

# Chicago Transit Authority Circle Line Alternatives Analysis Study

## Screen 2 Public Involvement Responses to Public Comments and Questions

24 February 2007

Written questions and comments regarding the Circle Line Alternatives Analysis Study were submitted by a variety of individuals and groups from throughout the Chicago region at the study's Screen 2 Public Meetings held on September 26, 27 and 28, 2006. In addition, public comments and questions on Screen 2 were submitted directly to the Chicago Transit Authority (CTA) via e-mail and postal mail through October 27, 2006.

All of the questions and comments have been collected and compiled to provide a comprehensive review of the issues raised along with CTA's responses. Every question, comment, and suggestion, submitted during the public comment period has been compiled in the "Outreach Comment Database" (see separate document). Each question has been recorded verbatim and assigned a number that corresponds with the answers provided in this document, ensuring every question or comment submitted has been reviewed and answered or acknowledged. Collectively, the public comments and preferences will be considered in the evaluation of alternatives and concepts introduced through the public involvement process and may be evaluated and/or reflected in advancing alternatives as appropriate.

Many of the comments received were very similar in nature. As a result, similar comments and their responses have been grouped by topic and "General Comment" heading below to avoid duplicative responses. Questions or comments requiring individual or specific responses are also included below along with unique responses. In order to understand some terms used in the Comments and Responses, it may be necessary to review the original Screen 1 and Screen 2 presentation materials (including Screen 1 Comments and Responses), which are posted on CTA's Web site [www.transitchicago.com](http://www.transitchicago.com).

The list below shows the index of topics covered in the report, along with the number of comments received for each. Most of the comments received were regarding the corridors analyzed and other recommended Circle Line routes. This was followed by an interest in the transit vehicles and modes analyzed, as well as the alignments considered. A number of general questions, compliments and complaints also were submitted. Because comments often refer to more than one topic, the numbers associated with each do not equal the total number of comments received.

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## **1. Overall Circle Line Project Timeline, Purpose, and Need**

### **General Comment:**

What is the time frame for planning, construction, and completion of the project? How do we ensure that the project satisfies pressing transportation needs?

### **Pertains to specific comments:**

15, 16, 17, 18, 19, 20, 221, 223, 252

### **Response:**

The FTA New Starts grant program requires transit project proposals to proceed through a formal process of planning, design, and construction. Upon completion of this process, the project will be ready for operation. The process involves five formal steps: Alternatives Analysis (AA); Environmental Impact Statement (EIS); Preliminary Engineering (PE); Final Design (FD); and Construction. At a minimum, each of these steps typically takes 2-3 years to complete. Initiation of each step is also contingent upon continued availability of federal and local funding, the timing of which will also affect the overall project schedule. In addition, the FTA must approve entry into PE, FD and construction. For highly complex projects, the Final Design and Construction steps will take longer, particularly if construction is implemented in sequential phases rather than all at once.

In the Alternatives Analysis step, FTA guidance requires that the project's purpose and need are identified, alternatives to address the purpose and need are developed and evaluated, comprehensive and on-going public involvement is initiated, and a Locally Preferred Alternative (LPA) is ultimately determined. The Circle Line project is currently in the Alternatives Analysis step. The current Circle Line Alternatives Analysis study will continue to conduct public involvement meetings for Screen 3 in 2007. Identification of a LPA and completion of the study is anticipated later in 2007.

The purpose of the Circle Line project is to address the fact that rail transit riders must now travel through Chicago's Loop to get to most destinations outside of the immediate central area. The Circle Line will provide better access to various neighborhoods, regional job centers, and civic and educational institutions by connecting the region's transit lines before they enter Chicago's central area. The Circle Line will also more effectively link Chicago and its neighborhoods with suburban communities, bring workers closer to jobs and families closer together. The Circle Line will complement existing CTA and Metra systems by creating numerous transit system travel shortcuts and freeing up capacity in the center and most congested part of the current system.

As described further in Topic 17 of this document, overall regional transit infrastructure needs have been identified in the Chicago Metropolitan Agency for Planning's Regional Transportation Plan, and other federally authorized CTA transit expansion plans are currently being addressed through Alternatives Analysis studies, including extensions to CTA's Red, Orange, and Yellow Lines.

## **2. Evaluation Criteria Used in the Alternatives Analysis Study**

### **General Comment:**

How are screening criteria applied throughout the analysis to advance the alternatives being evaluated?

### **Pertains to specific comments:**

2, 3, 113, 119, 121

### **Response:**

In Screen 1, the Alternatives Analysis began with a large universe of alternatives. The alternatives included a wide array of transit vehicle technologies, six corridors within the study area, and three possibilities for vertical profiles (i.e., at ground level, above ground, and below ground). The initial universe of alternatives was evaluated in Screen 1 to identify technologies, corridors and profiles that

satisfied the project's goals and objectives. General evaluation criteria were used to eliminate those alternatives that were not capable of meeting the project's goals. For more details on Screen 1, please see the reports and presentation materials on CTA's Web site.

The Screen 2 evaluation process began with the subset of alternatives that survived the Screen 1 evaluation process. These alternatives included three transit vehicle technologies (Bus Rapid Transit, Light Rail Transit, and Heavy Rail Transit), four corridors (Ashland, Ashland-Ogden, Western, and Western-35<sup>th</sup> Street), and three profiles (At-Grade, Mostly Elevated, and Limited Elevated).

Multiple evaluation criteria were applied to each of the alternatives to determine their relative strengths and weaknesses. Detailed summaries of these evaluations are available for review on the Screen 2 presentation boards, which are available for download at the CTA's Web Site [www.transitchicago.com](http://www.transitchicago.com) as noted in the introduction to this document. The Screen 2 preliminary findings have determined that four "build" alternatives (HRT and BRT on Ashland and Ashland-Ogden) as well as a "baseline" alternative (limited capital investment) and a "no build" alternative should be advanced for further study.

**Other Specific Comments on this Topic:**

**Comment:**

1. Are "no advance" options now eliminated?

**Response:**

Yes. The alternatives recommended "not to advance" into the next stage of screening will be eliminated from further examination in this study. However, the screening process allows flexibility to re-consider certain elements of all alternatives if further analysis and public input indicates that certain project elements may still be warranted in a modified form from that in which they were initially evaluated.

