			270			1133	1130	472	658	793	452
tC, single (s)	4.1			4.2			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			100	100	100	95	98	50
cM capacity (veh/h)	1119			1276			78	200	544	346	314	555

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	180	763	488	26	276
Volume Left	0	0	36	19	0
Volume Right	0	673	0	0	276
cSH	1700	1700	1276	337	555
Volume to Capacity	0.11	0.45	0.03	0.08	0.50
Queue Length 95th (ft)	0	0	2	6	69
Control Delay (s)	0.0	0.0	0.9	16.6	17.7
Lane LOS			A	C	C
Approach Delay (s)	0.0		0.9	17.6	
Approach LOS				C	

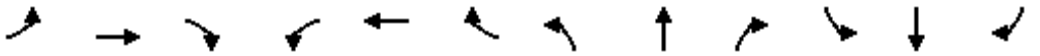
Intersection Summary				
Average Delay	3.3			
Intersection Capacity Utilization	60.5%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	260	0	439	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	289	0	488	0	0	0

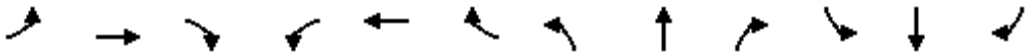
Direction, Lane #	EB 1	EB 2	NB 1
Volume Total (vph)	144	144	488
Volume Left (vph)	144	144	488
Volume Right (vph)	0	0	0
Hadj (s)	0.55	0.55	0.25
Departure Headway (s)	6.4	6.4	5.0
Degree Utilization, x	0.26	0.26	0.68
Capacity (veh/h)	536	537	701
Control Delay (s)	10.3	10.3	17.7
Approach Delay (s)	10.3		17.7
Approach LOS	B		C

Intersection Summary			
Delay	15.0		
HCM Level of Service	B		
Intersection Capacity Utilization	40.2%	ICU Level of Service	A
Analysis Period (min)	15		



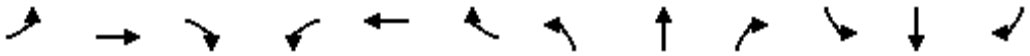
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	553	345	332	869	0	0	0	0	303	269	372
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	13	12	12	12	12	10	10	11
Total Lost time (s)		6.0	6.0		6.0					6.0	6.0	6.0
Lane Util. Factor		0.95	1.00		0.95					0.86	0.81	0.86
Frpb, ped/bikes		1.00	0.98		1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	0.95	0.85
Flt Protected		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (prot)		3179	1228		3427					1359	3807	1133
Flt Permitted		1.00	1.00		0.99					0.95	0.99	1.00
Satd. Flow (perm)		3179	1228		3427					1359	3807	1133
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	582	363	349	915	0	0	0	0	319	283	392
RTOR Reduction (vph)	0	0	208	0	0	0	0	0	0	0	52	96
Lane Group Flow (vph)	0	582	155	0	1264	0	0	0	0	175	571	100
Confl. Peds. (#/hr)	4		6	6		4						
Heavy Vehicles (%)	0%	4%	6%	1%	2%	0%	0%	0%	0%	1%	1%	1%
Parking (#/hr)			0									0
Turn Type			Perm	Split						Split		custom
Protected Phases		2		10 12 14	10 12 14					4	4	
Permitted Phases			2									4 2
Actuated Green, G (s)		27.0	27.0		75.0					31.7	31.7	64.7
Effective Green, g (s)		27.0	27.0		75.0					31.7	31.7	64.7
Actuated g/C Ratio		0.17	0.17		0.47					0.20	0.20	0.40
Clearance Time (s)		6.0	6.0							6.0	6.0	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		536	207		1606					269	754	458
v/s Ratio Prot		c0.18			c0.37					0.13	c0.15	
v/s Ratio Perm			0.13									0.09
v/c Ratio		1.09	0.75		0.79					0.65	0.76	0.22
Uniform Delay, d1		66.5	63.3		35.8					59.1	60.5	31.1
Progression Factor		1.00	1.00		0.12					1.00	1.00	1.00
Incremental Delay, d2		64.2	21.8		0.2					5.5	4.4	0.2
Delay (s)		130.7	85.1		4.6					64.6	64.9	31.4
Level of Service		F	F		A					E	E	C
Approach Delay (s)		113.2			4.6			0.0			58.2	
Approach LOS		F			A			A			E	

Intersection Summary			
HCM Average Control Delay	53.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	28.3
Intersection Capacity Utilization	84.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



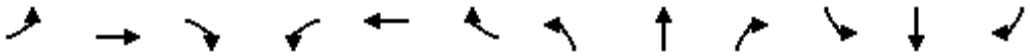
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	292	564	0	0	869	233	332	214	211	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	13	12	12	11	12	13	13	14	12	12	12
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0				
Lane Util. Factor	1.00	0.95			0.95	1.00	0.91	0.91				
Frt	1.00	1.00			1.00	0.85	1.00	0.94				
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (prot)	1605	3431			3210	1485	1561	3056				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99				
Satd. Flow (perm)	1605	3431			3210	1485	1561	3056				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	324	627	0	0	966	259	369	238	234	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	94	0	75	0	0	0	0
Lane Group Flow (vph)	324	627	0	0	966	165	288	478	0	0	0	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Split					Perm	Split					
Protected Phases	2 4 8	2 4 8			10		12	12				
Permitted Phases						10						
Actuated Green, G (s)	77.0	77.0			35.0	35.0	22.0	22.0				
Effective Green, g (s)	77.0	77.0			35.0	35.0	22.0	22.0				
Actuated g/C Ratio	0.48	0.48			0.22	0.22	0.14	0.14				
Clearance Time (s)					6.0	6.0	6.0	6.0				
Vehicle Extension (s)					3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	772	1651			702	325	215	420				
v/s Ratio Prot	c0.20	0.18			c0.30		c0.18	0.16				
v/s Ratio Perm						0.11						
v/c Ratio	0.42	0.38			1.38	0.51	1.34	1.14				
Uniform Delay, d1	27.0	26.3			62.5	54.9	69.0	69.0				
Progression Factor	0.05	0.06			1.00	1.00	1.00	1.00				
Incremental Delay, d2	0.2	0.1			178.1	1.3	180.7	87.3				
Delay (s)	1.6	1.5			240.6	56.2	249.7	156.3				
Level of Service	A	A			F	E	F	F				
Approach Delay (s)		1.6			201.6			188.3			0.0	
Approach LOS		A			F			F			A	

