31st Street Corridor Analysis

Chicago Transit Authority
Planning

31st Street Corridor
Table of Contents

1 Executive Summary

3 In Context

6 West Section

11 Middle Section

15 East Section

20 Appendix

31st Street Corridor
Executive Summary

Executive Summary (p.1-2)
In Context (p.3-5)
West Section (p.6-10)
Middle Section (p.11-14)
East Section (p.15-19)
Appendix (p.20-23)

Purpose

The purpose of this report is to provide analysis and a recommendation on the extension of route #35 31st/35th to Cicero Avenue and on whether a single bus route should be implemented along the 31st Street corridor from the Lakefront to Cicero Avenue.

Findings and Recommendation

After a comprehensive analysis of the 31st Street corridor, staff recommends:

- The extension of route #35 31st/35th to Cicero Avenue and 24th Place be adopted as permanent
- A single bus route along the entire length of 31st Street from the Lakefront to Cicero Avenue should not be implemented
- Service along the east section of 31st Street between Ashland and the Lakefront should not be implemented at this time
- Route #35 31st/35th should be extended to the 31st Street Beach on weekends during the summer months

This analysis examines the 31st Street corridor in three sections: the west section between Cicero Avenue and Kedzie Avenue, where route #35 was extended, the middle section, between Kedzie Avenue and Ashland Avenue, and the eastern section between Ashland Avenue and the Lakefront. The middle section was looked at separately because it played a major part in the analysis of bus service on the entire length of the 31st Street corridor. The eastern section was examined separately to determine if there was value in a separate bus route between Ashland and the Lakefront even if a full-length route were not implemented.

The extended portion of route #35 31st/35th west along 31st Street has seen good ridership growth since implementation. The most recent ridership numbers are up 20% over the first few months after implementation. Although the extension has not been highly productive up to this point in terms of ridership per vehicle hour, productivity is similar to neighboring bus routes in this area and it is expected that ridership and productivity will continue to improve. The extension provides needed service to a densely-populated area of the city that lacks a true east-west bus connection to the rest of the system.

The main impediment to implementing a single bus route across 31st Street from the Lakefront to Cicero Avenue is the middle section of the 31st Street corridor. A lack of a continuous roadway on 31st Street in this area necessitates a circuitous routing which creates duplicative mileage with other bus routes. In addition, there are large areas of land in the middle section with little to no population or development conducive to transit ridership. If a single bus route were implemented from Cicero Avenue to the Lakefront, the unproductive or duplicative mileage in this middle section would comprise more than 1/3rd of the total route mileage. While there is some demand for customers traveling across this middle section, staff estimates it to be too light to justify this unproductive mileage.

While there is a gap in east-west bus service on the east section of the 31st Street corridor, analysis indicates it is not likely that a bus route on the east section of 31st Street would draw enough ridership to be an efficient use of CTA's resources at this time. Origin-destination surveys show minimal demand from the population in the vicinity of 31st Street and surveyed customers did not indicate a high preference for service operating closer to their origin/destination. In addition, staff analyzed demographic data from the east section of 31st. It did not compare well with the west section of the corridor and does not stand out against other areas of the city with similar gaps in bus service.

The extension of route #35 to operate west along 31st Street to Cicero Avenue has strengthened CTA's bus system by improving transit access for customers traveling to and from the 31st Street corridor west of Kedzie Avenue. Customers on both sides of this corridor now have access to many more north-south bus routes, improving transportation options for customers to travel throughout the city. Customers on the west section of 31st Street now have a connection to major destinations and transfer points in the corridor such as the Orange, Red and Green Lines, Illinois Institute of Technology, U.S. Cellular Field and retail areas. After reviewing all potential traffic generators in the corridor and comparing to successful operating patterns throughout the bus system, staff recommends the #35 be extended to 31st Street beach on weekends during the summer months. This should further strengthen the utility of this bus route for customers in this corridor.

Background

On August 8th, 2012, the Chicago Transit Board approved, as a 180-day experiment, a service enhancement for route #35 35th, extending it west from 36th Street and Kedzie Avenue to 24th Place and Cicero Avenue to provide new service to the western section of 31st Street. The route was renamed #35 31st/35th. The estimated cost of the extension is $1.2 million annually which is partially funded through a Job Access Reverse Commute (JARC) Grant awarded in 2009. 18% of this grant has been expended to date.

On April 19th, 2013, the Chicago Transit Board requested an analysis of a potential full-length 31st Street bus route, including service operating on the eastern section of 31st Street to the Lakefront, which had been included as part of the original JARC grant application. The board also approved an extension of the original experiment to allow more time to collect and analyze data to determine whether the route extension should be made permanent.

31st Street Corridor
Executive Summary

Executive Summary (p.1-2)
In Context (p.3-5)
West Section (p.6-10)
Middle Section (p.11-14)
East Section (p.15-19)
Appendix (p.20-23)

Data Collection

Staff collected data, conducted on-board customer surveys and performed site visits along the 31st Street corridor.

The following factors were taken into account:

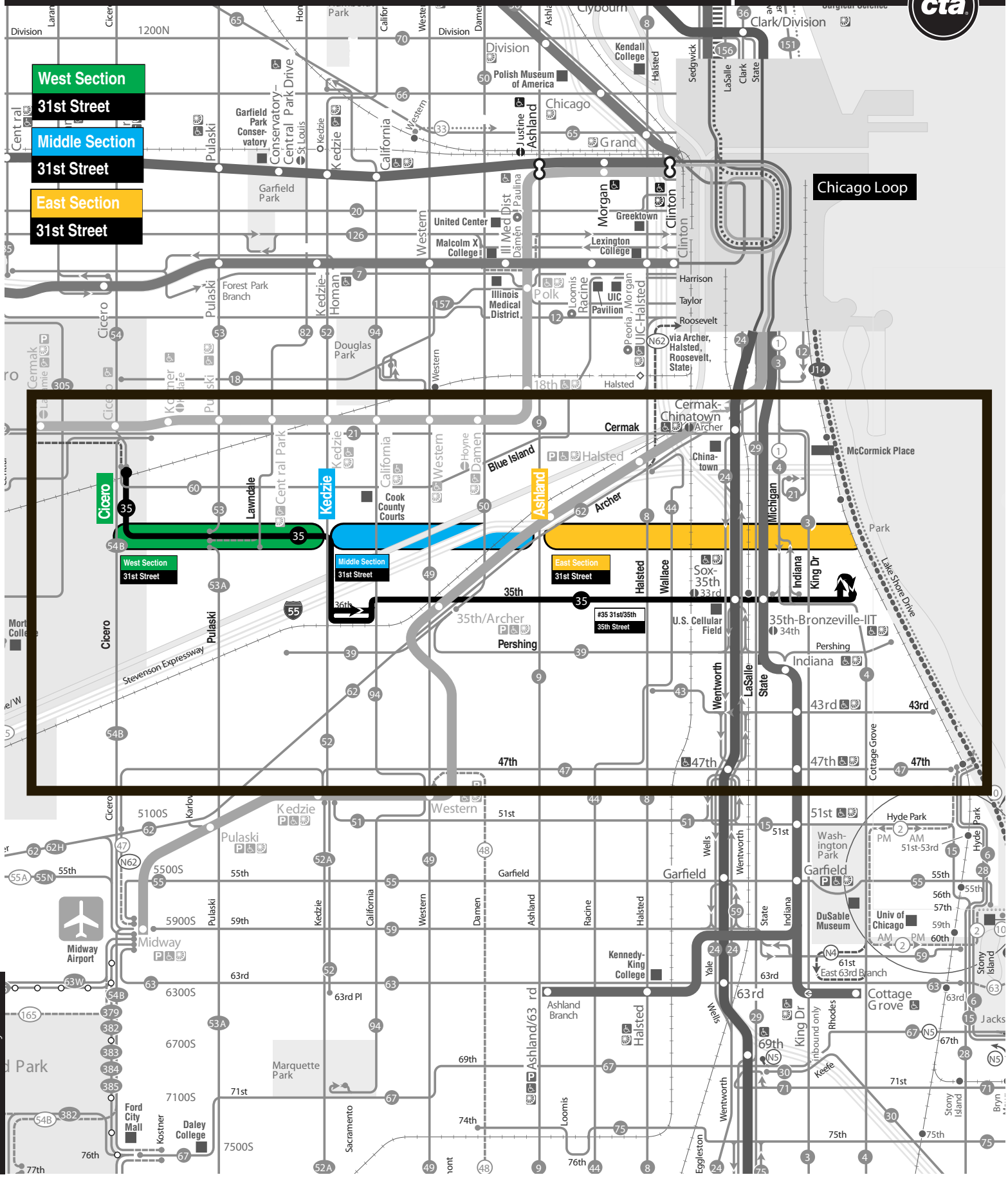
- Ridership Trends
- Bus Productivity (ridership per vehicle hour)
- Customer Origin/Destination
- Existing Bus System
- Land Use and Road Network
- Population Density and Area Demographics
- Historical Ridership and Customer Behavior Analysis

Sources used include:

- 2010 Census Data
- 5 Year American Community Survey 2005 to 2009
- 2010 Longitudinal Employer-Household Dynamics Origin-Destination Employment Statistics
- CTA on-board customer survey
- CTA Origin-Destination Data
- CTA Farebox Ridership Data
- CTA Automated Passenger Counter Ridership Data

31st Street Corridor
In Context

Executive Summary (p.1-2)
In Context (p.3-5)
West Section (p.6-10)
Middle Section (p.11-14)
East Section (p.15-19)
Appendix (p.20-23)



31st Street Corridor
In Context

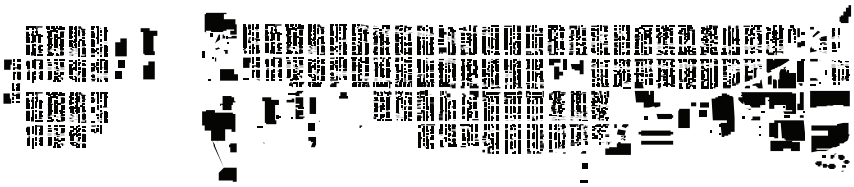
Executive Summary (p.1-2)
In Context (p.3-5)
West Section (p.6-10)
Middle Section (p.11-14)
East Section (p.15-19)
Appendix (p.20-23)

Development Analysis

Land development along the three sections of the 31st Street corridor is highlighted below to provide a visual sense of both undeveloped land and the roadway network in each area. Transit operations are optimal along highly developed land with a strong grid network and little deviation in operation.

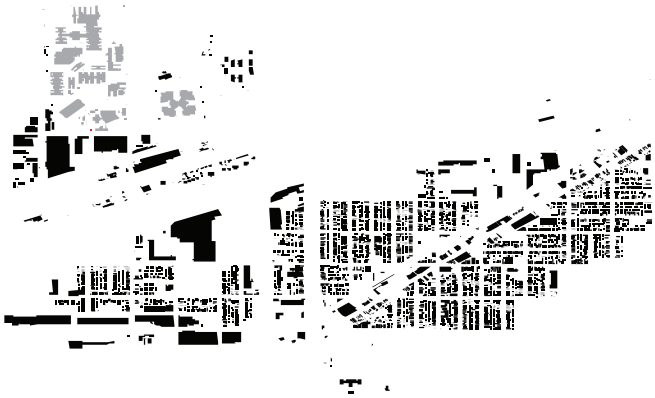
West Section of 31st Street

The west section of 31st Street has a population density of 15,440 people per/sq. mile. This is a fairly dense area with residential development covering much of the land as well as commercial development closer to Cicero Avenue.