**3. Circle Line Study Area**

**General Comment:**

How were the boundaries of the study area determined?

**Pertains to specific comments:**

21, 24, 212, 233, 239, 247

**Response:**

A key component of the Alternatives Analysis process is specifying a study area of a definite size for the project. The goal is to establish a specific area and to define the transit challenges and opportunities within this particular space, so that potential solutions can be measured against these defined challenges. Keeping the study area focused also helps to avoid confusion between multiple unique transit project proposals within the same city or region. Too large a study area can make it too difficult to determine accurately whether the potential solutions effectively address the identified transportation needs.

The study area for the Circle Line is bordered by Fullerton (2400N), Rockwell Avenue (2600W), Pershing Road (3900S), and Lake Michigan to the east. These boundaries define a compact area with numerous opportunities for improving transit connections and making transit a more appealing transportation option. The area also contains all of CTA's rail rapid transit lines and Metra's commuter rail lines that currently serve downtown Chicago. The boundaries of the study area roughly correspond with the maximum load point for each of these existing CTA and Metra rail lines (the points on each line where the trains typically have the greatest number of riders on board). By creating linkages between the existing transit lines in this area, the maximum number of customers should be served. A key goal of the Circle Line is to provide greater access between and within neighborhoods and activity centers outside the central business district, so that Chicago's rail transit network will no longer require travelers to enter the Loop if that is not their final destination. The size of the study area in relation to the existing transit infrastructure within it addresses this goal.

**Other Specific Comments on this Topic:**

**Comment:**

22. If you shrink the Circle Line towards the loop, then you lose the point of promoting rapid transit in the outlying area. It has to be a wider circle otherwise there is not much time saving in going into the loop and coming back out.

**Response:**

Part of the intent of evaluating the various alternatives within the defined study area is to find the right balance between these features. A wider circle would capture a larger area, while a smaller circle would provide faster travel time around the circle itself. A travel demand model was used to determine which trade-offs may be expected to provide a higher level of overall cost effectiveness. Entering Screen 3, the most cost-effective alignment appears to be one which makes connections along the Ashland Avenue corridor. Additional analysis regarding cost effectiveness will be employed in Screen 3.

**Comments:**

23. Do you plan on continuing further than North Ave. in the future?  
25. Is there consideration for Division to be furthest north or anything south of North Ave.?

**Response:**

The Alternatives Analysis process requires projects to be evaluated based upon their stand-alone utility and merits. The federal New Starts project evaluation process does not permit making assumptions regarding future expansions or improvements that have not themselves progressed through all evaluation and obtained full funding. Therefore, the Circle Line project at this stage of analysis is examining the North Avenue and Ogden-Division corridors as its northern extent, as discussed in the Screen 2 presentation materials. Any possible future transit expansions that would serve corridors outside of these two would be separate projects, responding to a separate purpose and need, and subject to a separate formal evaluation process.

**Comments:**

33. Take a map and draw a straight line down the Western bending east at the top to Howard. A Western Ave. rail is a perfect next step. Thank you.

**Response:**

While the alignment described may provide improved transit access to neighborhoods north and south of the Circle Line study area, it is significantly outside of the study area and does not address the identified purpose and need for the Circle Line. Thus, this alignment will not be studied as part of the Circle Line Alternatives Analysis.

**Comment:**

42. If the goal is to connect the radial system, why not build the ring connecting at the center point of each radiating line i.e. 63rd St., Cicero, Lawrence? The premise that the Circle Line as proposed provides connection to the spokes is not really valid, it is too close to the loop.

**Response:**

The proposed points of connection between the Circle Line and existing radial CTA and Metra lines correspond with the maximum load points for each of these lines (the points on each line where the trains typically have the greatest number of riders on board). By creating linkages between the existing transit lines at or near the maximum load point, rather than at the geographic "center point" of the radial lines, the maximum number of customers should be served most directly.

In addition, the purpose and need for the project also includes more effectively linking neighborhoods and activity centers. Major employment centers such as the Illinois Medical District are directly served by the alignments under study; this purpose and need for the project would not be as effectively addressed by simply attempting to connect CTA's radial lines at their geographic center points.

#### **4. Alignments (Corridors) Analyzed**

**General Comment:**

How were the potential corridors determined? Why have some been advanced for further analysis and evaluation while others have not?

**Pertains to specific comments:**

10, 28, 29, 30, 31, 33, 34, 35, 36, 37, 39, 40, 41, 42, 43, 46, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 213, 216, 217, 218, 219, 220, 229, 230, 231, 232, 233, 234, 236, 237, 241, 242, 245, 253, 259

**Response:**

In the first screen of the Circle Line Alternatives Analysis Study, potential corridors were identified for further study as possible locations for new transit service that would achieve the project's goals and objectives. At that stage, the corridors did not represent exact locations of transit lines, but rather represented general routings for potential service. The six corridors initially analyzed in Screen 1 could all connect numerous CTA and Metra transit lines and, to varying degrees, cut travel times for transit customers.

The preliminary findings of Screen 1 recommended that three corridors (Ashland, Ashland-Ogden, and Western) be advanced for further analysis. Public comments at the conclusion of Screen 1 made a strong case for analyzing a fourth potential corridor, Western-35<sup>th</sup>, which the study team did. The first screen's evaluation process showed that the other corridors did not address the identified purpose and need for the project as well as the four corridors that advanced for further analysis.<sup>1</sup>

Numerous public comments have been received that provide input regarding preferences and reasons for using one corridor routing versus another, including variations, alterations, and additions to the corridors presented at the Circle Line public meetings. These comments have been noted and will be analyzed and evaluated as appropriate in Screen 3 as a part of determining the recommended Locally Preferred Alternative. The overall purpose of the Alternatives Analysis is to identify a Locally Preferred Alternative, which will define a particular mode and alignment within the study area that best achieves the goals and objectives of the project.

**Other Specific Comments on this Topic:**

**Comment:**

9. Will the Bloomingdale Line be used in the new route?

**Response:**

While the abandoned freight railroad alignment along Bloomingdale Avenue was considered early in the Alternatives Analysis as one of many possible east-west alignments in the northern portion of the study area, this alignment did not effectively connect with other CTA and Metra lines nor did it effectively serve existing and potential traffic generators in this part of the study area. In addition, there was strong neighborhood sentiment against using this corridor for an active public transit line and a preference for a more passive use such as a trail or parkland. For these reasons, this alignment will not be considered further in this study.