Intersection Summary			
HCM Average Control Delay	134.8	HCM Level of Service	F
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	28.0
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	140	506	136	89	270	67	108	522	70	96	1150	120
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	14	12	10	10	12	9	10	12
Total Lost time (s)	4.0	4.0	5.0	4.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1576	1600	1373	1596	1790		1580	3016		1537	3030	
Flt Permitted	0.27	1.00	1.00	0.12	1.00		0.08	1.00		0.32	1.00	
Satd. Flow (perm)	452	1600	1373	194	1790		133	3016		513	3030	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	147	533	143	94	284	71	114	549	74	101	1211	126
RTOR Reduction (vph)	0	0	88	0	8	0	0	9	0	0	7	0
Lane Group Flow (vph)	147	533	55	94	347	0	114	614	0	101	1330	0
Confl. Peds. (#/hr)	28		8	8		28	59		11	11		59
Confl. Bikes (#/hr)	3					3	1		2	2		1
Heavy Vehicles (%)	1%	5%	2%	0%	4%	0%	1%	4%	0%	0%	3%	3%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	49.0	39.0	39.0	42.6	35.6		58.2	51.2		59.8	52.0	
Effective Green, g (s)	47.4	40.0	39.0	40.6	35.6		56.2	51.2		57.8	52.0	
Actuated g/C Ratio	0.39	0.33	0.32	0.34	0.30		0.47	0.43		0.48	0.43	
Clearance Time (s)	3.0	5.0	5.0	3.0	5.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	267	533	446	136	531		135	1287		305	1313	
v/s Ratio Prot	c0.04	c0.33		c0.03	0.19		c0.04	0.20		0.02	c0.44	
v/s Ratio Perm	0.17		0.04	0.20			0.36			0.14		
v/c Ratio	0.55	1.00	0.12	0.69	0.65		0.84	0.48		0.33	1.01	
Uniform Delay, d1	26.0	40.0	28.5	31.2	36.8		26.1	24.8		18.0	34.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.4	39.0	0.6	14.1	6.2		35.7	1.3		0.6	28.1	
Delay (s)	28.5	79.0	29.0	45.3	43.0		61.8	26.0		18.6	62.1	
Level of Service	C	E	C	D	D		E	C		B	E	
Approach Delay (s)		61.3			43.5			31.6			59.1	
Approach LOS		E			D			C			E	

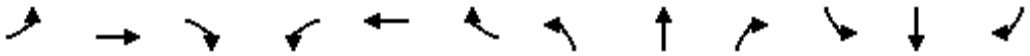
Intersection Summary			
HCM Average Control Delay	51.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	91.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	88	462	111	13	334	22	49	59	19	21	91	82
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	10	10	10	12	15	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00			1.00	
Frpb, ped/bikes		1.00	0.96		1.00	0.97		1.00			0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00			1.00	
Frt		1.00	0.85		1.00	0.85		0.98			0.94	
Flt Protected		0.99	1.00		1.00	1.00		0.98			0.99	
Satd. Flow (prot)		1963	1467		1629	1381		1892			1857	
Flt Permitted		0.89	1.00		0.98	1.00		0.86			0.97	
Satd. Flow (perm)		1760	1467		1598	1381		1649			1813	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	93	486	117	14	352	23	52	62	20	22	96	86
RTOR Reduction (vph)	0	0	45	0	0	12	0	10	0	0	40	0
Lane Group Flow (vph)	0	579	72	0	366	11	0	124	0	0	164	0
Confl. Peds. (#/hr)	12		20	20		12	8		2	2		8
Confl. Bikes (#/hr)	1		2	2		1			1	1		
Heavy Vehicles (%)	3%	3%	0%	0%	3%	0%	0%	0%	0%	0%	1%	3%
Turn Type	Perm		Perm	Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Effective Green, g (s)		32.0	32.0		32.0	32.0		27.0			27.0	
Actuated g/C Ratio		0.49	0.49		0.49	0.49		0.42			0.42	
Clearance Time (s)		3.0	3.0		3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		866	722		787	680		685			753	
v/s Ratio Prot												
v/s Ratio Perm		c0.33	0.05		0.23	0.01		0.08			c0.09	
v/c Ratio		0.67	0.10		0.47	0.02		0.18			0.22	
Uniform Delay, d1		12.5	8.8		10.9	8.4		12.0			12.2	
Progression Factor		1.00	1.00		1.88	3.14		1.00			1.98	
Incremental Delay, d2		4.1	0.3		1.9	0.0		0.6			0.7	
Delay (s)		16.6	9.1		22.3	26.5		12.6			24.8	
Level of Service		B	A		C	C		B			C	
Approach Delay (s)		15.3			22.5			12.6			24.8	
Approach LOS		B			C			B			C	

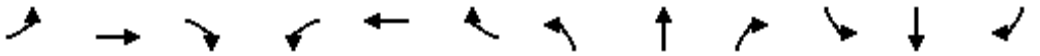
Intersection Summary			
HCM Average Control Delay	18.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	78.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	108	244	91	11	226	10	48	114	19	15	184	82
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.94		1.00	0.97		1.00	0.97		0.99	
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.96	
Flt Protected		0.98	1.00		1.00	1.00		0.99	1.00		1.00	
Satd. Flow (prot)		1743	1443		1728	1487		1712	1489		1703	
Flt Permitted		0.78	1.00		0.98	1.00		0.85	1.00		0.98	
Satd. Flow (perm)		1387	1443		1692	1487		1481	1489		1680	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	114	257	96	12	238	11	51	120	20	16	194	86
RTOR Reduction (vph)	0	0	58	0	0	7	0	0	10	0	23	0
Lane Group Flow (vph)	0	371	38	0	250	4	0	171	10	0	273	0
Confl. Peds. (#/hr)	19		25	25		19	3		6	6		3
Confl. Bikes (#/hr)	1		2	2		1			1	1		
Heavy Vehicles (%)	0%	2%	0%	0%	4%	0%	0%	5%	0%	0%	0%	2%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Effective Green, g (s)		23.0	23.0		23.0	23.0		32.0	32.0		32.0	
Actuated g/C Ratio		0.35	0.35		0.35	0.35		0.49	0.49		0.49	
Clearance Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	
Lane Grp Cap (vph)		491	511		599	526		729	733		827	
v/s Ratio Prot												
v/s Ratio Perm		c0.27	0.03		0.15	0.00		0.12	0.01		c0.16	
v/c Ratio		0.76	0.08		0.42	0.01		0.23	0.01		0.33	
Uniform Delay, d1		18.5	13.9		15.9	13.6		9.5	8.4		10.0	
Progression Factor		1.79	3.63		0.93	0.93		1.00	1.00		1.04	
Incremental Delay, d2		8.1	0.2		2.1	0.0		0.8	0.0		1.1	
Delay (s)		41.3	50.8		16.9	12.7		10.2	8.5		11.5	
Level of Service		D	D		B	B		B	A		B	
Approach Delay (s)		43.2			16.7			10.0			11.5	
Approach LOS		D			B			B			B	