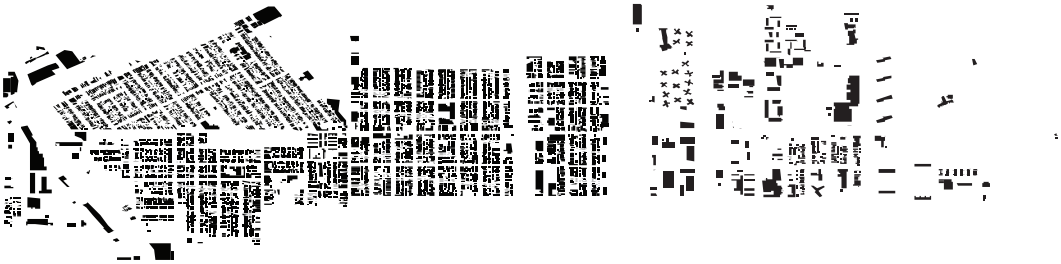
Middle Section of 31st Street

The middle section of 31st Street has a population density of 6,434 people per/sq. mile. Vacant land, the Cook County Department of Corrections (shown in gray), the Stevenson Expressway, Sanitary and Ship Canal and low-density light-industrial land cover much of the area.



East Section of 31st Street

The east section of 31st Street has a population density of 11,429 people per/sq. mile. While much of the developed areas in this section are fairly dense, large zones of both undeveloped and underutilized land exist between the Dan Ryan Expressway and the Lakefront.



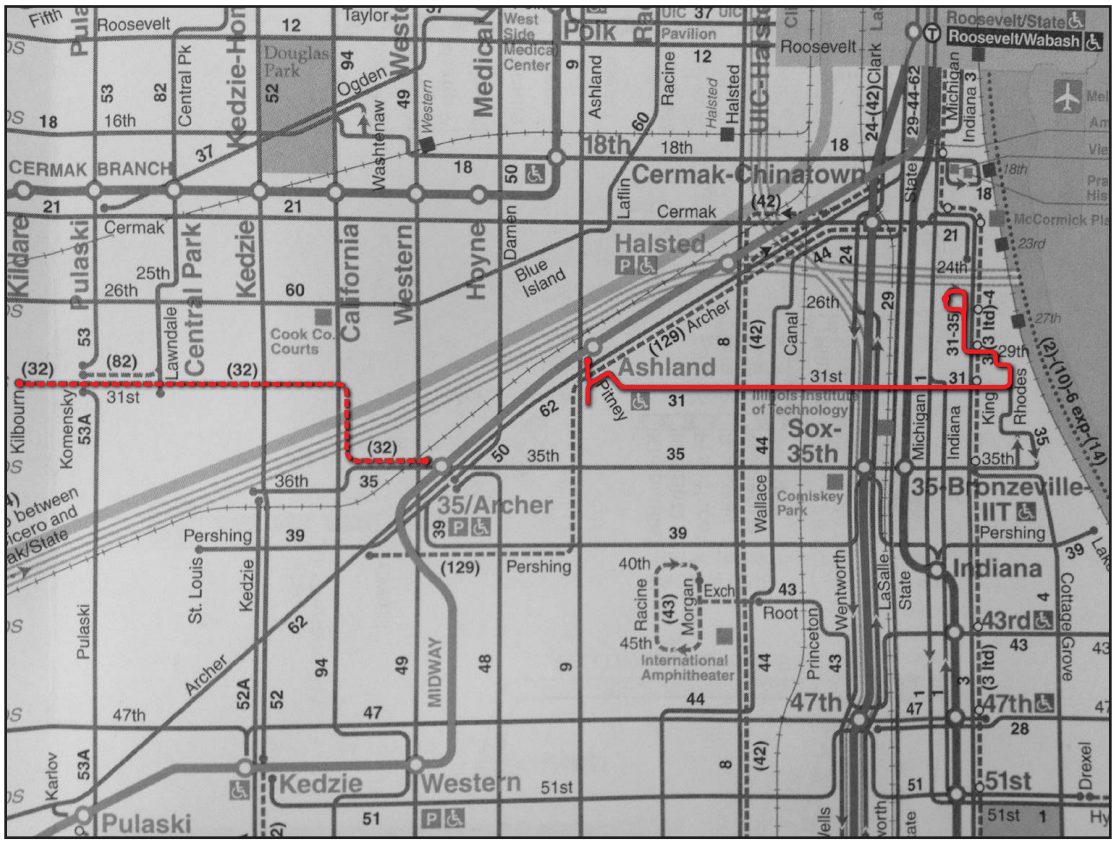
31st Street Corridor
In Context

Executive Summary (p.1-2)
In Context (p.3-5)
West Section (p.6-10)
Middle Section (p.11-14)
East Section (p.15-19)
Appendix (p.20-23)

Historical Routing

Prior to 1997 service on 31st Street was provided by two separate bus routes, #31 31st and #32 West 31st. There is no historical record of a single 31st Street bus route operating along the entire corridor. On October 5th, 1997 a system-wide comprehensive analysis was conducted by consultants from Booz-Allen & Hamilton, Inc. which proposed a comprehensive service restructuring of the CTA system. As a part of the recommendations, service operating along both the west and east 31st Street corridor was eliminated due to low performance on both routes.

Historical Routing along 31st Street Corridor



CTA System Map July 1997

31st Street Corridor
West Section

Executive Summary (p.1-2)
In Context (p.3-5)
West Section (p.6-10)
Middle Section (p.11-14)
East Section (p.15-19)
Appendix (p.20-23)

Background

In September 2012, route #35 35th was extended west from Kedzie and 36th Street to Cicero and 24th Place and renamed #35 31st/35th as an experiment approved by the Chicago Transit Board. This section examines the available data to evaluate the utility of this extension and whether it should be adopted as permanent.

Recommendation

Staff recommends the extension of route #35 31st/35th along the west section of 31st Street be adopted as permanent. The extension has seen good ridership growth since implementation and provides service coverage for a densely-populated area of the city that lacks a true east-west bus connection to the rest of the system. While the extension has not been highly productive up to this point, it is understood that not every segment of every route will be at system-average productivity. The productivity of the extension is comparable to the productivity of neighboring routes in the area west of Kedzie and the productivity of the entire route is comparable to neighboring routes as well. Survey results showed high customer satisfaction with the extension and that the extension has improved customers' daily commutes.

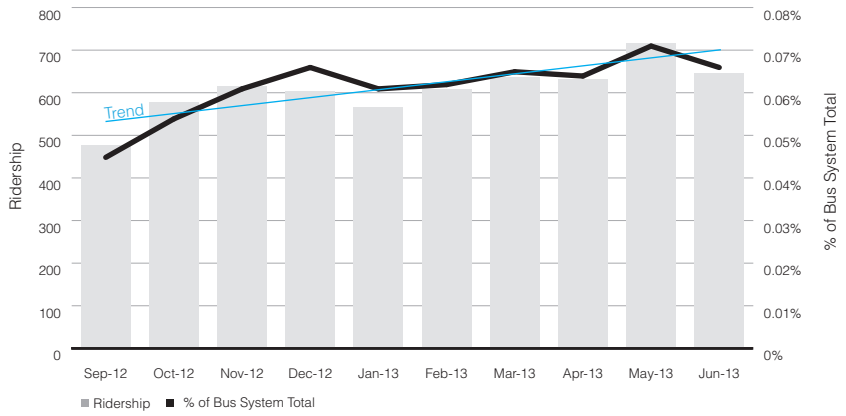
Staff also reviewed ridership patterns on this route and does not recommend any adjustments to the operating pattern or service span at this time.

Analysis

Ridership and Trend

Since extending route #35 to 24th Place and Cicero in September 2012, the new service has seen an average of 609 rides on weekdays, 394 on Saturdays and 291 on Sundays. Weekday ridership has grown 20% since implementation, comparing ridership in April and May to weekday ridership in October and November and adjusting for system and seasonal trends. September data was not used since the CPS teacher's strike had a significant effect on ridership.

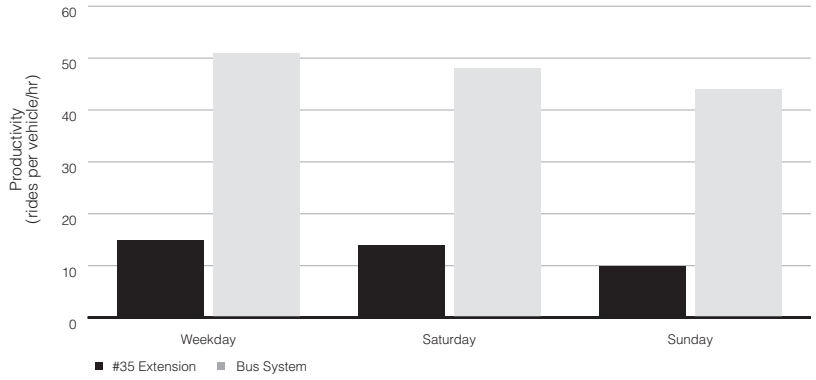
#35 Extension Weekday Ridership with Percent of Bus System Total Ridership and Trendline



Productivity

The extension has averaged 15 rides per vehicle hour on weekdays, 14 on Saturdays and 10 on Sundays.
This is well below the system average of 51 rides per vehicle hour on weekdays, 48 on Saturdays and 44 on Sundays.

#35 Extension Productivity Compared to Bus System

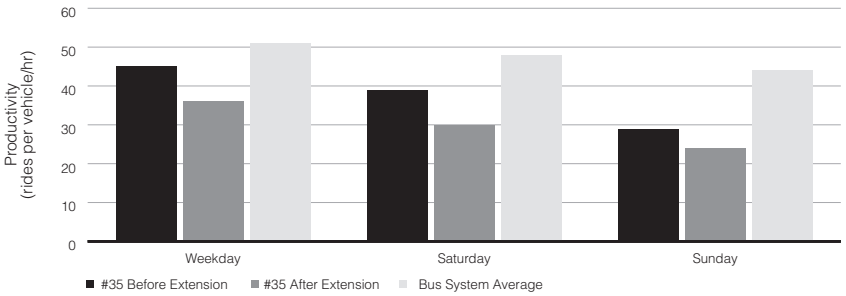


31st Street Corridor
West Section

Executive Summary (p.1-2)
In Context (p.3-5)
West Section (p.6-10)
Middle Section (p.11-14)
East Section (p.15-19)
Appendix (p.20-23)

Below is a chart of productivity for the entire route #35 31st/35th compared with the system total both before and after the extension. Weekday productivity before the extension was much closer to the system average; the extension has reduced the overall productivity of the route by about 20%.