**Comments:**

24. Why can't LSD [Lake Shore Drive] be east border (other than cost)? It would connect museum campus, Navy Pier, Ohio St. Beach, and North Ave. Beach to all Metra & CTA lines.

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<sup>1</sup> Transit service improvements in corridors that did not advance in the Circle Line evaluation may possibly be warranted to serve other purposes or needs, but those corridors have been determined to not best address the purpose and need identified for the Circle Line project specifically.

**Response:**

To most efficiently use funding resources, the Circle Line project seeks to use existing infrastructure where possible and practical. For the heavy rail options, the closest existing north-south infrastructure to Lake Michigan is the State Street Subway. For bus rapid transit options, Screen 3 will examine a potential route closer to Lake Michigan but still using portions of existing transit infrastructure. This route could provide closer access to Navy Pier and Museum Campus, and its benefits and costs will be evaluated relative to other options in Screen 3.

**Comments:**

26. What are the most common cross town routes that you studied?

**Response:**

Early in the alternatives development process, east-west cross-town routes included nearly every arterial-type east-west roadway from Grand to Fullerton in the northern portion of the study area and from Cermak to Pershing in the southern portion of the study area. The north-south cross-town routes examined included Clinton-Canal, Halsted, Ashland, Damen, and Western. The screening process examined features such as land use, street width/number of lanes, on-street parking, and presence of historic structures in order to narrow the options to those presented at the Screen 2 public meetings.

**Comments:**

32. What were some of the problems with using the 35<sup>th</sup> Street as the southern leg of the circle route?

**Response:**

During the Screen 1 public involvement process, a recommendation was made to also study Bus Rapid Transit (BRT) along an east-west route other than Archer Avenue for the southern part of the Circle Line; 35<sup>th</sup> Street and Pershing Road were both examined. For travel demand forecasting purposes, the more vibrant mix of commercial and residential land use along 35<sup>th</sup> Street appeared to make it a more favorable route for ridership generation than Pershing Road. The full Screen 2 evaluation compared 35<sup>th</sup> Street with Archer Avenue; it indicated that BRT along 35<sup>th</sup> Street would have both lower ridership and higher capital and operating costs than along Archer Avenue. Therefore, the 35<sup>th</sup> Street alternatives are not advancing to Screen 3 for further evaluation.

**Comment:**

45. Why was the 35<sup>th</sup> St. alternative only included on the Western line?

**Response:**

The 35<sup>th</sup> Street BRT Alternative (which was developed and analyzed based on public comments in Screen 1) was initially paired with Western because the southern extent of the original Western corridor was at approximately 35<sup>th</sup> Street. The intent was to compare the Western Alternative with the Western-35<sup>th</sup> Alternative. If the 35<sup>th</sup> Street Alternative faired better than the alternative using Archer Avenue, then 35<sup>th</sup> Street may have potentially been combined with other corridors for comparison as well. However, since the option along 35<sup>th</sup> Street did not perform well, further comparisons were not necessary.

**Comments:**

27. Was a combination Ashland/Western alignment considered that would utilize the Paulina corridor south of Lake St. and Western north?

**Response:**

Yes. In Screen 1, various alternative alignments using segments of Ashland, Western, and Lake were examined in order to most effectively use existing infrastructure and provide access to neighborhoods and activity centers in the study area. Because the added travel time of these non-direct routes was substantial—some routes added over five minutes of travel time between various activity centers—it was determined that these alternatives would generate significantly less ridership than the more direct routings and were therefore dropped from further consideration.

**Comment:**

38. Why not run a bus along Elston as well as build a connection along Western-Ogden-North-Grand.

**Response:**

The recommended Locally Preferred Alternative to be developed as a part of the Screen 3 analysis will include evaluation and recommendations for ancillary supporting bus services as may be appropriate to best satisfy the purpose and need for the Circle Line. In addition, as a part of CTA's ongoing Service Planning process, new markets for bus service are continually assessed in accordance with CTA's Service Standards. This recommendation has been shared with CTA's Service Planning department.

**Comment:**

44. Why after connecting at Milwaukee/Ashland/Division did you not consider going down Division to Halsted and then North rather than up to Ashland and east on North?

**Response:**

The option described was considered in the earlier part of Screen 2 when alternatives were refined. The option of using Division-Halsted rather than Ashland-North presented geometric design challenges for the Heavy Rail Transit (HRT) alignment due to the existing street configuration and location of the existing Division Blue Line subway station at a point where the Circle Line would have to make a 90-degree turn. In addition, approaching The Red Line at North/Clybourn from the south would present significant geometric design obstacles to being able to operate HRT trains in a circle, as the trains would have to somehow both approach and leave the North Clybourn station from the south/southeast. The Ashland-North alignment, on the other hand, would approach North/Clybourn from the northwest and leave to the southeast—a direct path through the station.

**Comment:**

47. The Tribune said a "path" will be on Rockwell. Is that true?

**Response:**

Rockwell Avenue is the western boundary of the study area. It is possible that the boundary of the overall study area was misidentified by the press as an alignment being advanced for further analysis. Most of the Rockwell Avenue alignment within the study area is occupied by a major freight railroad right-of-way that is heavily used for freight rail traffic and has no space available for additional transit facilities. For this reason, Rockwell was not advanced in Screen 1 as a viable Circle Line corridor.

**Comment:**

51. Is it possible to offer an alignment with service to McCormick Place and/or North Avenue Beach in form of a "C" instead of a circle since the eastern part is already served by the Red Line?

**Response:**

During Screen 3, a "C" option similar to that proposed will be examined. Ridership for the "C" option will then be compared with the "full circle" option.

## **5. Vertical Profiles Analyzed**

**General Comment:**

How was it determined which Heavy Rail Transit (HRT) profile to recommend: "limited elevated" or "mostly elevated"?