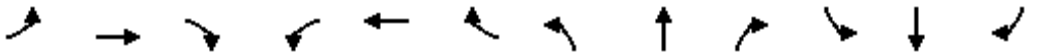
Intersection Summary			
HCM Average Control Delay	24.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	72.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	167	45	96	8	16	9	43	225	8	21	481	209
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	14	12	12	16	12	12	16	12
Total Lost time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.95		0.99			1.00			1.00	0.94
Flpb, ped/bikes		0.98	1.00		0.99			1.00			1.00	1.00
Frt		1.00	0.85		0.96			1.00			1.00	0.85
Flt Protected		0.96	1.00		0.99			0.99			1.00	1.00
Satd. Flow (prot)		1873	1440		1782			1991			1976	1382
Flt Permitted		0.81	1.00		0.93			0.88			0.98	1.00
Satd. Flow (perm)		1573	1440		1686			1762			1946	1382
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	186	50	107	9	18	10	48	250	9	23	534	232
RTOR Reduction (vph)	0	0	63	0	7	0	0	2	0	0	0	92
Lane Group Flow (vph)	0	236	44	0	30	0	0	305	0	0	557	140
Confl. Peds. (#/hr)	37		53	53		37	39		54	54		39
Confl. Bikes (#/hr)							2					2
Heavy Vehicles (%)	4%	0%	1%	0%	0%	0%	0%	1%	0%	0%	3%	4%
Turn Type	pm+pt		Perm	Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		27.0	27.0		17.0			32.0			32.0	32.0
Effective Green, g (s)		27.0	27.0		17.0			32.0			32.0	32.0
Actuated g/C Ratio		0.42	0.42		0.26			0.49			0.49	0.49
Clearance Time (s)		3.0	3.0		3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		690	598		441			867			958	680
v/s Ratio Prot		c0.04										
v/s Ratio Perm		0.10	0.03		0.02			0.17			c0.29	0.10
v/c Ratio		0.34	0.07		0.07			0.35			0.58	0.21
Uniform Delay, d1		12.9	11.5		18.0			10.1			11.7	9.3
Progression Factor		1.02	1.87		1.00			1.08			0.66	0.22
Incremental Delay, d2		1.1	0.2		0.3			0.9			2.0	0.5
Delay (s)		14.3	21.7		18.3			11.9			9.7	2.6
Level of Service		B	C		B			B			A	A
Approach Delay (s)		16.6			18.3			11.9			7.6	
Approach LOS		B			B			B			A	

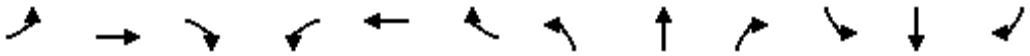
Intersection Summary			
HCM Average Control Delay	10.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	72.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



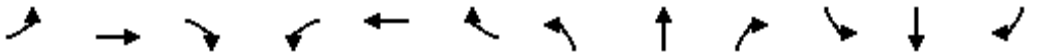
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	922	289	675	1189	0	0	0	0	513	284	334
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	11	11	11	8	8	8	11	12	14
Total Lost time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Lane Util. Factor		0.91		0.97	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	1.00
Frt		0.96		1.00	1.00					1.00	0.98	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.98	1.00
Satd. Flow (prot)		4578		3144	3210					1489	2913	1442
Flt Permitted		1.00		0.12	1.00					0.95	0.98	1.00
Satd. Flow (perm)		4578		409	3210					1489	2913	1442
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	971	304	711	1252	0	0	0	0	540	299	352
RTOR Reduction (vph)	0	38	0	0	0	0	0	0	0	0	9	42
Lane Group Flow (vph)	0	1237	0	711	1252	0	0	0	0	308	603	229
Confl. Peds. (#/hr)	15		11	11		15						
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	0%	3%	3%	2%	3%	0%	0%	0%	0%	1%	3%	3%
Turn Type				pm+pt						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Actuated Green, G (s)		49.6		83.8	82.3					35.7	35.7	35.7
Effective Green, g (s)		49.6		83.8	82.3					35.7	35.7	35.7
Actuated g/C Ratio		0.38		0.64	0.63					0.27	0.27	0.27
Clearance Time (s)		6.0		4.5	6.0					6.0	6.0	6.0
Vehicle Extension (s)		7.0		3.5	7.0					3.5	3.5	3.5
Lane Grp Cap (vph)		1747		857	2032					409	800	396
v/s Ratio Prot		0.27		c0.18	0.39							
v/s Ratio Perm				c0.35						0.21	0.21	0.16
v/c Ratio		0.71		0.83	0.62					0.75	0.75	0.58
Uniform Delay, d1		34.1		32.4	14.3					43.1	43.1	40.7
Progression Factor		1.00		0.78	0.52					1.00	1.00	1.00
Incremental Delay, d2		2.5		3.1	0.6					7.9	4.2	2.2
Delay (s)		36.5		28.3	8.0					51.0	47.3	42.9
Level of Service		D		C	A					D	D	D
Approach Delay (s)		36.5			15.4			0.0			47.3	
Approach LOS		D			B			A			D	