#35 Productivity Compared to Bus System Before and After Extension



Comparison to Neighboring Routes

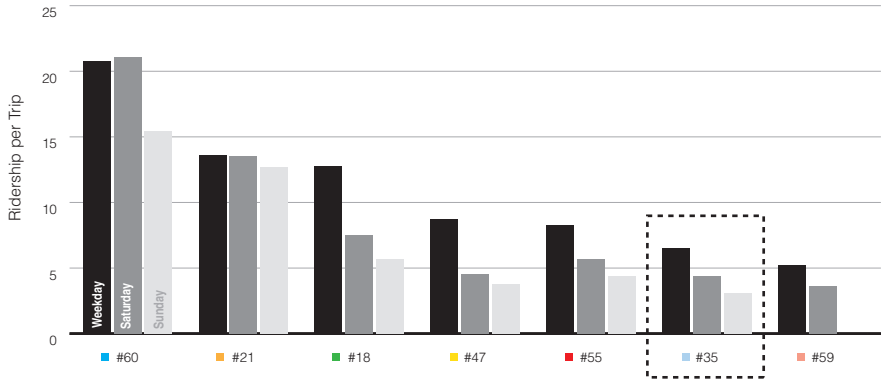
As a provider of a public good with a fixed budget, it is important that CTA strike the right balance between comprehensive service coverage and efficient operation. While not every part of the service area can be served since some areas simply do not produce enough ridership, it's also true that in order to provide reasonable service coverage not every section of every bus route will be highly productive.

To this point, although the additional service has not been highly productive up to now, ridership should be examined in context with neighboring bus routes and similar segments on these routes to determine if there is a reasonable precedence for this type of service in the existing bus system.

Ridership per Trip for Service Between Kedzie and Cicero

Below is a comparison of the ridership per trip between Kedzie and Cicero on the #35 to that of several neighboring bus routes. The #35 averages 7 rides per trip on Weekdays, 4 on Saturdays and 3 on Sundays in this area. The #35 slightly outperforms the #59 59th/61st over this stretch and is comparable to routes #47 47th and #55 Garfield, however it lags behind routes #18 16th/18th, #21 Cermak and #60 Blue Island/26th.

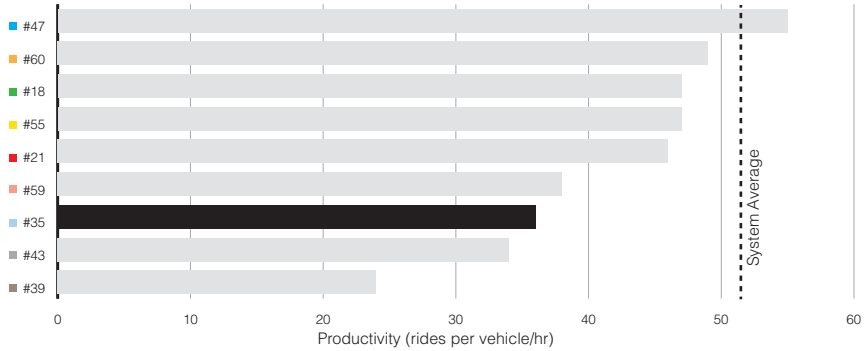
#35 Ridership per Trip Between Kedzie and Cicero Compared to Neighboring Routes



#35 Weekday Productivity Compared to Neighboring Routes

The overall productivity of route #35 compares reasonably well to neighboring bus routes. It is more productive than routes #43 43rd and #39 Pershing and is comparable to route #59 59th/61st. The #35 ranks 93rd out of 123 routes reporting productivity, which puts it at about the 25th percentile.

#35 Weekday Productivity Compared to Neighboring Routes



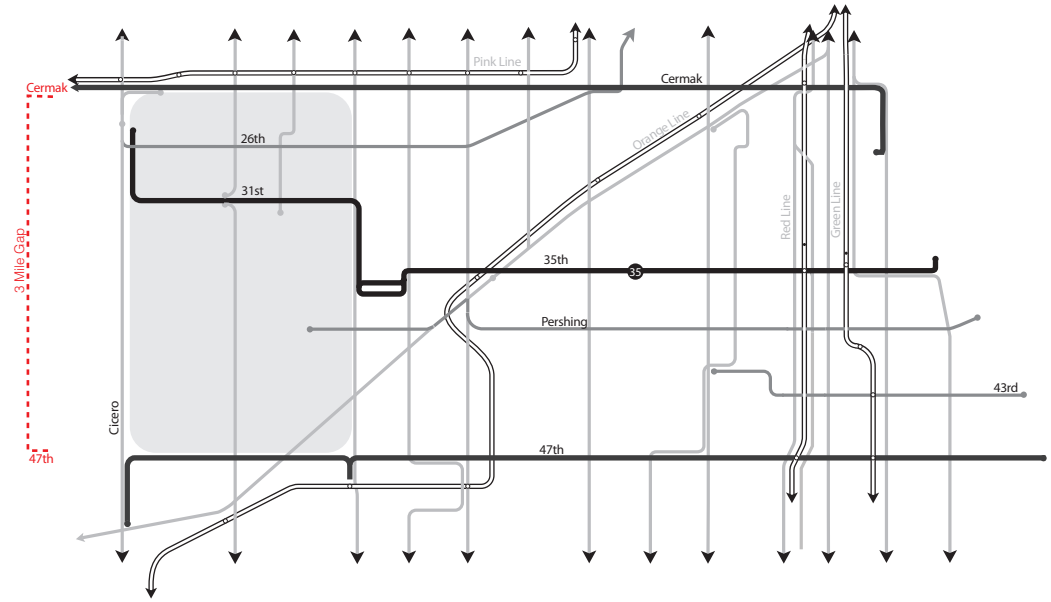
31st Street Corridor
West Section

Executive Summary (p.1-2)
In Context (p.3-5)
West Section (p.6-10)
Middle Section (p.11-14)
East Section (p.15-19)
Appendix (p.20-23)

Geography of Routes in the Area

Prior to the #35 extension, there was a three mile gap with no east-west bus service going from the west end of the city (Cicero) to the east end (lakefront). This extension not only helps customers living in the area along 31st Street west of Kedzie but improves east-west travel options for customers in the area between Cermak and 47th across the entire city. The figure below illustrates how the extension of route #35 has eliminated a significant service gap. Prior to the extension there were no cross-town options between Cermak and 47th. The bus system is strengthened by opening up connections to north-south routes in this corridor.

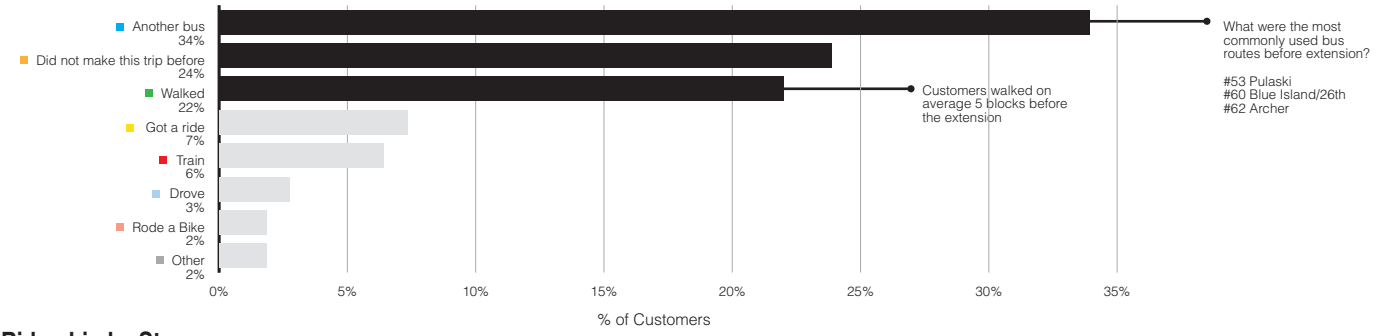
Service Gap Prior to #35 Extension with North-South Connections



Customer Survey Results

The customer surveys indicated that 85% of customers were satisfied with the service extension. As part of the survey, customers were also asked how they made their trip before the #35 31st/35th extension along the western section of 31st Street. The results shown below indicate the extension has significantly improved customers' commutes. In about one-quarter of all cases this route made possible a trip which was not being made before.

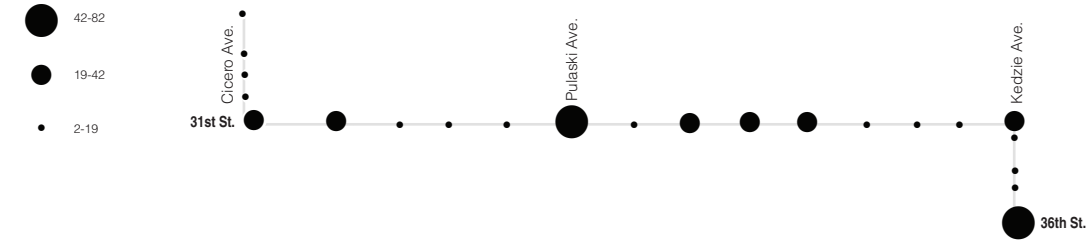
Customer Mode of Travel Prior to #35 Extension



Ridership by Stop

Below is weekday ridership by stop on the extension. Ridership is allocated fairly consistently across the extension. No changes to route length or operating pattern are recommended at this time.

#35 Extension Weekday Ridership by Stop



31st Street Corridor
West Section

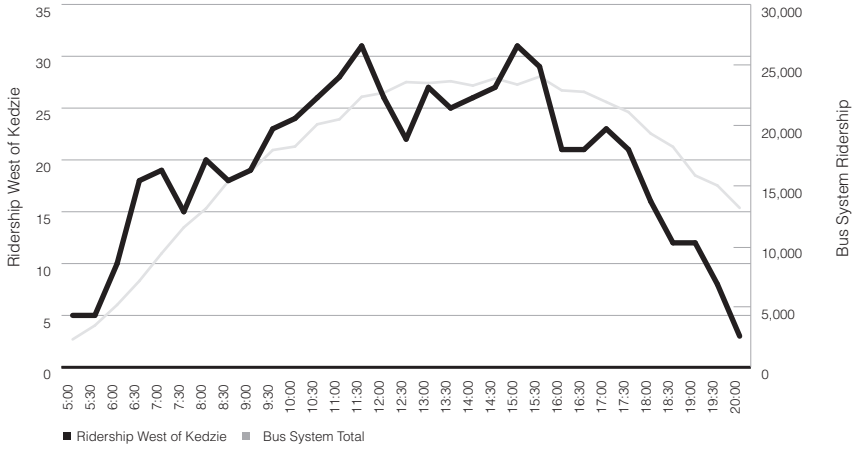
Executive Summary (p.1-2)
In Context (p.3-5)
West Section (p.6-10)
Middle Section (p.11-14)
East Section (p.15-19)
Appendix (p.20-23)

Ridership by Time of Day

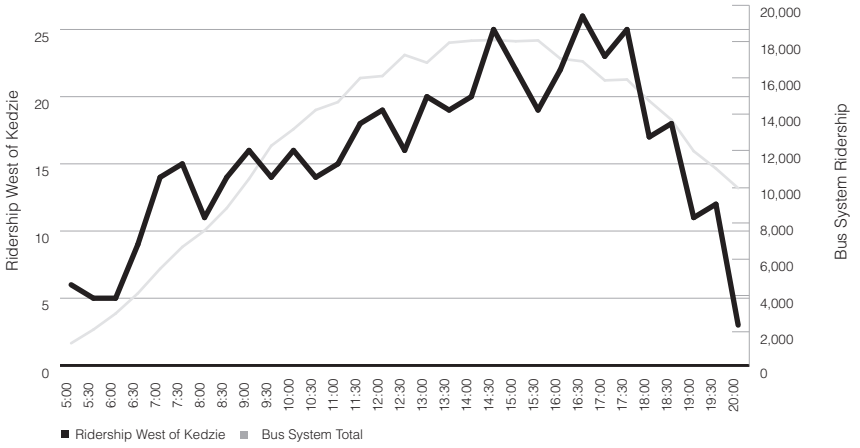
Staff examined the ridership trend for the extension throughout the day and compared it to the system trend to see if any time periods stand out as having particularly heavy or light ridership during that time of the day. Ridership in the early morning does slightly better compared to the rest of the day while early evening ridership performs slightly worse. Despite these minor differences the below charts suggest service allocation is already closely matched to demand.