**Pertains to specific comments:**

48, 50, 52, 53, 54, 55, 57, 58, 196, 197, 198, 199, 200, 201, 213, 215, 228, 242, 244, 254

**Response:**

Three vertical profiles are possible for any transit infrastructure: below ground (subway), above ground (elevated) or at grade (street level). The current CTA system features buses that operate at grade and trains that operate on each of the three profiles at various points within the rail system. Following modern transit industry practice, CTA-compatible heavy rail transit in the Circle Line analysis will only be considered in dedicated right-of-way, meaning mostly subway or elevated with no at-grade street crossings.<sup>2</sup> Bus rapid transit will only be considered on street level (at grade), because the benefits of lower construction costs for BRT could not be realized if it were to use an elevated structure or subway alignment like heavy rail.

The analysis and evaluation of the HRT vertical profile includes social, economic, environmental, and transportation factors. These factors must all be considered when determining the extent to which the recommended Circle Line profile should be elevated or in a subway. In the case of the Circle Line corridors under analysis, the HRT alternatives must all connect with existing segments of CTA's rail system that are elevated in some places (such as the existing Orange Line tracks near Archer Avenue or the existing Pink Line tracks along Paulina Avenue) and in subways at other places (such as the existing Red Line tracks under Clybourn Avenue). In order to be able to make these physical connections between new Circle Line track and existing CTA track, some parts of the Circle Line will have to be built on elevated structure while others must be in subway tunnel. For the sections of new track in-between the existing CTA track, it may be possible to transition from elevated to subway or vice-versa.

Based upon public input and concerns regarding visual impacts and construction-related impacts, the Screen 2 analysis has recommended limiting the amount of HRT elevated structure in residential and commercial areas to only those sections where it is physically necessary to connect with existing CTA tracks. If HRT is ultimately selected as the Locally Preferred Alternative, full details on the exact nature and extent of elevated and subway structure required would be determined in the preparation of the federally required Environmental Impact Statement (EIS). The EIS process is a requirement for federal funding and mandates that all negative environmental impacts—including impacts upon the built environment—must be mitigated in order to receive federal approval. The EIS process begins after the Alternatives Analysis process ends and an LPA is determined.

**Other Specific Comments on this Topic:**

**Comment:**

49. I have a question regarding the proposed North/Clybourn station. Are the Brown Line tracks going to be reconstructed to use the subway?

72. Have you considered extending the subway from North/Clybourn over to the Sedgwick Brown Line station? It would better facilitate transfers between the Brown and Circle Line.

**Response:**

One option being examined with the HRT Ashland Alternative would be reconstruction of the Brown Line near North and Clybourn to follow an underground alignment like the Red Line and serve the underground North/Clybourn station. This option would create a convenient transfer connection between Red, Brown, Purple and Circle Lines. However, this would require substantially more complex construction than leaving the Brown Line on its existing elevated tracks without a stop at North Avenue. As an alternative option, it may be possible to design Circle Line-related changes to North/Clybourn station in a manner that would physically accommodate a more complex Brown Line connection to the station in the future. It should be noted that this sort of design detail would be developed fully the Preliminary Engineering (PE) phase of project development. PE begins after the Alternatives Analysis process ends and a Locally Preferred Alternative is determined.

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<sup>2</sup> Although there are sections of CTA's existing Brown, Pink, and Purple heavy rail transit lines that currently operate at grade, this characteristic is due to the design standards that were in place at the time these lines were built approximately 100 years ago. Modern design practice for newly-built heavy rail transit lines calls for complete grade separation to promote faster, safer and more reliable service for transit customers.

**Comment:**

56. If the underground option is chosen, will the deep tunnel or cut-and-cover [construction method] be used?

**Response:**

Construction methods would be more fully examined in subsequent phases of project development (Preliminary Engineering and Final Design) after the Alternatives Analysis process ends and a Locally Preferred Alternative is determined. However, in subway projects in other cities it is often the case that multiple construction methods are required. At transition points between elevated and subway, as well as at stations, cut-and-cover methods are typically most effective. Between stations, tunneling methods may be more effectively used.

**Comment:**

254. What referendum is being referred to below? Does the CTA have a referendum on the November 7th election? Or someone else relative to the 32nd Ward? Thanks for you help.

**Response:**

In the November 2006 general election, residents of Chicago's 32<sup>nd</sup> Ward voted upon the following advisory referendum submitted by 32<sup>nd</sup> Ward Alderman Ted Matlak:

*The residents of the 32<sup>nd</sup> Ward of the City of Chicago endorse the underground heavy rail transit option proposed in the Chicago Transit Authority's Circle Line Alternative Analysis Study for the area between West Fullerton, West North, North Western, and North Sheffield Avenues, which include the following precincts in the 32<sup>nd</sup> Ward: 2, 3, 4, 5, 14, 16, 28, 29, 31, 33, 34, 35, 36, 37, 47, 49, 50, 51, and 52. Yes No*

A total of 9,266 'Yes' votes (80.54%) and 2,239 'No' votes were cast.

## **6. Transit Vehicle Technologies (Modes) Analyzed**

**General Comment:**

What types of vehicles were considered for use on the Circle Line?

**Pertains to Specific Comments:**

43, 59, 61, 62, 63, 65, 66, 67, 68, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 211, 216, 230, 231, 240, 244

**Response:**

All transit vehicle technologies, whether rail, bus or other, have unique attributes and features. The Circle Line Alternatives Analysis Study is examining which vehicles would best address the anticipated transportation needs within the study area. Of the initial 11 transit vehicle technologies considered in Screen 1 only two medium capacity modes (Bus Rapid Transit and Light Rail Transit), and one high capacity mode (Heavy Rail Transit) were advanced for further study in Screen 2.

The Screen 2 preliminary findings recommend that only two transportation technologies be considered for further study: HRT and BRT. The other technology considered—Light Rail Transit (LRT) was not advanced. Detailed summaries on why LRT was not advanced can be found on the presentation boards for Screen 2.

Heavy Rail Transit would be separated from surface traffic by operating either above or below grade. Bus Rapid Transit would operate in mixed traffic conditions; in some sections of the proposed corridor it would be separated from traffic in a dedicated lane, while in others it would operate in mixed traffic just as the current CTA bus fleet does. When transit vehicles are operated in dedicated lanes they may operate free from general traffic congestion and achieve a travel time savings relative to buses operated in mixed traffic lanes.

**Other Specific Comments on this Topic:**

**Comment:**

70. Why was LRT removed? The idea that LRT is more expensive is flawed. The new BRT line (Orange) in L.A. cost more than recent LRT lines in Salt Lake City and Sacramento. BRT, in fact, has cost more in Boston and Pittsburgh than comparable LRT lines.