Intersection Summary			
HCM Average Control Delay	30.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	113.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	341	1094	0	0	1435	271	430	351	393	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	11	11	11	12	11	12	12	12	12	12	12	12
Total Lost time (s)	6.0	6.0			6.0			6.0				
Lane Util. Factor	1.00	0.95			0.91			0.91				
Frpb, ped/bikes	1.00	1.00			1.00			1.00				
Flpb, ped/bikes	1.00	1.00			1.00			1.00				
Frt	1.00	1.00			0.98			0.95				
Flt Protected	0.95	1.00			1.00			0.98				
Satd. Flow (prot)	1621	3241			4541			4492				
Flt Permitted	0.06	1.00			1.00			0.98				
Satd. Flow (perm)	106	3241			4541			4492				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	359	1152	0	0	1511	285	453	369	414	0	0	0
RTOR Reduction (vph)	0	0	0	0	21	0	0	70	0	0	0	0
Lane Group Flow (vph)	359	1152	0	0	1775	0	0	1166	0	0	0	0
Confl. Peds. (#/hr)	7		5	5		7						
Confl. Bikes (#/hr)	1		1	1		1						
Heavy Vehicles (%)	2%	2%	0%	0%	2%	1%	2%	1%	3%	0%	0%	0%
Turn Type	pm+pt						Perm					
Protected Phases	5	2			6			8				
Permitted Phases	2						8					
Actuated Green, G (s)	83.4	83.4			58.4			34.6				
Effective Green, g (s)	83.4	83.4			58.4			34.6				
Actuated g/C Ratio	0.64	0.64			0.45			0.27				
Clearance Time (s)	6.0	6.0			6.0			6.0				
Vehicle Extension (s)	3.5	7.0			7.0			5.0				
Lane Grp Cap (vph)	289	2079			2040			1196				
v/s Ratio Prot	c0.18	0.36			0.39							
v/s Ratio Perm	c0.61							0.26				
v/c Ratio	1.24	0.55			0.87			0.98				
Uniform Delay, d1	43.2	13.0			32.4			47.3				
Progression Factor	1.12	0.18			0.62			1.00				
Incremental Delay, d2	128.4	0.8			3.5			20.3				
Delay (s)	176.8	3.1			23.6			67.6				
Level of Service	F	A			C			E				
Approach Delay (s)		44.4			23.6			67.6			0.0	
Approach LOS		D			C			E			A	

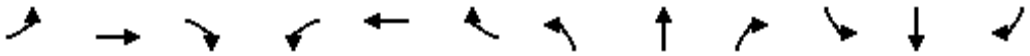
Intersection Summary			
HCM Average Control Delay	42.5	HCM Level of Service	D
HCM Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	113.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	135	774	408	104	1197	100	227	179	66	85	162	121
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	10	11	12	11	12	12	10	10	13	10	10	10
Total Lost time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		0.99	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.96		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1565	3273	1312	1603	3285		1578	3001		1537	2938	
Flt Permitted	0.13	1.00	1.00	0.34	1.00		0.34	1.00		0.59	1.00	
Satd. Flow (perm)	214	3273	1312	581	3285		573	3001		959	2938	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	142	815	429	109	1260	105	239	188	69	89	171	127
RTOR Reduction (vph)	0	0	151	0	5	0	0	30	0	0	106	0
Lane Group Flow (vph)	142	815	278	109	1360	0	239	227	0	89	192	0
Confl. Peds. (#/hr)	11		23	23		11	8		12	12		8
Confl. Bikes (#/hr)									1	1		
Heavy Vehicles (%)	2%	1%	3%	3%	3%	0%	1%	1%	2%	3%	0%	1%
Parking (#/hr)			0									
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	47.2	47.2	64.2	62.7	60.2		37.9	27.8		24.0	17.4	
Effective Green, g (s)	47.2	47.2	64.2	62.7	60.2		37.9	27.8		24.0	17.4	
Actuated g/C Ratio	0.36	0.36	0.49	0.48	0.46		0.29	0.21		0.18	0.13	
Clearance Time (s)	3.5	6.0	3.5	3.5	6.0		3.5	6.0		3.5	6.0	
Vehicle Extension (s)	3.0	7.0	3.0	3.0	7.0		3.0	7.0		3.0	7.0	
Lane Grp Cap (vph)	248	1188	648	511	1521		298	642		206	393	
v/s Ratio Prot	0.07	c0.25	0.06	0.05	c0.41		c0.10	0.08		0.02	0.07	
v/s Ratio Perm	0.14		0.16	0.05			c0.13			0.06		
v/c Ratio	0.57	0.69	0.43	0.21	0.89		0.80	0.35		0.43	0.49	
Uniform Delay, d1	32.0	35.1	21.1	21.4	32.0		38.8	43.5		45.9	52.2	
Progression Factor	1.15	1.01	1.43	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	7.0	2.4	0.3	0.2	8.5		14.3	1.2		1.5	3.4	
Delay (s)	43.8	37.7	30.5	21.7	40.5		53.1	44.7		47.3	55.6	
Level of Service	D	D	C	C	D		D	D		D	E	
Approach Delay (s)		36.1			39.1			48.7			53.7	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	40.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	88.9%	ICU Level of Service	E
Analysis Period (min)	15		