#35 Weekday Ridership West of Kedzie vs. Bus System by Half-Hour

#35 Saturday Ridership West of Kedzie vs. Bus System by Half-Hour



#35 Sunday Ridership West of Kedzie vs. Bus System by Half-Hour



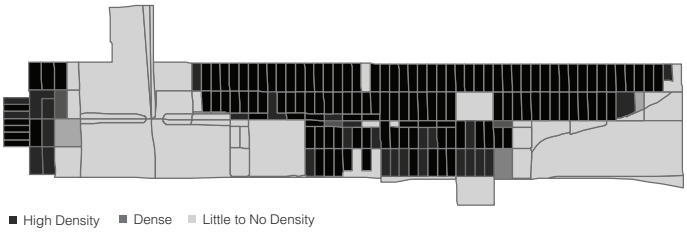
31st Street Corridor
West Section

Executive Summary (p.1-2)
In Context (p.3-5)
West Section (p.6-10)
Middle Section (p.11-14)
East Section (p.15-19)
Appendix (p.20-23)

Population Density

The west section of 31st Street has a population density of 15,440 people per/sq. mile. The chart below highlights population density along the west section of 31st Street.

West Section of 31st Street Population Density



31st Street Corridor
Middle Section

Executive Summary (p.1-2)
In Context (p.3-5)
West Section (p.6-10)
Middle Section (p.11-14)
East Section (p.15-19)
Appendix (p.20-23)

Background

Historically, 31st Street was served by two separate bus routes, one from 35th/Archer west to Kilbourn and the other between Ashland and King Drive *(see p. 5)*. However, a single route has been proposed to operate along the entire 31st Street corridor, from Cicero to the Lakefront, which is what was originally applied for in the 31st Street JARC application.

This section of the report will examine the usefulness of a single 31st Street bus route crossing the entire city and the impact the middle section of the 31st Street corridor would have on such a route.

Recommendation

Staff does not recommend a single 31st Street bus route from the Lakefront to Cicero Avenue. The main reason is that the middle section of such a route, between Kedzie and Ashland Avenues, has several significant drawbacks which lead to a lot of unproductive mileage and would make the overall route very unproductive.

- 31st Street dead-ends between Western and Archer just east of Ashland and there is no bridge across the Chicago River. This necessitates a circuitous routing that duplicates existing service.
- There are large areas of land in this middle section with little to no population or active land use.
- Due to the duplicative routing and low population density, very few people in this area would see improved access to transit from such a route.
- There is not enough demand from customers traveling across this area from the west section of 31st Street to the east to justify this unproductive mileage.

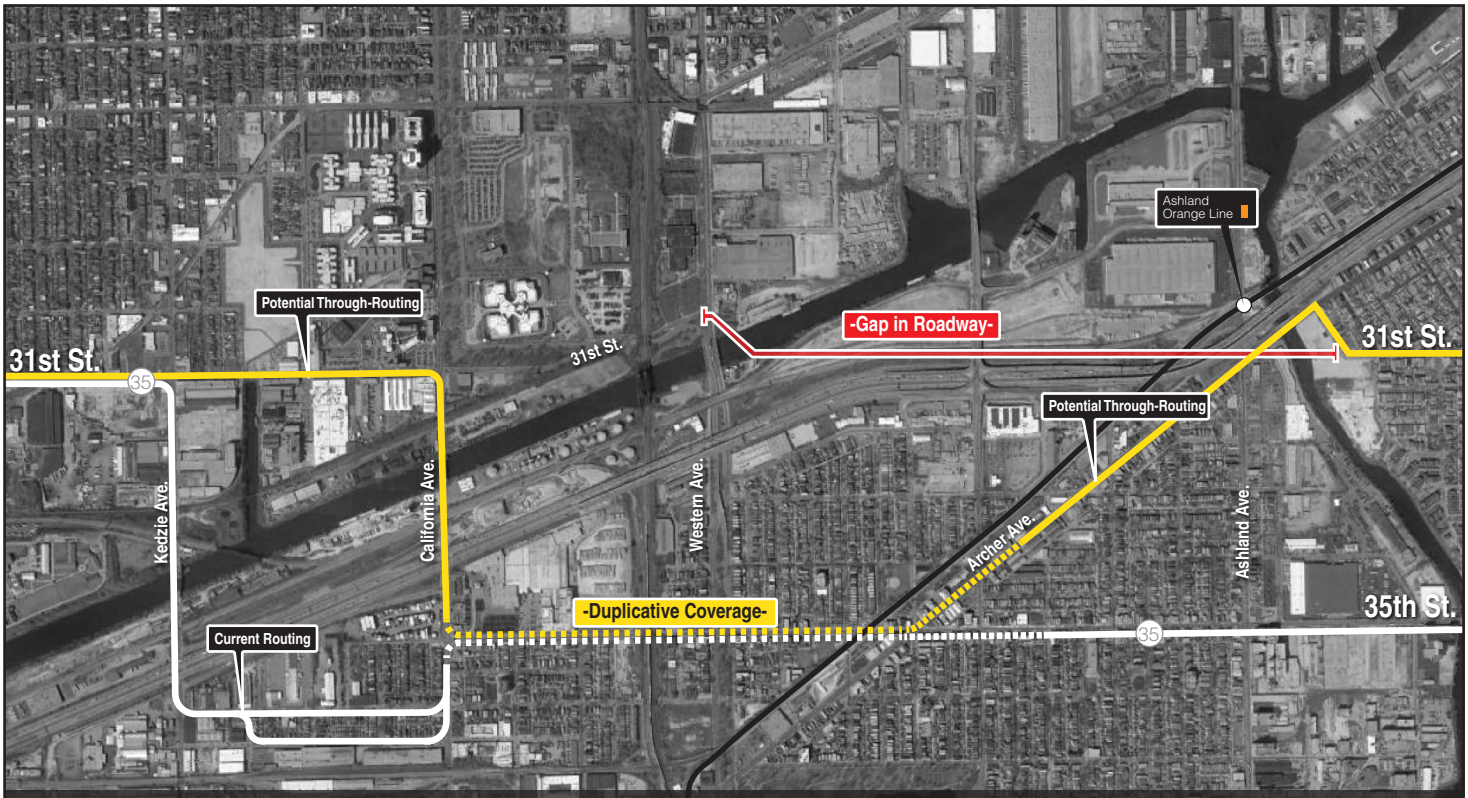
Overall, more than 1/3rd of a through-routed 31st Street bus route would have very unproductive mileage due to the poor characteristics of this middle section.

Analysis

Existing Street Network and Potential Routing

There is a gap in the 31st Street roadway from one block east of Ashland Avenue to Western Avenue. The below map shows what would be the most likely routing for a through-routed 31st Street bus route, detouring a half-mile south to 35th and then back north to 31st along Archer Avenue. Such a routing would duplicate the existing #35 routing and to a lesser extent routes #94 South California, #35 31st/35th and #62 Archer. Duplication within one-quarter mile of existing east-west service is shown by the dotted lines.

Road Network Gap and Duplicative Coverage in Middle Section of 31st Street Corridor



Aerial View highlighting gap in the street network and duplicative coverage in the middle section of 31st St. between Kedzie and Ashland

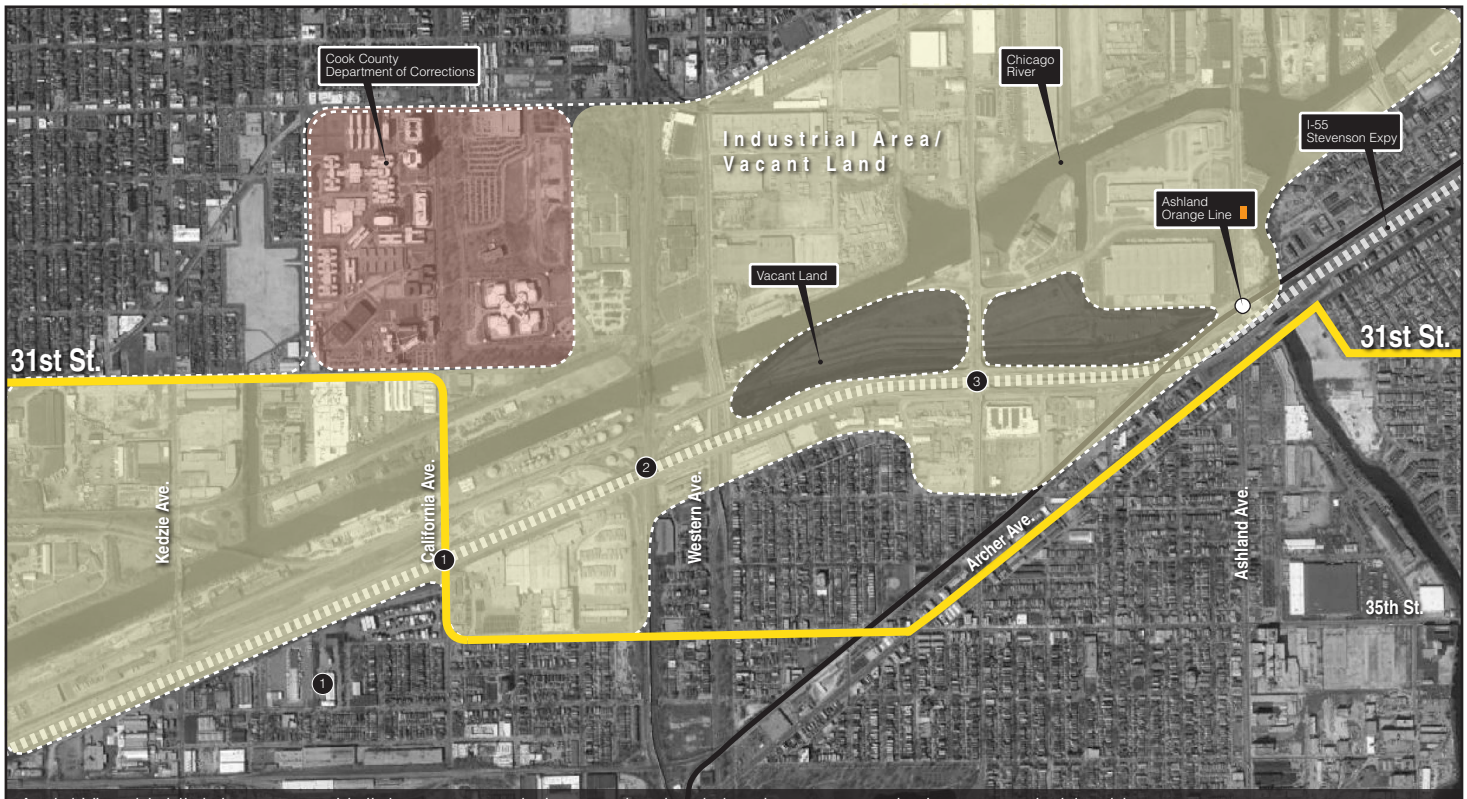
31st Street Corridor
Middle Section

Executive Summary (p.1-2)
In Context (p.3-5)
West Section (p.6-10)
Middle Section (p.11-14)
East Section (p.15-19)
Appendix (p.20-23)

Land Use and Population Density

A through-routed 31st Street bus route would operate through areas with little or no population or other land development conducive to transit ridership. Vacant land, the Cook County Department of Corrections, the Stevenson Expressway, Sanitary and Ship Canal, railroad viaducts and low-density light-industrial land cover much of the area. Population density in the middle section is little more than half of the bus system average.