**Response:**

In order to be meaningful, cost per mile comparisons should take into account specific characteristics of the transit infrastructure improvement. The comment references BRT infrastructure in Los Angeles, Boston, and Pittsburgh, all of which involve significant capital investment in grade separation (elevated or subway structure), high-technology vehicles, or other fixed facilities (such as stations, park and ride facilities, and extensive landscaping and noise mitigation). The contemplated BRT Alternative for the Circle Line would operate exclusively on existing city streets at grade. Relative to the cities mentioned in the comment, BRT expense for grade separation or other fixed facilities in the Circle Line corridor would be minimal. Using FTA Annual New Starts Report data to examine BRT and LRT projects that would be more directly comparable to what would be needed in Chicago, the BRT range of average cost is from \$12.5 to \$25 million per mile. The LRT range of average cost is from \$28 to \$150 million dollars per mile. LRT and BRT would be functionally equivalent from an operations standpoint in the proposed Circle Line context, so on the basis of the cost comparison the Screen 2 recommendation is that only the BRT option should advance for further analysis.

**Comment:**

64. How about using a monorail?

**Response:**

Monorail transit vehicle technology was one of the modes considered in the first steps of Screen 1. Unlike BRT, monorail would require extensive new capital infrastructure. Unlike HRT, monorail would not be compatible with existing infrastructure, and therefore would not be able to cost effectively utilize segments of CTA's existing rail lines such as the Orange, Pink, and Red Lines and leverage existing CTA investment in its current vehicle technology and associated resources. For these reasons, monorail was not advanced to Screen 2.

**Comment:**

69. Are the light rail options for the circle line compatible with existing rail and other infrastructure?

**Response:**

Light rail track and vehicle dimensions could be made to be compatible with existing CTA rail, but light rail trains are typically powered by way of an overhead catenary wire power supply that is not compatible with CTA's existing third rail power distribution system. The floor height of light rail vehicles is also significantly lower than the floor height of CTA's heavy rail vehicles, presenting a problem if a light rail vehicle were to try to berth at a heavy rail platform. Only with great difficulty and expense could a new light rail vehicle and CTA's existing heavy rail technology be made fully compatible. This is another reason why LRT is not recommended to advance from Screen 2 into the Screen 3 analysis.

**Comment:**

213. [See Appendix]

**Response:**

Some portions of this comment pertain to details of design that are yet to be determined. Regarding the Bus Rapid Transit (BRT) alternative, this Alternatives Analysis currently assumes that there will be no dedicated BRT lanes along North Avenue due to the restricted street width that has been noted in the comment. As a result, the BRT options would be directly affected by traffic congestion in this area and travel times would be slower and less reliable than for rail. These factors will affect the overall benefit comparisons with the rail options to be completed in Screen 3. There may be isolated impacts of BRT to

on-street parking near intersections or near stations, but these impacts would not be determined precisely until and unless BRT is selected as the Locally Preferred Alternative.

The potential negative impacts of elevated Heavy Rail Transit (HRT) in this corridor have been assessed in the Screen 2 analysis and have resulted in a recommendation that the HRT options be pursued with “limited elevated” infrastructure. Aside from areas where existing track, engineering issues, and other physical constraints preclude underground construction, the Screen 2 analysis recommends avoiding elevated construction and the more detailed Screen 3 cost and benefit analysis will be performed consistent with these recommendations.

Regardless of whether BRT or HRT modes are ultimately selected as the Locally Preferred Alternative, design details on street geometry, street parking impacts, and aesthetic concerns must all be addressed in the preparation of the federally required Environmental Impact Statement (EIS). The EIS process is a requirement for federal funding and mandates that all negative environmental impacts—including impacts upon the built environment—must be mitigated in order to receive federal approval. The EIS process begins after the Alternatives Analysis process ends and an LPA is determined.

Part of the comment also addressed the alignment of the Ashland-Ogden alternative. The alignment along Ogden would connect with Division Avenue and would not go up to the Red Line station at North Avenue. The alignment maps presented at the public meetings are posted on the CTA Web site.

**Comment:**

216. [See Appendix]

**Response:**

This comment addresses some of the trade-offs between alternatives and vehicle technologies in particular. In general, the east-west portions of the bus rapid transit alternative would run in mixed traffic, not in dedicated bus lanes. While running in mixed traffic prevents major impacts to sidewalks, bike lanes, parking, and other street features, running in mixed traffic causes the bus rapid transit vehicle to run at the same speed as other traffic. As shown on exhibits at the public meeting, estimated travel times for the bus rapid transit alternatives are quite a bit slower than travel times for heavy rail alternatives which are not impacted by street traffic.

## **7. Proposed Circle Line Stations**

**General Comment:**

Where would stations on the proposed Circle Line be located?

**Pertains to Specific Comments:**

71, 72

**Response:**

Prospective station locations for the advancing BRT and HRT alternatives have been identified in the Screen 2 preliminary findings. A major purpose of the Circle Line is to establish connectivity in the transit network, so candidate station sites have been designated at all points of potential interconnection with other CTA rail routes, at or near major streets served by CTA bus routes, and at locations where the Circle Line route would cross Metra commuter rail lines. These station locations would also provide convenient access to the major activity centers located along the Circle Line corridor. Additional review of potential stations and their locations will be conducted as a part of the Screen 3 analysis and evaluation, as well as in subsequent stages of the planning and design process.

Physical constraints, the ability to transfer between lines, cost issues, property acquisition and other critical station design issues must all be addressed in the preparation of the federally required Environmental Impact Statement (EIS). The EIS process is a requirement for federal funding and mandates that any negative environmental impacts—including impacts upon the built environment—must

be mitigated in order to receive federal approval. The EIS process begins after the Alternatives Analysis process ends and an LPA is determined.

**Other Specific Comments on this Topic:**

**Comment:**

74. Are there any parking areas planned near the Circle Line stations?  
76. What government provided parking lots will be added or available next to the existing proposed stations?