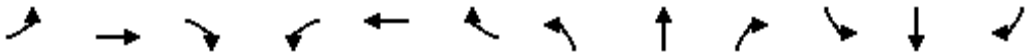
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	46	250	367	186	441	113	362	340	107	206	408	56
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	11	12	11	12	12	11	13	12	10	11	12
Total Lost time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.91		1.00	0.97		1.00	0.96		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1707	2925		1653	3267		1620	3381		1580	3183	
Flt Permitted	0.39	1.00		0.18	1.00		0.32	1.00		0.48	1.00	
Satd. Flow (perm)	698	2925		314	3267		544	3381		802	3183	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	48	263	386	196	464	119	381	358	113	217	429	59
RTOR Reduction (vph)	0	225	0	0	19	0	0	26	0	0	9	0
Lane Group Flow (vph)	48	424	0	196	564	0	381	445	0	217	479	0
Confl. Peds. (#/hr)	12		3	3		12	5					5
Heavy Vehicles (%)	0%	2%	2%	0%	1%	1%	2%	1%	0%	1%	2%	0%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	35.5	28.8		46.8	36.1		56.2	44.2		40.1	32.1	
Effective Green, g (s)	35.5	28.8		46.8	36.1		56.2	44.2		40.1	32.1	
Actuated g/C Ratio	0.31	0.25		0.41	0.31		0.49	0.38		0.35	0.28	
Clearance Time (s)	4.0	6.0		4.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	3.5	7.0		3.5	7.0		3.5	7.0		3.5	7.0	
Lane Grp Cap (vph)	274	733		291	1026		454	1299		334	888	
v/s Ratio Prot	0.01	0.15		c0.08	0.17		c0.15	0.13		0.05	0.15	
v/s Ratio Perm	0.04			c0.19			c0.26			0.18		
v/c Ratio	0.18	0.58		0.67	0.55		0.84	0.34		0.65	0.54	
Uniform Delay, d1	28.3	37.8		24.9	32.7		20.8	25.1		28.8	35.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	3.3		6.3	2.1		13.1	0.7		4.5	2.3	
Delay (s)	28.7	41.1		31.2	34.8		33.9	25.8		33.3	37.5	
Level of Service	C	D		C	C		C	C		C	D	
Approach Delay (s)		40.2			33.9			29.4			36.2	
Approach LOS		D			C			C			D	

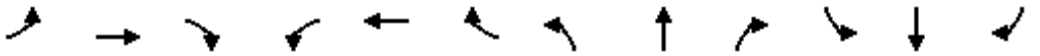
Intersection Summary			
HCM Average Control Delay	34.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.5%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	105	603	293	10	376	66	720	355	9	198	625	183
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	12	12	10	12	9	11	12	9	9	12
Total Lost time (s)	4.0	4.0			4.0		3.0	4.0		3.0	4.0	
Lane Util. Factor	1.00	0.95			0.95		0.97	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95			0.98		1.00	1.00		1.00	0.97	
Flt Protected	0.95	1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1690	2962			3035		2817	3230		1523	2873	
Flt Permitted	0.35	1.00			0.82		0.95	1.00		0.31	1.00	
Satd. Flow (perm)	621	2962			2479		2817	3230		497	2873	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	117	670	326	11	418	73	800	394	10	220	694	203
RTOR Reduction (vph)	0	66	0	0	15	0	0	2	0	0	30	0
Lane Group Flow (vph)	117	930	0	0	487	0	800	402	0	220	867	0
Confl. Peds. (#/hr)	4		2	2		4	8		4	4		8
Confl. Bikes (#/hr)							2					2
Heavy Vehicles (%)	1%	2%	2%	0%	2%	6%	6%	2%	0%	1%	3%	3%
Turn Type	Perm			Perm			Prot			pm+pt		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	27.0	27.0			27.0		25.0	39.5		27.0	27.0	
Effective Green, g (s)	27.0	27.0			27.0		25.0	39.5		27.0	27.0	
Actuated g/C Ratio	0.30	0.30			0.30		0.28	0.44		0.30	0.30	
Clearance Time (s)	4.0	4.0			4.0		3.0	4.0		3.0	4.0	
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	186	889			744		783	1418		292	862	
v/s Ratio Prot		c0.31					c0.28	0.12		0.10	c0.30	
v/s Ratio Perm	0.19				0.20					0.12		
v/c Ratio	0.63	1.05			0.65		1.02	0.28		0.75	1.01	
Uniform Delay, d1	27.2	31.5			27.4		32.5	16.2		26.0	31.5	
Progression Factor	1.00	1.00			1.00		0.43	0.24		1.00	1.00	
Incremental Delay, d2	6.5	43.0			2.1		31.9	0.3		10.5	32.0	
Delay (s)	33.7	74.5			29.5		45.9	4.3		36.5	63.5	
Level of Service	C	E			C		D	A		D	E	
Approach Delay (s)		70.2			29.5			32.0			58.2	
Approach LOS		E			C			C			E	

Intersection Summary			
HCM Average Control Delay	49.9	HCM Level of Service	D
HCM Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	100.7%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	67	198	222	337	167	28	414	1147	993	35	866	70
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	16	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)	4.0	5.0	4.0	4.0	5.0		4.0	5.0	4.0	4.0	5.0	4.0
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.99	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1710	2040	1491	3130	1991		1676	3320	1429	1437	3320	1485
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.15	1.00	1.00	0.15	1.00	1.00
Satd. Flow (perm)	1710	2040	1491	3130	1991		264	3320	1429	222	3320	1485
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	69	204	229	347	172	29	427	1182	1024	36	893	72
RTOR Reduction (vph)	0	0	21	0	8	0	0	0	143	0	0	40
Lane Group Flow (vph)	69	204	208	347	193	0	427	1182	881	36	893	32
Confl. Peds. (#/hr)	3		20	20		3	2		3	3		2
Confl. Bikes (#/hr)			1	1			2		2	2		2
Heavy Vehicles (%)	0%	0%	1%	6%	0%	0%	2%	3%	6%	19%	3%	2%
Turn Type	Prot		pm+ov	Prot			pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases			4				2		2	6		6
Actuated Green, G (s)	12.2	15.1	29.7	15.0	17.9		46.9	39.5	54.5	29.7	27.3	39.5
Effective Green, g (s)	12.2	15.1	29.7	15.0	17.9		46.9	39.5	54.5	29.7	27.3	39.5
Actuated g/C Ratio	0.14	0.17	0.33	0.17	0.20		0.52	0.44	0.61	0.33	0.30	0.44
Clearance Time (s)	4.0	5.0	4.0	4.0	5.0		4.0	5.0	4.0	4.0	5.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	232	342	492	522	396		367	1457	865	106	1007	718
v/s Ratio Prot	0.04	c0.10	0.07	0.11	0.10		c0.19	0.36	c0.17	0.01	0.27	0.01
v/s Ratio Perm			0.07				c0.42		0.45	0.10		0.02
v/c Ratio	0.30	0.60	0.42	0.66	0.49		1.16	0.81	1.02	0.34	0.89	0.04
Uniform Delay, d1	35.0	34.6	23.5	35.1	32.0		29.6	22.0	17.8	38.6	29.9	14.4
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	0.73	0.34	0.13
Incremental Delay, d2	0.7	2.8	0.6	3.2	0.9		99.4	5.0	35.4	0.2	1.2	0.0
Delay (s)	35.8	37.4	24.1	38.3	32.9		129.0	27.0	53.1	28.2	11.5	1.9
Level of Service	D	D	C	D	C		F	C	D	C	B	A
Approach Delay (s)		31.1			36.3			53.7			11.4	
Approach LOS		C			D			D			B	