Land Use in Middle Section of 31st Street



Aerial View highlighting areas with little or no population or other land development conducive to transit ridership

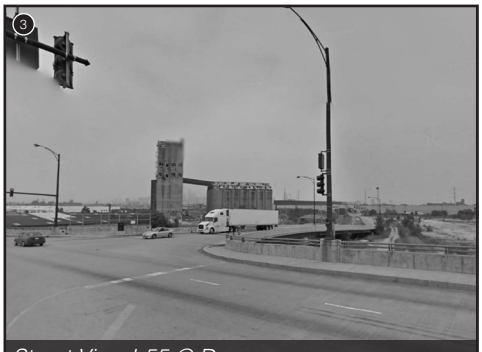
Aerial View I-55 @ California

Aerial View I-55 @ Western

Aerial View I-55 @ Damen

Street View I-55 @ California

Street View I-55 @ Western



Street View I-55 @ Damen

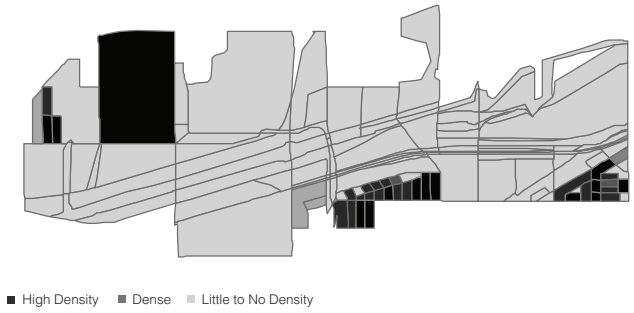
31st Street Corridor
Middle Section

Executive Summary (p.1-2)
In Context (p.3-5)
West Section (p.6-10)
Middle Section (p.11-14)
East Section (p.15-19)
Appendix (p.20-23)

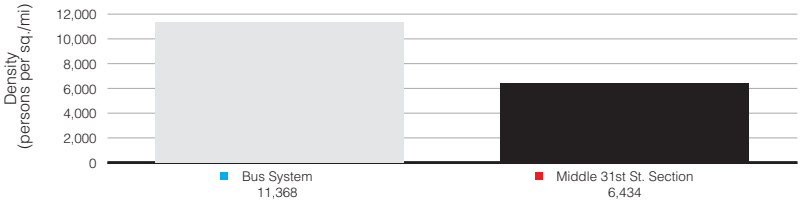
Population Density

The middle section of 31st Street has a population density of 6,434 people per/sq. mile. The charts below highlights population density along the middle section of 31st Street and compares it to the bus system average.

Middle Section of 31st Street Population Density



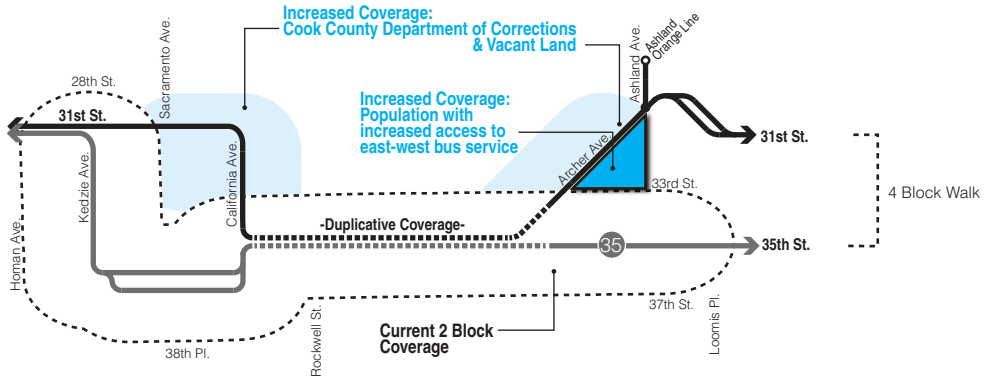
Middle Section of 31st Street Population Density Compared to Bus System



Benefit to Customers in the Middle Section of 31st Street

As a result of the poor street network and the existing land use, few people in this area would benefit from a 31st Street bus route. The map below shows the population for whom through-routing would improve access to east-west bus service. Except for the small area shown in dark blue with only 660 people, the remaining areas covered by the proposed extension are already within a two-block walk of an existing route or have no population.

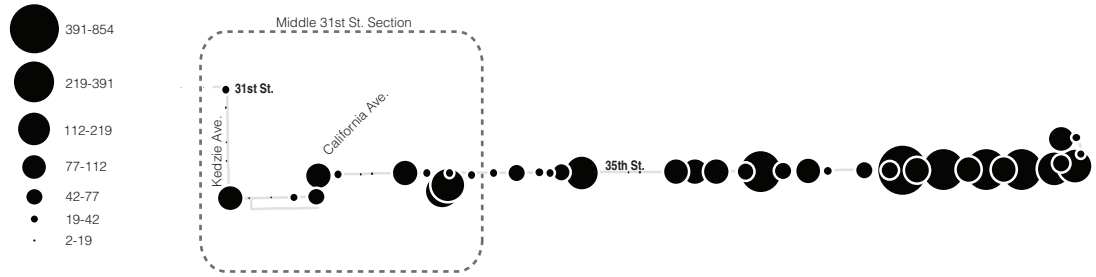
Improved Access to East-West Bus Service in Middle Section of 31st Street



Potential of Middle Section as a Destination

Ridership on existing service on the duplicated section of 35th Street is not heavy, which further highlights the inefficiency of duplicating service on this corridor. If there was very strong ridership in this area there could be some justification for connecting riders from other parts of 31st Street to this area, however it only accounts for 5% of total ridership on the #35. Below is a map of ridership by stop on the #35 with the middle section outlined.

Middle Section of #35 Weekday Ridership by Stop



31st Street Corridor
Middle Section

Executive Summary (p.1-2)
In Context (p.3-5)
West Section (p.6-10)
Middle Section (p.11-14)
East Section (p.15-19)
Appendix (p.20-23)

Benefit of Through-Routing for Cross-Corridor Trips

While the extension of the #35 has been a benefit to customers taking longer trips across this corridor, these are not a high percentage of the total trips taken. Origin-destination surveys show about 4% of total riders on the #35 make a trip between west of Kedzie and east of Ashland. Neighboring bus routes show similar percentages of riders traveling across the city so it is expected a through-routed 31st Street route would perform similarly as well.

For the customers who are making longer trips, route #35 makes many connections just as well or better than a proposed 31st Street bus route. This is because many customers are connecting to north-south bus routes and rail lines in this area, 50% based on current travel patterns. Route #35 gets customers to their connecting route just as quickly as a potential 31st route. In fact the transfer to the Red and Green Lines is comparatively faster on route #35 since the rail station entrances are located on 35th Street. The #35 also provides direct service to other major traffic generators in the area for cross-corridor riders such as U.S. Cellular Field, Illinois Institute of Technology and the retail area near Cottage Grove.

The value of a single bus route across 31st Street in this case should be compared to having separate service on the west and east sections of the corridor. Given the very unproductive mileage in the middle section, this value is then based mostly on these cross-corridor trips. Given the relatively light demand for these trips and the fact that the existing route #35 likely serves many of these trips just as well or better, it makes it clear that there is not significant value in a through-routed 31st Street route.

31st Street Corridor
East Section

Executive Summary (p.1-2)
In Context (p.3-5)
West Section (p.6-10)
Middle Section (p.11-14)
East Section (p.15-19)
Appendix (p.20-23)

Background

This section of the report examines the east end of the 31st Street corridor, from Ashland east to the Lakefront. Because staff does not recommend a single bus route across 31st Street, the east section of the corridor is evaluated on its own merit. Staff examined existing transit coverage and travel patterns as well as demographic and survey data to determine how useful bus service on the east section of the 31st Street corridor would be for potential customers and whether such a bus route would be a good use of CTA's resources.

Recommendation

Staff does not recommend implementation of a bus route on the east section of 31st Street at this time. While a gap in coverage does exist north of 35th Street, it's not likely that a route on 31st Street would bring in enough ridership to be an efficient use of CTA's resources. An extension of #35 31st/35th to the 31st Street beach during summer weekends is recommended.

- Origin-Destination surveys indicate low existing demand from customers near 31st Street
- Surveys did not indicate a strong preference by customers for service closer to one's origin/destination
- 31st Street does not stand out based on demographic data or ridership potential when compared to the west section of the corridor and other comparable gaps in service throughout the bus system
- Travel demand is oriented more north and south in this area, which is already served by a good route network.

Analysis

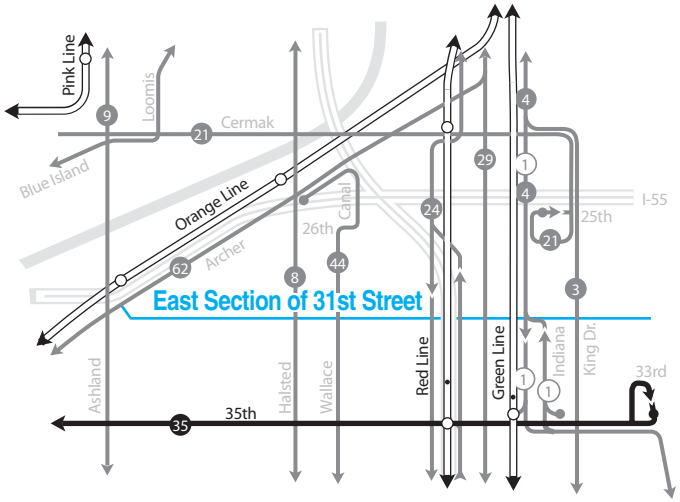
Existing Service Coverage and Assessing Demand from Current Travel Patterns

A gap in east-west bus service exists on the east section of the 31st Street corridor between Cermak Road and 35th Street between Ashland and the Lakefront. However, this area does have good north-south transportation options, with eight bus routes and two rail lines.