**Response:**

The proposed Circle Line would serve established pedestrian-oriented neighborhoods with substantial higher density residential development as well as significant commercial, institutional, and industrial activity. These neighborhoods are important generators as well as attractors of transit trips, and the primary mode of access to the proposed stations is anticipated to be by foot or other public transit. Especially at locations where the Circle Line will connect with one or more major rail lines or bus routes, the new stations will create opportunities to intensify transit-oriented land uses and development patterns in proximity to the station location. Park and ride access at the contemplated station locations is not appropriate given these neighborhood characteristics and the nature of trips to be served. As such, ample provision for pedestrian, bicycle, and other public transit access to the stations will be provided, but no provisions for park and ride access will be planned at these station locations.

**Comment:**

73. May I suggest that as the proposed Circle Line runs on the Orange Line tracks that a stop be added on Clark St. to accommodate the increasing number of residences that have been built since the Orange Line was completed.

**Response:**

Both of the HRT alternatives advancing into the Screen 3 analysis include a new station at 18<sup>th</sup> Street and Clark Street, along the existing Orange Line tracks, to be shared by Orange and Circle Line trains. This station would not only serve nearby residences and the growing Chinatown community, but it would also allow direct transfer connections with the adjacent CTA Red Line (existing Cermak-Chinatown station) and Metra's Rock Island Line (proposed Archer station).

**Comment:**

75. Have "flex" stations been included in the Circle Line plan? These would be either temporary stations that could be used during reconstruction or special events. Or permanent stations that would be needed if conditions dictated.

**Response:**

Due to the high cost of building stations and providing all of the required features and amenities, all stations built would be used full time and considered permanent. It is possible that provisions could be made in the detailed project design to allow sufficient space for future (in-fill) stations that would be built at a later date.

**Comment:**

77. Will there be a station at North and Ashland?

**Response:**

One of the HRT alternatives advancing into the Screen 3 analysis includes a new station along North Avenue between Ashland and Elston, with a western entrance near North/Ashland, and an eastern entrance near North/Elston. One of the BRT alternatives advancing into the Screen 3 analysis also includes a stop at North/Ashland.

**Comment:**

78. Are Circle Line stations built to accommodate even larger platforms if that would be necessary in the future?

**Response:**

This is a detail that would be explored further during the Preliminary Engineering phase of project development (following completion of the Alternatives Analysis and determination of a Locally Preferred Alternative). However, at this time the working assumption is that station designs would specify platforms that can accommodate CTA's current standard eight-car train length, although sufficient space would be provided to allow a future build-out for 10-car trains. This same approach has been applied to the design of many newer and rebuilt CTA stations, including those on the existing Orange Line.

**Comment:**

79. Do number & location of transfer stations impact time savings calculations?

**Response:**

Yes, in multiple ways. The location and physical design of stations impacts how long it takes customers to transfer between lines. Ideally, a very short walk is desired, but this is not always physically possible. The location of stations also impacts the time it takes to walk between the station and nearby destinations including housing and employment locations. The overall number of stations along the line also impacts travel time because each station stop adds the time it takes for trains to slow, stop, and accelerate. All of these factors and the trade-offs among them must be considered when preparing station location recommendations.

**Comment:**

- 176. What's the impact for Chinatown neighborhood?
- 177. Will it increase the transit access to Chinatown?
- 178. Will it increase Chinatown residents' access to other communities?

**Response:**

For the heavy rail alternatives, the Circle Line would use the existing Orange Line track and structure in the vicinity of Chinatown. A new Orange Line/Circle Line station would be added along the existing Orange Line tracks near 18<sup>th</sup>/Clark. It is anticipated that this new station would be connected via a pedestrian passageway to the existing CTA Red Line Cermak-Chinatown station approximately one block south. In addition, a Metra connection to the existing Rock Island Line is possible at this location with the construction of a new Metra station. For Bus Rapid Transit alternatives, the Circle Line would use existing city streets in this area, but also connect with the existing CTA Red Line station and possible Metra Rock Island Line station. The combination of these existing and new transit facilities would create a neighborhood transit hub adjacent to Chinatown that would feature faster and more direct transit service to many destinations throughout the Chicago region via CTA and Metra.<sup>3</sup>

Detailed environmental impacts of the Circle Line in this area (if any) will be studied during the Environmental Impact Study phase of project development, subsequent to the completion of the Alternatives Analysis study and determination of a Locally Preferred Alternative.

## **8. Proposed Circle Line Operations**

**General Comment:**

What type of service would be operated on the proposed Circle Line, in terms of frequency, span, accessibility, train lengths, vehicle types, and train routing and stopping patterns?

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<sup>3</sup> In this regard, the proposed Circle Line improvements in Chinatown are representative of the beneficial impacts that would occur from stations wherever the Circle Line intersects and connects with an existing CTA or Metra line.

**Pertains to Specific Comments:**

80, 81, 82, 83

**Response:**

At this time, specific operating hours, frequency, routing and other operational issues of the Circle Line have not been determined. As a part of Screen 3, FTA guidance requires CTA to conduct additional analysis of ridership, travel times, and cost-effectiveness ratings (cost per travel time savings) on the proposed routes and transit technologies. Until these additional reviews have been made, operation recommendations cannot be developed. It is expected, however, that any new CTA service will be generally consistent with current CTA operating standards and seek to provide customers with frequent and reliable travel options. It is also expected that any new CTA service and associated facilities would be consistent with American with Disabilities Act (ADA) requirements. Regarding required rolling stock, the request for federal funds for the project would include the vehicles necessary for Circle Line operation.

**9. Ridership Estimates and Related Issues**

**General Comment:**

How many riders are expected to use the Circle Line?

**Pertains to Specific Comments:**

84, 85, 86, 87, 88, 89, 90, 91, 92, 124, 189, 211

**Response:**

As required by FTA guidance, CTA is working in cooperation with other regional transportation agencies and the Chicago Metropolitan Agency for Planning (CMAP) to develop a regional travel forecasting computer model that can be used to predict ridership for the various alternatives being studied. This computer model is based on other models already used by CMAP for other regional transportation planning purposes. In Screen 2, simple baseline ridership estimates were developed in order to begin comparing alternatives. More refined and detailed ridership estimates will be prepared as a part of the Screen 3 analysis.

Preliminary descriptions of alternatives as presented in the Screen 2 public meetings, including alignments, vehicle technologies, vertical profiles, and operating plans will become the basis for preparing the ridership forecasts. The ridership forecast is a key component used to evaluate the effectiveness of the various alternatives and a critical factor used by the FTA to determine whether to recommend funding for the Locally Preferred Alternative. Developing these projections is a required part of the Alternatives Analysis process and will be finalized in Screen 3 of this study.