Intersection Summary			
HCM Average Control Delay	40.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	91.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

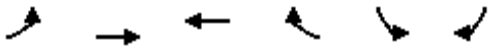
Movement	EBL	EBT	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	785	455	550	18	3	10	9	47	9	0	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	10	10	10	10	12	12	16	12	12	16	12
Total Lost time (s)		5.0	3.0	5.0				4.5			4.5	
Lane Util. Factor		0.95	1.00	1.00				1.00			1.00	
Frpb, ped/bikes		1.00	1.00	1.00				0.98			0.97	
Flpb, ped/bikes		1.00	1.00	1.00				1.00			1.00	
Frt		1.00	1.00	1.00				0.91			0.94	
Flt Protected		1.00	0.95	1.00				0.99			0.97	
Satd. Flow (prot)		3160	1565	1652				1795			1793	
Flt Permitted		0.95	0.14	1.00				0.93			0.87	
Satd. Flow (perm)		3015	234	1652				1681			1609	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	2	826	479	579	19	3	11	9	49	9	0	3
RTOR Reduction (vph)	0	0	0	1	0	0	0	20	0	0	5	0
Lane Group Flow (vph)	0	828	479	597	0	0	0	52	0	0	12	0
Confl. Peds. (#/hr)	7		4		7		7		2	2		7
Confl. Bikes (#/hr)							2		2	2		2
Heavy Vehicles (%)	0%	1%	2%	1%	6%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Perm		pm+pt			Perm	Perm			Perm		
Protected Phases		8	7	4				2			6	
Permitted Phases	8		4			2	2			6		
Actuated Green, G (s)		25.1	67.3	67.3				6.7			6.7	
Effective Green, g (s)		25.1	67.3	67.3				6.7			6.7	
Actuated g/C Ratio		0.30	0.81	0.81				0.08			0.08	
Clearance Time (s)		5.0	3.0	5.0				4.5			4.5	
Vehicle Extension (s)		3.0	3.0	3.0				3.0			3.0	
Lane Grp Cap (vph)		906	813	1331				135			129	
v/s Ratio Prot			0.28	0.36								
v/s Ratio Perm		c0.27	0.20					c0.03			0.01	
v/c Ratio		0.91	0.59	0.45				0.38			0.10	
Uniform Delay, d1		28.2	10.6	2.5				36.4			35.6	
Progression Factor		1.00	1.00	1.00				1.00			1.00	
Incremental Delay, d2		15.2	1.1	0.2				1.8			0.3	
Delay (s)		43.3	11.7	2.7				38.3			35.9	
Level of Service		D	B	A				D			D	
Approach Delay (s)		43.3		6.7				38.3			35.9	
Approach LOS		D		A				D			D	

Intersection Summary			
HCM Average Control Delay	29.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	83.5	Sum of lost time (s)	12.5
Intersection Capacity Utilization	82.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBR2	NER
Lane Configurations		
Volume (vph)	5	1155
Ideal Flow (vphpl)	1800	1800
Lane Width	12	12
Total Lost time (s)		3.0
Lane Util. Factor		0.88
Frpb, ped/bikes		1.00
Flpb, ped/bikes		1.00
Frt		0.85
Flt Protected		1.00
Satd. Flow (prot)		2693
Flt Permitted		1.00
Satd. Flow (perm)		2693
Peak-hour factor, PHF	0.95	0.95
Adj. Flow (vph)	5	1216
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	0	1216
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Heavy Vehicles (%)	0%	0%
Turn Type		Over
Protected Phases		7
Permitted Phases		
Actuated Green, G (s)		39.2
Effective Green, g (s)		39.2
Actuated g/C Ratio		0.47
Clearance Time (s)		3.0
Vehicle Extension (s)		3.0
Lane Grp Cap (vph)		1264
v/s Ratio Prot		c0.45
v/s Ratio Perm		
v/c Ratio		0.96
Uniform Delay, d1		21.4
Progression Factor		1.00
Incremental Delay, d2		17.0
Delay (s)		38.4
Level of Service		D
Approach Delay (s)		
Approach LOS		

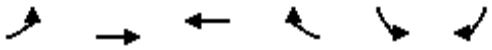
Intersection Summary



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	355	1614	774	63	96	257
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.99		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1660	3320	3283		1660	1485
Flt Permitted	0.25	1.00	1.00		0.95	1.00
Satd. Flow (perm)	439	3320	3283		1660	1485
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	394	1793	860	70	107	286
RTOR Reduction (vph)	0	0	3	0	0	257
Lane Group Flow (vph)	394	1793	927	0	107	29
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt					Perm
Protected Phases	7	4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)	115.8	115.8	91.3		14.2	14.2
Effective Green, g (s)	115.8	115.8	91.3		14.2	14.2
Actuated g/C Ratio	0.84	0.84	0.66		0.10	0.10
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	550	2786	2172		171	153
v/s Ratio Prot	c0.11	0.54	0.28		c0.06	
v/s Ratio Perm	c0.50					0.02
v/c Ratio	0.72	0.64	0.43		0.63	0.19
Uniform Delay, d1	6.5	3.9	11.0		59.4	56.7
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	4.4	1.2	0.6		7.0	0.6
Delay (s)	10.9	5.0	11.6		66.3	57.3
Level of Service	B	A	B		E	E
Approach Delay (s)		6.1	11.6		59.7	
Approach LOS		A	B		E	