Assessing customer travel patterns in the area can help determine the usefulness of implementing new east-west bus service along the east section of 31st Street. Customer surveys conducted for the entire bus system show that 72% of customers living in the area between 33rd and 49th Streets east of Ashland Avenue use north-south bus and/or rail service to get to their final destination. Most of the population living along the east section of 31st Street are currently within a two-block walk of north-south bus service. The area from 33rd to 49th has good east-west coverage, which makes this a good area for comparison.

While service along the east section of 31st Street would improve travel for some people in this area, it wouldn't be focusing resources in the direction of travel where the demand is greatest.

Existing Service Coverage on East Section of 31st Street



Current Customer Travel Patterns on East Section of 31st Street

31st Street Corridor
East Section

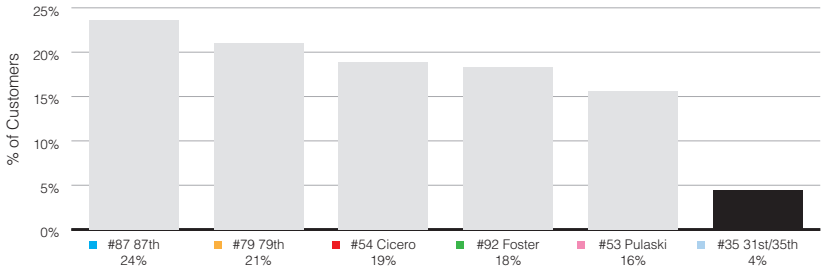
Executive Summary (p.1-2)
In Context (p.3-5)
West Section (p.6-10)
Middle Section (p.11-14)
East Section (p.15-19)
Appendix (p.20-23)

As part of this study, CTA performed a customer origin-destination survey on route #35 31st/35th. Through this survey, staff was able to determine the demand from existing customers who would benefit from a 31st Street bus route. Overall just 4% of customers ride the #35 who are within a two-block walk of 31st between 31st and 33rd.

One possible explanation for this low percentage is that customers simply aren't likely to walk this distance for bus service, which would render the exercise of measuring demand along 31st Street among existing customers somewhat irrelevant. In order to test this, similar gaps in service were examined throughout the system to see if the nearest routes to these gaps had similar demand from the same distance.

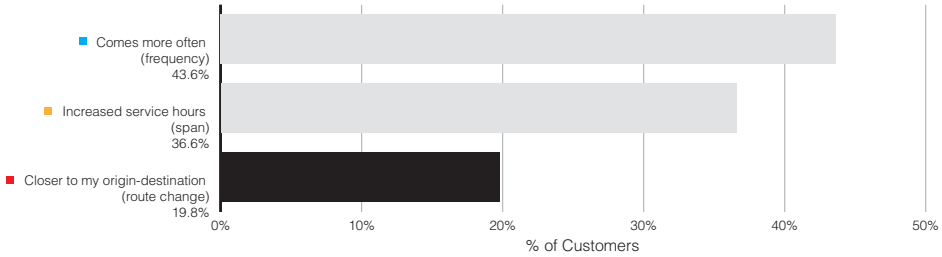
Staff found that people in these other areas were much more likely to travel this same distance to the nearest route. This disparity is a strong indication that the lack of demand among current customers coming from near 31st Street is a relevant measure of overall demand. Customers are willing to walk these distances elsewhere in the service area so the low numbers are more likely the result of low demand for transit in the area and not an existing lack of transit. Below is the comparison of demand from the 31st Street corridor to #35 service with demand from similar gaps to the nearest service.

Customer Demand from 31st Street Corridor to #35 Compared to Similar Gaps in Service



As part of the customer survey, customers were asked their preference for improving bus service in their area. They ranked having service closer to their origin/destination behind both having more frequent service and an earlier/later start and end to service.

Customer Preference for Improvement



Route #35 serves many of the major destinations in the area, connecting to the Red and Green Lines, north-south bus routes, retail around Cottage Grove Avenue, Illinois Institute of Technology and U.S. Cellular Field.
One significant destination in the area not served by this route is the 31st Street Beach.

Beach service has been successful on three other routes which serve area beaches: #63 63rd, #72 North and #78 Montrose. These routes operate to the beach in the summer months only, with route #78 Montrose operating on the weekends and routes #63 and #72 providing service to the beach weekdays and weekends.

Staff recommends route #35 be extended to the 31st Street beach on weekends in the summer months.
The service pattern on route #78 Montrose was used as a model since ridership on route #35 more closely matches that on route #78 than the much more heavily ridden #63 and #72.

Population Density

The east section of 31st Street has a population density of 11,429 people per/sq. mile. The chart below highlights population density along the east section of 31st Street.

East Section of 31st Street Population Density

31st Street Corridor
East Section

Executive Summary (p.1-2)
In Context (p.3-5)
West Section (p.6-10)
Middle Section (p.11-14)
East Section (p.15-19)
Appendix (p.20-23)

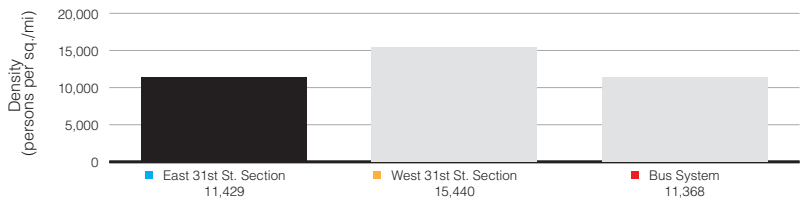
Demographic Comparison to the West Section of 31st Street and the Bus System

Aside from evaluating demand based on customer survey data, staff compared the demographic conditions on the east section of the 31st Street corridor to the west section as well as the bus system as a whole. The comparison to the west section provides a good comparison since this area just received new service. It is difficult to ascertain ridership demand from demographic statistics, however they do help to better understand the area being considered for service. Together with what was learned from existing customer travel patterns and preference for improvement, the demographic information does not show the east section of 31st as standing out as far as ridership potential.

Population Density

Population density serves as a foundation for understanding potential ridership, however it can not be seen as totally predictive in determining route performance. The east section of 31st Street is about 26% less dense than the west section of the corridor. It is roughly at the system average.

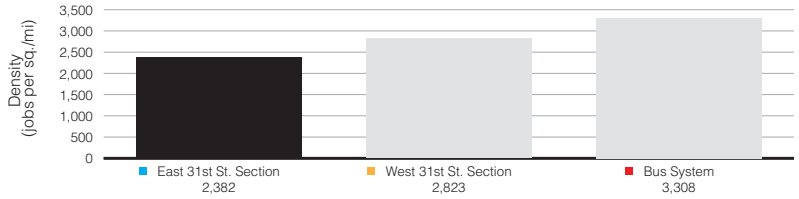
Population Density



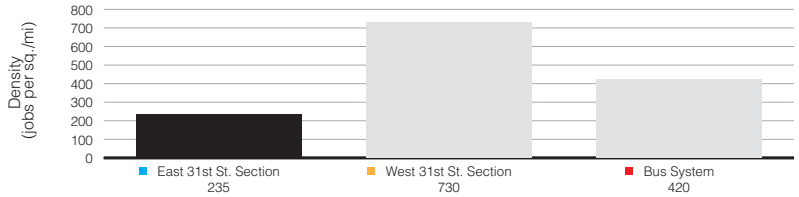
Employment and Retail-Employment Density

The east section of 31st Street has lower employment density and retail employment density than the west section of 31st Street and the bus system as a whole.

Employment Density



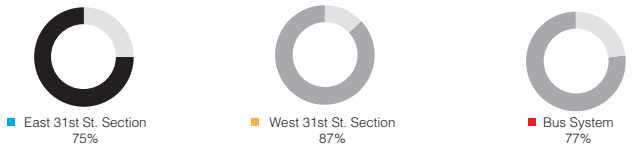
Retail-Employment Density



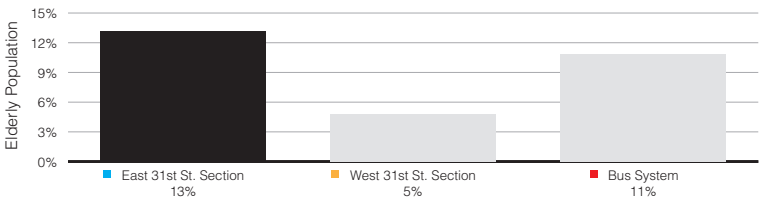
Additional Demographic Statistics

The east section of 31st Street compares somewhat more favorably in terms of automobile ownership and elderly population.

Automobile Ownership



Elderly Population



31st Street Corridor
East Section

Executive Summary (p.1-2)
In Context (p.3-5)
West Section (p.6-10)
Middle Section (p.11-14)
East Section (p.15-19)
Appendix (p.20-23)

Existing Service Coverage and Assessing Demand from Current Travel Patterns
Demographic Comparison To Other Areas Without Service

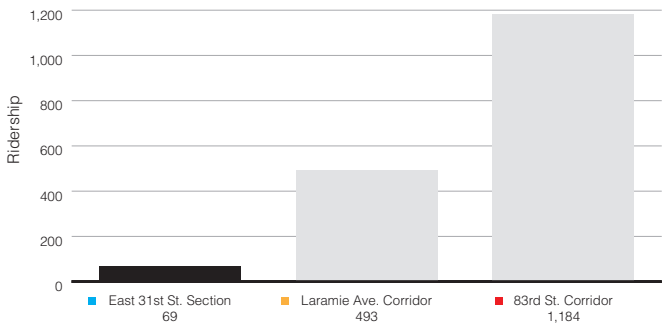
Staff compared the east section of the 31st Street corridor to areas with similar service gaps throughout the bus system: the 83rd Street corridor from Vincennes to the Lakefront and the Laramie Avenue corridor north of Armitage. This was done in order to provide insight as to the importance of filling the gap in service along the east section of the 31st Street corridor in context with these other areas.

The east section of 31st Street did not stand out in this comparison. There is much lighter existing ridership coming from the vicinity of the 31st Street corridor compared to these other corridors. The Laramie corridor has a significantly higher population density and, while the east section of 31st Street had higher employment density, the other demographic statistics were somewhat of a mixed bag.

Ridership in Corridor to Closest Bus Route

As discussed in the *Existing Service Coverage and Assessing Demand from Current Travel Patterns* section *(see p. 15)*, customer surveys show there is much lighter existing ridership from the 31st Street corridor than on the Laramie Avenue and 83rd Street corridors. This serves as a key indicator in determining the demand for transit service.

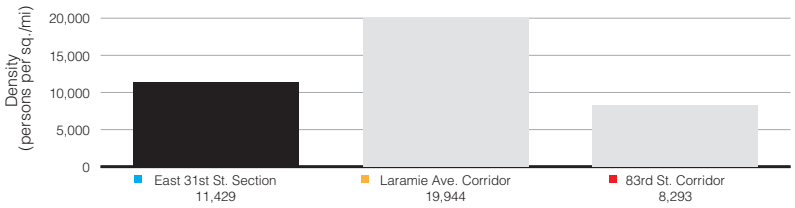
Existing Ridership on Parallel Routes



Population Density

The east section of 31st Street has significantly lower population density than the gap in service along Laramie Avenue but higher than 83rd Street.