**Other Specific Comments on this Topic:**

**Comment:**

66. Are buses or heavy rail assumed to be more likely to be heavily utilized?

**Response:**

Official FTA guidance prohibits assigning qualitative factors to bus or rail that would make one mode inherently preferable over another in the demand forecasting process. The results of the travel demand model must therefore estimate future ridership based on characteristics such as travel time savings, station locations, ease of connection to other modes, and other quantitative factors.

Aside from the demand forecasting process, it should also be noted that different transit vehicle technologies have different inherent capacities. Ordinary CTA buses and Bus Rapid Transit are medium-capacity modes, while Heavy Rail Transit, with the ability to form 8- or 10-car trains, is a high-capacity mode.

**Comment:**

88. Will this line increase ridership or merely divert travel patterns?

**Response:**

The expectation is that both will occur. The Circle Line will improve travel options for some existing transit customers who will choose to change their travel patterns to take advantage of the new service.<sup>4</sup> These same service improvements and the new transit connections created by the line will also make transit a more convenient and competitive travel option for other trips that do not presently take place on transit (or at all), thereby causing a net increase in overall transit travel.

## **10. Potential Property Acquisition and Impacts**

**General Comment:**

How much property would be acquired in order to build the Circle Line?

**Pertains to Specific Comments:**

60, 94, 95, 96, 97, 98, 193, 249

**Response:**

At this stage in the Alternatives Analysis study it is too early to determine how much private property would need to be acquired in order to construct and operate the Circle Line. A final determination on the vehicle technology, alignment and vertical profile will need to be established before potential property impacts can be assessed. Potential property impacts are determined in detail as a part of the Preliminary Engineering (PE) phase of project development, which proceeds concurrently with the preparation of the Environmental Impact Statement (EIS). The EIS process is a requirement for federal funding and mandates that any negative environmental impacts—including impacts upon private property—must be mitigated in order to receive federal approval. The EIS and PE processes both begin after the Alternatives Analysis process ends and an LPA is determined. Public acquisition of private property is governed by federal and local laws. In accordance with these laws, affected property owners would be compensated for their properties based on fair market values and can be provided relocation costs.

**Other Specific Comments on this Topic:**

**Comment:**

93. If you are making the second part of the north side's Circle Line totally underground without destroying one house why can't you do the same in Pilsen for the 18th St. stop to Archer Ave.?

**Response:**

The Screen 3 analysis will examine approaches to minimizing potential right-of-way impacts along the potential alignments—both in the north and the south parts of the study area. For the HRT alternatives, one factor impacting need for right-of-way is the physical space required to transition between existing elevated track and potential new underground guideway. As discussed in Topic 5, the Screen 2 analysis has recommended limiting the amount of HRT elevated structure in residential and commercial areas to only those sections where it is physically necessary to connect with existing CTA tracks. The full impacts of elevated, underground, and transitioning HRT tracks are yet to be fully determined and would continue to be evaluated through the Environmental Impact Statement and Preliminary Engineering phases of project development (subsequent to completion of the Alternatives Analysis and determination of a Locally Preferred Alternative).

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<sup>4</sup> For instance, instead of riding in from the north or south sides on the Red Line and then transferring in the most crowded part of downtown to the Pink Line to get to Polk station, a traveler will be able to transfer to the Circle Line before reaching the congested downtown area and then proceed directly to the Illinois Medical District at Polk. This will provide more direct service for the customer traveling to Polk, and the changed travel pattern will also free up transit capacity to accommodate future travel growth in the Loop.

**Comment:**

98. For subway constructions, how much disruption would occur above ground during construction? My house is one block from (Southeast) North and Ashland where the subway would bend.

**Response:**

At this stage of analysis, it is not possible to determine specific methods for construction and specific impacts such as construction-related disruptions for various alignments. If HRT is ultimately selected as the Locally Preferred Alternative, full details on the exact nature and extent of elevated and subway structure required would be determined in the Preliminary Engineering (PE) phase of project development and through preparation of the federally required Environmental Impact Statement (EIS). The EIS process is a requirement for federal funding and mandates that all negative environmental impacts—including disruptions due to construction—must be mitigated in order to receive federal approval. The EIS and PE processes begin after the Alternatives Analysis process ends and an LPA is determined. The amount and nature of potential disruption will vary based on proximity to the final alignment, construction methods, and the locations of stations and other project facilities.

## **11. Alternatives Analysis Public Involvement Process and Format**

**General Comment:**

Does the public involvement process for the Circle Line Alternatives Analysis study allow individuals sufficient opportunity to be informed about and comment on the project?

**Pertains to Specific Comments:**

99, 100, 101, 102, 103, 184, 242, 253, 255, 256

**Response:**

The public involvement process for the Circle Line Alternatives Analysis study includes a total of nine public involvement meetings, three each at the conclusion of the Screen 1, Screen 2, and Screen 3/LPA analyses. The three meetings for each Screen are being held at venues in the northern, central, and southern parts of the study area respectively. In order to maximize geographic coverage, it is intended that no venue locations will be repeated.

The Screen 1 meetings were held at the Mexican Fine Arts Museum in Pilsen (south); Lincoln Park High School (north); and the University of Illinois at Chicago (central). The Screen 2 meetings were held at the Bucktown-Wicker Park Branch of the Chicago Public Library (north), the National Teachers Academy (south) and the First Congregational Baptist Church (central). Meeting locations for Screen 3 have not yet been determined, but must be close to public transit and accessible to people with disabilities. Suggestions for meeting locations may be sent to CTA in care of Darud Akbar, Government and Community Relations [dakbar@transitchicago.com](mailto:dakbar@transitchicago.com).

The first two rounds of meetings were (and the third round will be) announced through ads in neighborhood newspapers as well as public alerts on CTA trains and buses, at rail stations, on the CTA Web site, and distributed to print and broadcast media via a news release.