Intersection Summary			
HCM Average Control Delay	13.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	138.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	104	1609	747	152	265	94
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	12	10	11	12	10	10
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frpb, ped/bikes		1.00	1.00		1.00	0.99
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.97		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3122	3106		1506	1341
Flt Permitted		0.76	1.00		0.95	1.00
Satd. Flow (perm)		2389	3106		1506	1341
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	109	1694	786	160	279	99
RTOR Reduction (vph)	0	0	13	0	0	81
Lane Group Flow (vph)	0	1803	933	0	279	18
Confl. Peds. (#/hr)	2			2		1
Heavy Vehicles (%)	1%	2%	2%	10%	6%	5%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		99.0	99.0		23.0	23.0
Effective Green, g (s)		99.0	99.0		23.0	23.0
Actuated g/C Ratio		0.76	0.76		0.18	0.18
Clearance Time (s)		4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1819	2365		266	237
v/s Ratio Prot			0.30		c0.19	
v/s Ratio Perm		c0.75				0.01
v/c Ratio		0.99	0.39		1.05	0.07
Uniform Delay, d1		15.1	5.3		53.5	44.6
Progression Factor		1.00	1.00		0.80	1.25
Incremental Delay, d2		19.1	0.5		65.0	0.5
Delay (s)		34.2	5.8		107.9	56.2
Level of Service		C	A		F	E
Approach Delay (s)		34.2	5.8		94.3	
Approach LOS		C	A		F	

Intersection Summary			
HCM Average Control Delay	32.9	HCM Level of Service	C
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	102.6%	ICU Level of Service	G
Analysis Period (min)	15		

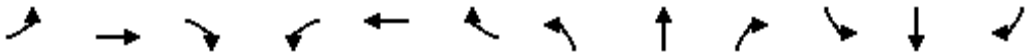
c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1404	329	121	771	222	58
Ideal Flow (vphpl)	2300	1800	1800	2300	1800	1800
Lane Width	15	12	14	16	15	12
Total Lost time (s)	5.0		3.0	5.0	5.0	5.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.97		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	2417		1788	2506	1758	1509
Flt Permitted	1.00		0.04	1.00	0.95	1.00
Satd. Flow (perm)	2417		69	2506	1758	1509
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	1433	336	123	787	227	59
RTOR Reduction (vph)	5	0	0	0	0	50
Lane Group Flow (vph)	1764	0	123	787	227	9
Confl. Peds. (#/hr)						1
Heavy Vehicles (%)	2%	2%	2%	4%	7%	0%
Turn Type			pm+pt			Perm
Protected Phases	4		3	8	2	
Permitted Phases			8			2
Actuated Green, G (s)	106.0		116.0	116.0	22.1	22.1
Effective Green, g (s)	106.0		116.0	116.0	22.1	22.1
Actuated g/C Ratio	0.72		0.78	0.78	0.15	0.15
Clearance Time (s)	5.0		3.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1730		135	1963	262	225
v/s Ratio Prot	c0.73		c0.04	0.31	c0.13	
v/s Ratio Perm			0.67			0.01
v/c Ratio	1.02		0.91	0.40	0.87	0.04
Uniform Delay, d1	21.0		54.7	5.1	61.6	53.9
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	26.6		51.3	0.1	24.6	0.1
Delay (s)	47.7		106.0	5.2	86.1	54.0
Level of Service	D		F	A	F	D
Approach Delay (s)	47.7			18.8	79.5	
Approach LOS	D			B	E	

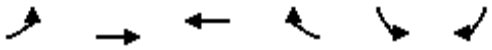
Intersection Summary			
HCM Average Control Delay	41.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	148.1	Sum of lost time (s)	13.0
Intersection Capacity Utilization	109.3%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	1680	84	112	875	1	73	0	157	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	15	13	11	11	12	12	12	16	12	12	16	12
Total Lost time (s)	4.0	4.0	4.0	3.0	3.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00			
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1881	3431	1479	1589	3320	1530		1938	1500			
Flt Permitted	0.29	1.00	1.00	0.08	1.00	1.00		0.76	1.00			
Satd. Flow (perm)	583	3431	1479	128	3320	1530		1545	1500			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	1867	93	124	972	1	81	0	174	0	0	0
RTOR Reduction (vph)	0	0	27	0	0	0	0	0	140	0	0	0
Lane Group Flow (vph)	1	1867	66	124	972	1	0	81	34	0	0	0
Heavy Vehicles (%)	0%	3%	0%	4%	3%	0%	0%	0%	2%	0%	0%	0%
Turn Type	Perm		Perm	custom		custom	Perm		Perm	Perm		
Protected Phases		4		3	3 8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)	49.4	49.4	49.4	67.1	67.1	67.1		9.9	9.9			
Effective Green, g (s)	49.4	49.4	49.4	67.1	67.1	67.1		9.9	9.9			
Actuated g/C Ratio	0.58	0.58	0.58	0.79	0.79	0.79		0.12	0.12			
Clearance Time (s)	4.0	4.0	4.0	3.0		4.0		4.0	4.0			
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0		3.0	3.0			
Lane Grp Cap (vph)	339	1994	860	354	2621	1208		180	175			
v/s Ratio Prot		c0.54		0.06	c0.29							
v/s Ratio Perm	0.00		0.04	0.22		0.00		c0.05	0.02			
v/c Ratio	0.00	0.94	0.08	0.35	0.37	0.00		0.45	0.20			
Uniform Delay, d1	7.5	16.4	7.8	14.8	2.7	1.9		35.0	34.0			
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00			
Incremental Delay, d2	0.0	9.9	0.2	0.6	0.1	0.0		1.8	0.6			
Delay (s)	7.5	26.2	8.0	15.4	2.8	1.9		36.8	34.5			
Level of Service	A	C	A	B	A	A		D	C			
Approach Delay (s)		25.4			4.2			35.2			0.0	
Approach LOS		C			A			D			A	