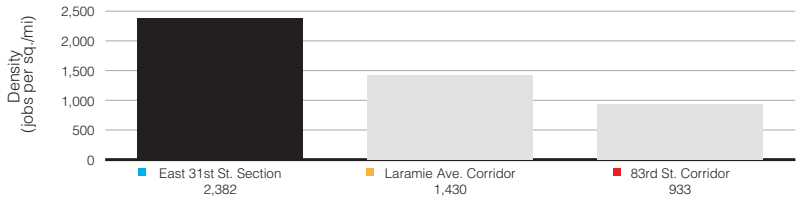
Population Density



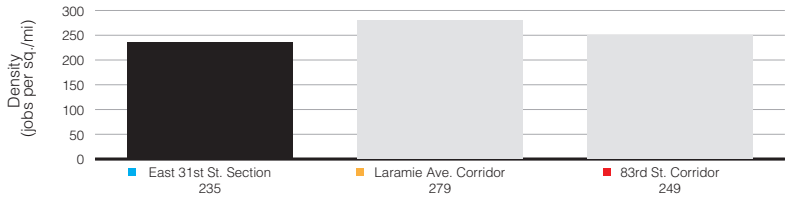
Employment and Retail-Employment Density

The east section of 31st Street has a significantly higher employment density than the other areas but a lower Retail-Employment density.

Employment Density



Retail-Employment Density



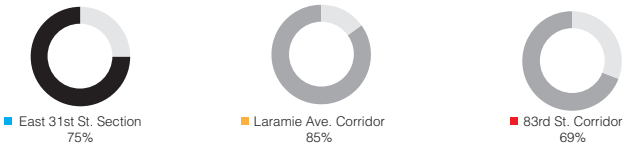
31st Street Corridor
East Section

Executive Summary (p.1-2)
In Context (p.3-5)
West Section (p.6-10)
Middle Section (p.11-14)
East Section (p.15-19)
Appendix (p.20-23)

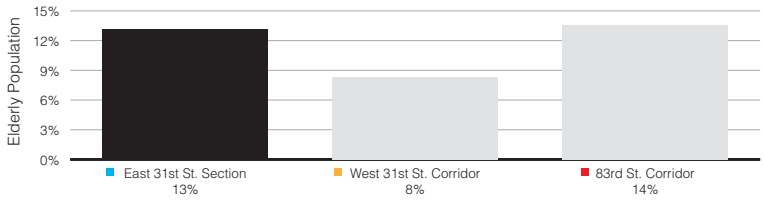
Additional Demographic Statistics

The east section of 31st Street compares closely to 83rd Street in terms of automobile ownership and elderly population.

Automobile Ownership



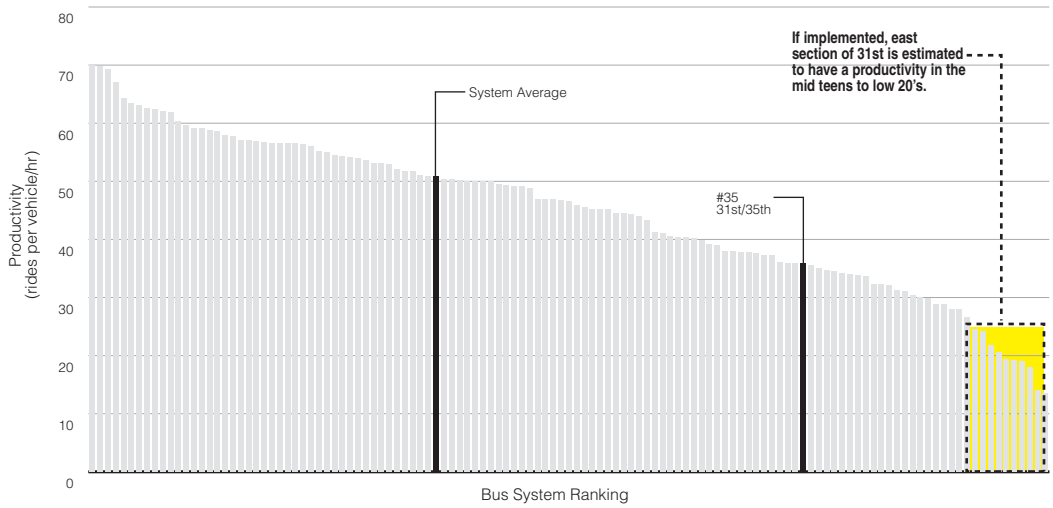
Elderly Population



Productivity Comparison

Projected productivity for a route covering the east section of 31st Street is charted below in comparison to the rest of the system. It is projected to rank near the bottom in terms of productivity.

Estimated Productivity of East Section of 31st Street Compared to Bus System



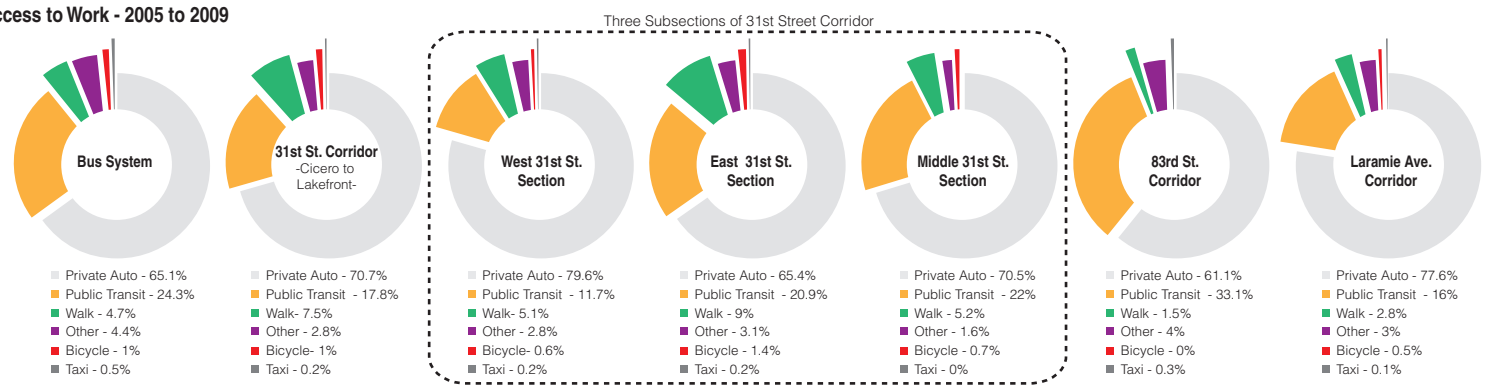
31st Street Corridor
Appendix

Executive Summary (p.1-2)
In Context (p.3-5)
West Section (p.6-10)
Middle Section (p.11-14)
East Section (p.15-19)
Appendix (p.20-23)

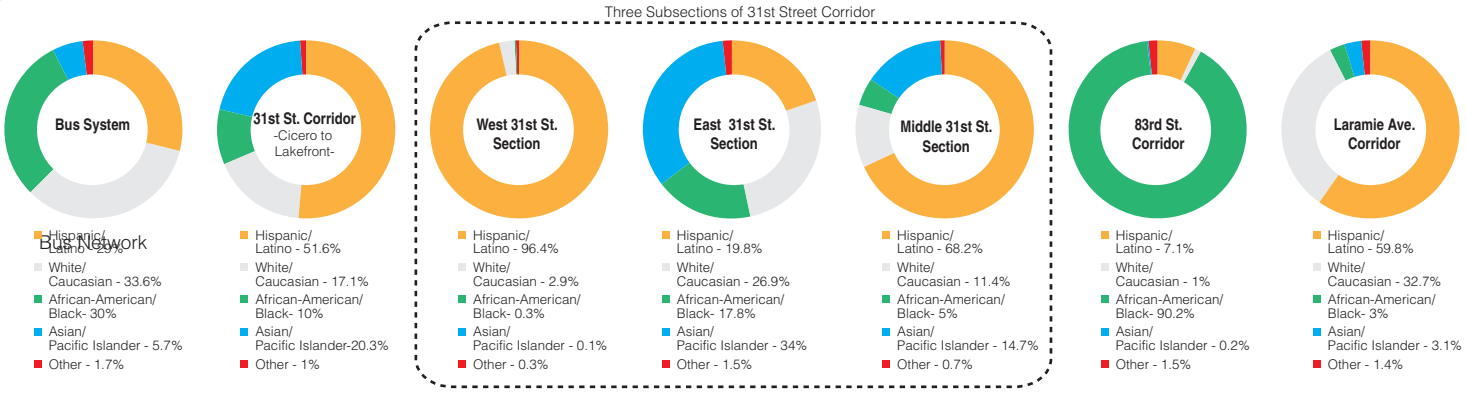
Demographics

The following demographic statistics analyzed the entire 31st Street corridor from Cicero to the Lakefront including the three individual sections and compares them to CTA's bus system as well as the 83rd Street and Laramie Avenue corridors.

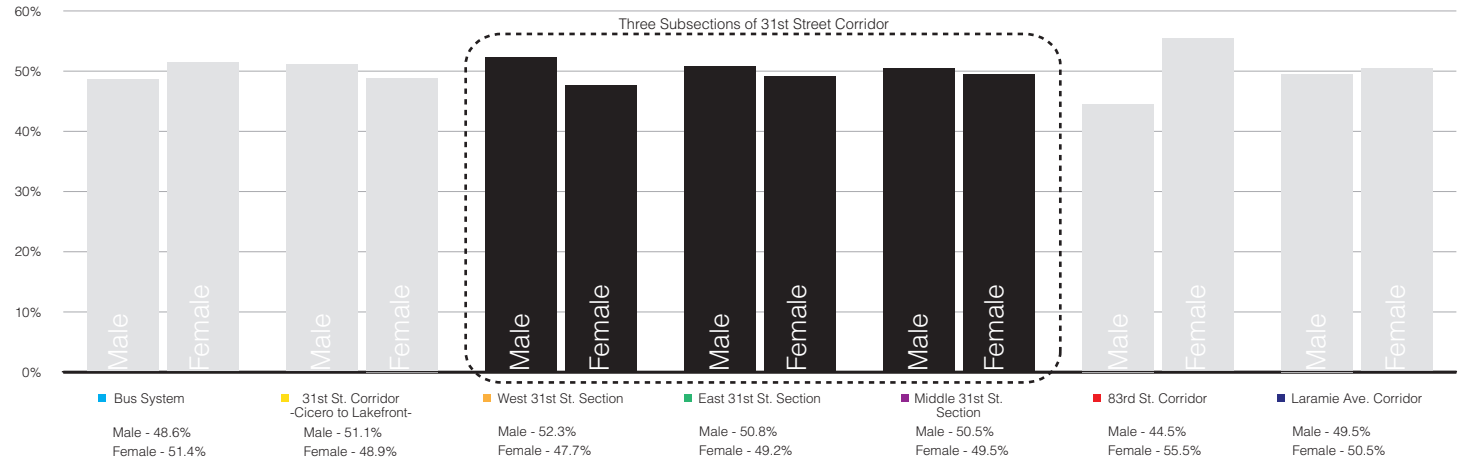
Access to Work - 2005 to 2009



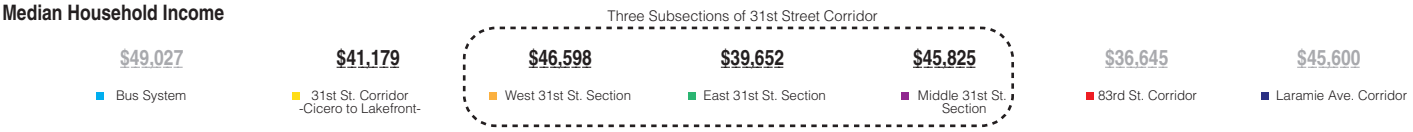
Race



Gender



Median Household Income



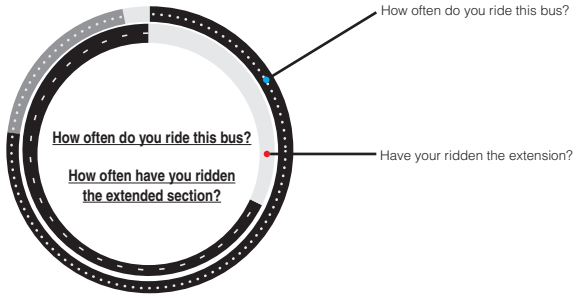
31st Street Corridor
Appendix

Executive Summary (p.1-2)
In Context (p.3-5)
West Section (p.6-10)
Middle Section (p.11-14)
East Section (p.15-19)
Appendix (p.20-23)

Customer Survey

CTA's Market Research department conducted a self-administered survey. Interviewers distributed and collected surveys from one end of #35 31st/35th to the other for two-hour shifts in the AM and PM peaks, and both weekend and weekday off-peak between Tuesday, June 18, 2013 and Sunday, June 30, 2013. Below highlights some key results from the survey not included in the main body of the report.

Frequency of Ridership (Customer Survey)

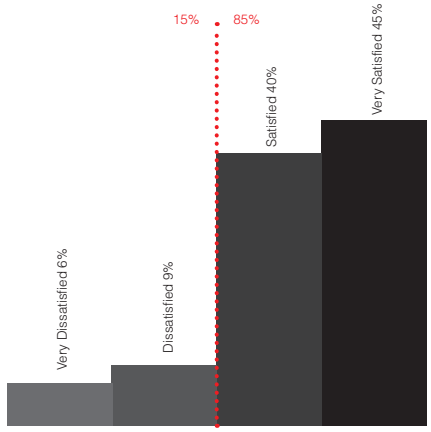


How often do you use #35 31st/35th?
- Frequent - 77%
- Infrequent - 20%
- Occasional - 3%

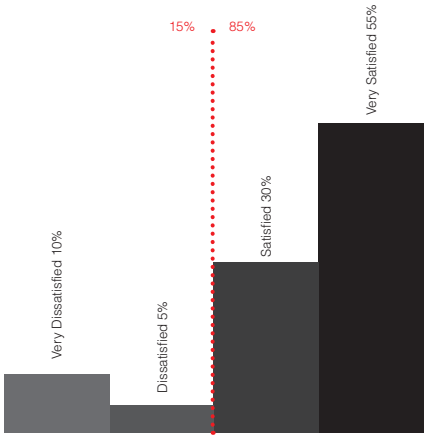
Have you ridden this bus west since 9/12?
- No - 68%
- Yes - 32%

Overall Satisfaction

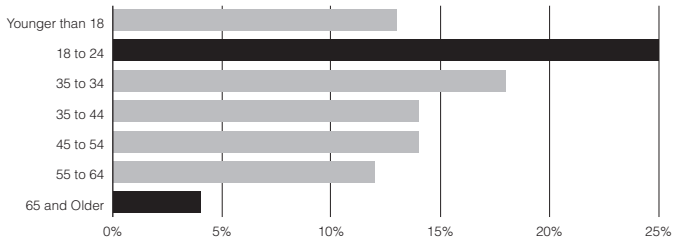
Customer Satisfaction with #35 31st/35th



Customer Satisfaction with Extension



Age



Income

Less than $15,000
- 40%

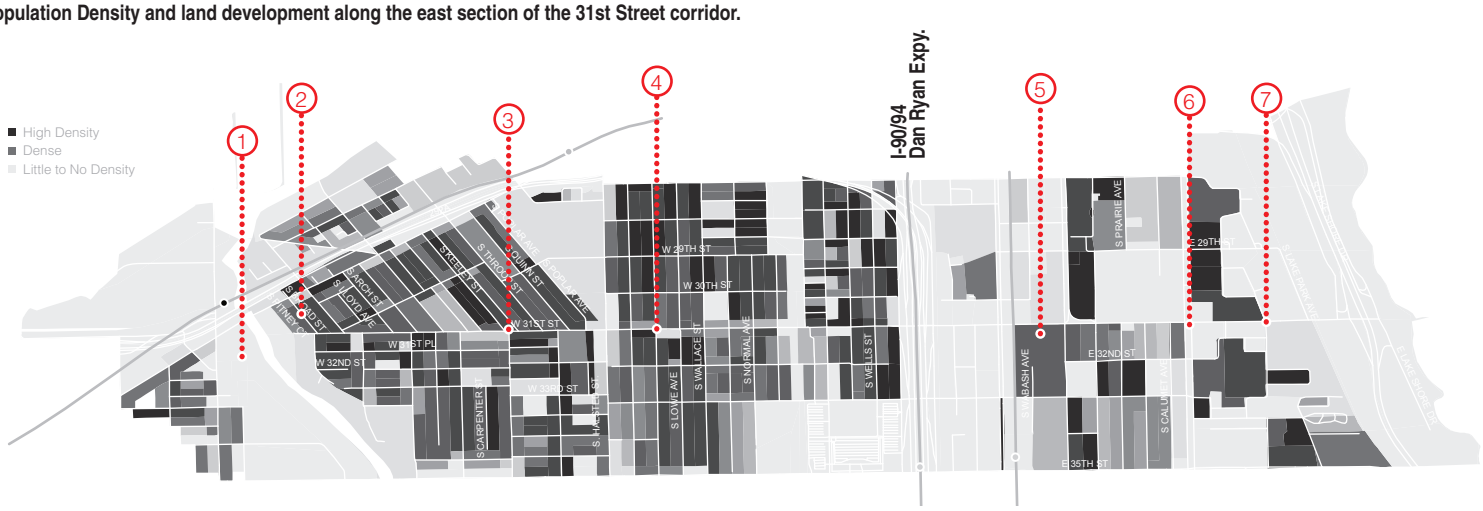
$15,000 to $39,999
- 37%

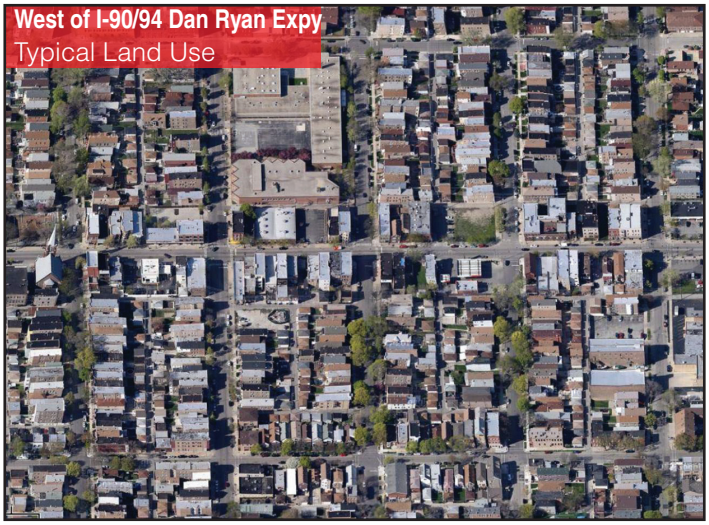
31st Street Corridor
Appendix

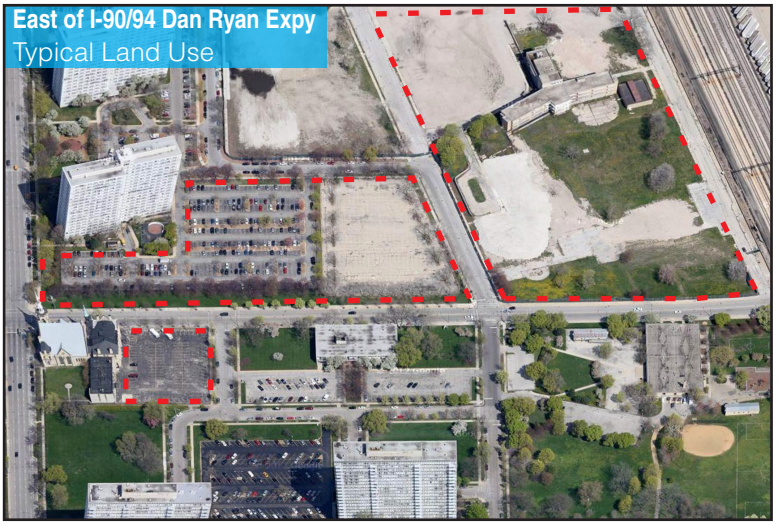
Executive Summary (p.1-2)
In Context (p.3-5)
West Section (p.6-10)
Middle Section (p.11-14)
East Section (p.15-19)
Appendix (p.20-23)

Land Use

Population Density and land development along the east section of the 31st Street corridor.



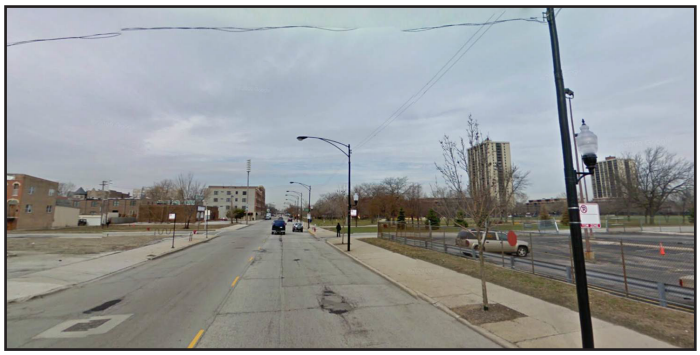


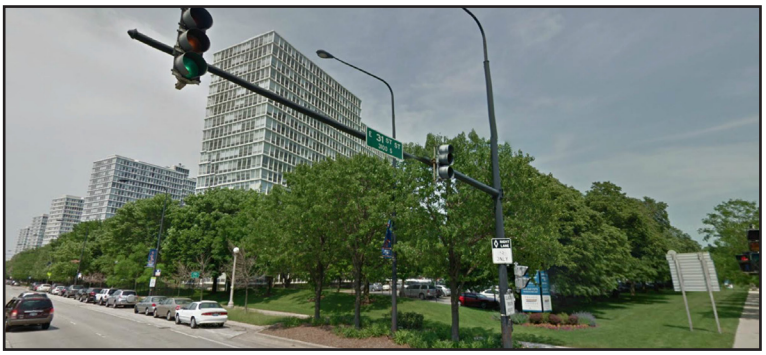


31st Street Corridor
Appendix

Executive Summary (p.1-2)
In Context (p.3-5)
West Section (p.6-10)
Middle Section (p.11-14)
East Section (p.15-19)
Appendix (p.20-23)

East of I-90/94 Dan Ryan Expressway





West of I-90/94 Dan Ryan Expressway