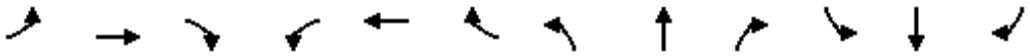
Intersection Summary			
HCM Average Control Delay	19.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	70.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	9	952	843	30	71	13
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width	10	10	10	10	10	10
Total Lost time (s)		5.0	5.0		3.0	
Lane Util. Factor		0.95	0.95		1.00	
Frt		1.00	0.99		0.98	
Flt Protected		1.00	1.00		0.96	
Satd. Flow (prot)		3098	3083		1533	
Flt Permitted		0.94	1.00		0.96	
Satd. Flow (perm)		2923	3083		1533	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	10	1058	937	33	79	14
RTOR Reduction (vph)	0	0	3	0	7	0
Lane Group Flow (vph)	0	1068	967	0	86	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Perm					
Protected Phases		4	8 2 11		5	
Permitted Phases	4					
Actuated Green, G (s)		33.0	64.0		7.0	
Effective Green, g (s)		33.0	64.0		7.0	
Actuated g/C Ratio		0.37	0.71		0.08	
Clearance Time (s)		5.0			3.0	
Lane Grp Cap (vph)		1072	2192		119	
v/s Ratio Prot			c0.31		c0.06	
v/s Ratio Perm		c0.37				
v/c Ratio		1.00	0.44		0.72	
Uniform Delay, d1		28.4	5.5		40.5	
Progression Factor		1.00	0.01		1.00	
Incremental Delay, d2		26.6	0.2		31.1	
Delay (s)		55.0	0.2		71.7	
Level of Service		E	A		E	
Approach Delay (s)		55.0	0.2		71.7	
Approach LOS		E	A		E	

Intersection Summary			
HCM Average Control Delay	30.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	46.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	58	500	0	1	582	39	3	2	28	202	0	138
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12	12	11	12	11
Total Lost time (s)		4.0			4.0			3.0			3.0	3.0
Lane Util. Factor		1.00			0.95			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			0.94			1.00	0.97
Flpb, ped/bikes		1.00			1.00			1.00			0.98	1.00
Frt		1.00			0.99			0.88			1.00	0.85
Flt Protected		0.99			1.00			1.00			0.95	1.00
Satd. Flow (prot)		1772			3341			1463			1667	1346
Flt Permitted		0.87			0.95			0.77			0.86	1.00
Satd. Flow (perm)		1553			3191			1132			1515	1346
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	64	556	0	1	647	43	3	2	31	224	0	153
RTOR Reduction (vph)	0	0	0	0	5	0	0	28	0	0	0	109
Lane Group Flow (vph)	0	620	0	0	686	0	0	8	0	0	224	44
Confl. Peds. (#/hr)	60		44	44		60	14		10	10		14
Confl. Bikes (#/hr)	1					1						
Heavy Vehicles (%)	0%	1%	0%	0%	1%	3%	20%	0%	0%	1%	0%	7%
Turn Type	Perm			Prot			Perm			pm+pt		Perm
Protected Phases		4		3	3 4			1		2	1 2	
Permitted Phases	4				3		1	1		1 2		1 2
Actuated Green, G (s)		38.4			52.0			9.0			23.0	26.0
Effective Green, g (s)		38.4			52.0			9.0			23.0	26.0
Actuated g/C Ratio		0.43			0.58			0.10			0.26	0.29
Clearance Time (s)		4.0						3.0				
Vehicle Extension (s)		3.0						3.0				
Lane Grp Cap (vph)		663			1866			113			411	389
v/s Ratio Prot					c0.06						c0.08	
v/s Ratio Perm		c0.40			0.16			0.01			c0.05	0.03
v/c Ratio		0.94			0.37			0.07			0.55	0.11
Uniform Delay, d1		24.6			10.2			36.7			29.0	23.5
Progression Factor		1.00			1.04			1.00			1.00	1.00
Incremental Delay, d2		22.2			0.0			0.3			1.5	0.1
Delay (s)		46.8			10.7			37.0			30.5	23.7
Level of Service		D			B			D			C	C
Approach Delay (s)		46.8			10.7			37.0			27.7	
Approach LOS		D			B			D			C	

Intersection Summary			
HCM Average Control Delay	27.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	78.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Appendix F
2014–2015 Red Line Extension Project Update

2014–2015 Red Line Extension Project Update

From 2012–2014, CTA evaluated benefits and impacts of four alternatives: the No Build Alternative, the Bus Rapid Transit Alternative (along Michigan Avenue), the Union Pacific Railroad (UPRR) Rail Alternative, and the Halsted Alternative. CTA evaluated three options of the UPRR Rail Alternative: Right-of-Way Option, East Option, and West Option. CTA also evaluated two options of the UPRR Rail Alternative 130th Street station: a South Station Option and a West Station Option. Based on the project description provided in Section 2 of this technical memorandum, CTA analyzed the impacts of these alternatives and station options. The benefits and impacts are included in the technical memoranda prepared in 2012–2014.

In August 2014, based on the technical analysis and public input, CTA announced the NEPA Preferred Alternative—the UPRR Rail Alternative. Additional conceptual engineering was conducted on the UPRR Rail Alternative to refine the East and West Option alignments. In addition, CTA is considering only the South Station Option of the 130th Street Station.

In late 2014 and early 2015, CTA conducted additional engineering and revised assumptions on the East and West Options to refine the alignments. The refinement of the East and West Options consisted of the following items:

- For the segment of the alignment along I-57, CTA shifted the proposed alignment from the median of I-57 to the north side of I-57 within the existing expressway right-of-way. The construction would be less complex, safer for construction workers, and have a shorter duration. The shift would also allow for fewer impacts to Wendell Smith Park for the East Option, and would allow for no permanent impacts to Wendell Smith Park for the West Option.

- CTA modified the curve speeds as the alignment heads south from I-57 along the UPRR tracks. The curve speed for both the East and West Options would be 35 mph.

- CTA shifted the East Option alignment near 103rd Street station to minimize impacts to Block Park and the Roseland Pumping Station.

- CTA modified the curves south of 103rd Street for both the East and West Options to 55 mph to maximize the train speed.

- CTA refined the layout of the 120th Street yard and shop to optimize yard operations. The refined layout of the yard would accommodate 340 train cars.

The refinement of the East and West Option alignments minimizes potential impacts to parks while providing flexibility for future design phases. The Draft Environmental Impact Statement contains the benefits and impacts of the refined East and West Option alignments and supersedes information presented in other chapters of this technical memorandum.

The refined East and West Option alignments would have no additional or different impacts from those described in the technical memoranda for the following resource areas: construction, transportation, land use and economic development, historic and cultural resources, safety and security, hazardous materials, indirect and cumulative, air quality, floodplains, vegetation and wildlife habitat, threatened and endangered species, and geology and soils.