The format of the meetings included groups of presentation boards containing detailed information on each area of analysis in the study, where individual conversations between the public and project staff knowledgeable about that area of analysis could take place. The public meetings also included a community presentation that provided information in a slideshow format led by the study's project managers. Meeting attendees were requested to submit questions and comments in a written format. CTA's goal in emphasizing written questions and comments has been to ensure everyone's thoughts are collected and reviewed, rather than only those individuals who might choose to speak publicly at a meeting. The intent has been for everyone to have an equal opportunity to participate in the process. In addition, by reviewing similarly worded questions, the presenters have been able to efficiently address multiple individuals at once and avoid repetition during the public meetings. CTA and the consultant team

staff have also been available to answer any individual questions on a one-on-one basis following the general question and answer period at each meeting.

The written comments received at the public meetings and other detailed comments submitted subsequently are being answered individually for the record in the format of this document, which will be made available publicly on the CTA Web site, by email to public meeting participants, and in hard copy by written request. All of the comment cards and other written communications (primarily emails) will collectively become part of the evaluation process and will be submitted to the Federal Transit Administration as a part of the official documentation for the Alternatives Analysis study.

**Other Specific Comment on this Topic:**

**Comment:**

216. [excerpt relevant to this topic] ...CTA did not bring a public meeting anywhere near where the real problem will come -the Red Line Clybourn stop.

**Response:**

The public involvement process for this Alternatives Analysis study involves three rounds of public meetings, corresponding with the conclusion of each of the three Screens of analysis. Due to the large size, population density, employment density, and variety of land uses and neighborhoods in the study area, and to better focus on local neighborhood concerns, CTA is holding three public meetings for each round of analysis—one in the northern part of the study area, one in the central part, and one in the southern part. The northern meeting for the Screen 1 analysis was held at Lincoln Park High School, approximately a half mile north of the Red Line North/Clybourn station. The northern meeting for the Screen 2 analysis was held at the Bucktown-Wicker Park Public Library, approximately one and a half miles west of the Red Line North/Clybourn station. Meeting locations for Screen 3 have not yet been determined, but must be close to public transit and accessible to people with disabilities. Suggestions for meeting locations may be sent to CTA in care of Darud Akbar, Government and Community Relations [dakbar@transitchicago.com](mailto:dakbar@transitchicago.com).

## **12. Funding for Circle Line Construction and Operations**

**General Comment:**

What are the anticipated sources of capital and operating funds for the Circle Line, and how can the CTA afford to proceed with new projects, such as the Circle Line, if they are currently facing funding shortfalls for operating and maintaining the existing system?

**Pertains to Specific Comments:**

105, 106, 107, 108, 110, 152, 185, 186, 187, 190, 222, 246

**Response:**

CTA, along with all transit agencies in the United States, receive public funding for both operating expenses and capital expenses.

The operating budget supports CTA's day-to-day operations and helps determine the service frequency and hours CTA can offer on its bus and rail system. Nearly half of CTA's operating budget comes from customer fares and revenue generated from sources such as advertising and concessions. The other half of the operating budget comes from regional sales taxes and matching funds from the State of Illinois. No federal funds are available specifically to cover operating expenses. Once the Circle Line is built and operational, the funds to operate the system will come from fare revenue as well as local and state funding sources, consistent with the funding mechanisms that support CTA's other bus and rail transit services.

It is important to note that the Chicago region's current transit operating funding structure is based on geographic boundaries and retail spending—not ridership or service provided. As a result, CTA's share

of this public funding has lagged nearly one full percentage point behind inflation for the past two decades. This issue is at the core of the well publicized operating funding crisis facing CTA today.

Meanwhile, CTA's capital funding is provided both by the federal government and State of Illinois and is granted specifically for improvement projects such as rail station renovations, track and structure rehabilitation, bus and rail car purchases, and rail extensions. It is capital funding that is being sought for the Circle Line and other New Starts projects. Capital funds help the CTA maintain and improve its service, but federal rules prevent its use for day-to-day operations expenses.

CTA has initiated this Alternatives Analysis study for the Circle Line as a first step towards obtaining capital funding for the project through the Federal Transit Administration's "New Starts" grant program.<sup>5</sup> This program provides funding for major public transit infrastructure projects throughout the U.S. through a highly competitive process. Upon successfully advancing through the four phases of project implementation (Alternatives Analysis, Environmental Impact Statement, Preliminary Engineering, and Final Design) a project will be qualified to receive a "Full Funding Grant Agreement" (FFGA) from the U.S. Government. The amount of funding in the FFGA typically covers fifty percent of the project's capital costs. State and local funds comprise the remainder of capital funding. It is possible to seek alternative sources of federal and non-federal funding for the project, but the federal New Starts grant program is specifically intended to support transit projects of this nature and is the public funding mechanism most capable of doing so.

As indicated above, to ultimately secure federal New Starts grant funding, matching funds for the remaining fifty percent of the project's capital costs are required from sources other than the New Starts grant program mainly from non-federal (i.e., state and local) sources. From 2000 through 2004, the Chicago region's matching funds came from the State of Illinois through the Illinois FIRST legislation. The Illinois FIRST legislation expired on June 30, 2004. Since that time, CTA has been working with the Illinois Legislature to enact a replacement to Illinois FIRST and ensure that all future federal transit funds available to the Chicago region can be fully utilized.

CTA is simultaneously pursuing solutions to its overall operating and capital funding challenges while also positioning itself (through Alternatives Analysis studies such as this one) to secure capital funding to meet the region's future transit infrastructure needs. While it is necessary and critical for CTA to obtain the capital and operating resources it needs to maintain its system in a state of good repair on an ongoing basis, it is equally important to plan for the future; there is little value in maintaining an existing system if it will not adequately address future travel needs. CTA's overall Capital Improvement Program not only identifies funding needs to maintain the existing system in a state of good repair, but it also identifies and addresses future needs to serve growing regional transit travel demands. With a growing population and shifting travel patterns and travel needs, it is important to anticipate CTA customers' future needs and plan accordingly. For instance, many of today's key transit links—including the Red Line Dan Ryan Branch, the Blue Line to O'Hare, the Orange Line to Midway, and the Yellow Line to Skokie—were made possible by past generations who understood the need to invest in transit's future even as they addressed significant day-to-day financial pressures.

It is also important to recognize that federal capital funding for transit system expansion projects comes largely from the New Starts grant program funds that are allocated separately from federal formula funds dedicated to ongoing "state of good repair" capital improvements. While federal formula funds may be used for infrastructure renewal projects, New Starts funds are discretionary funds that can only be used for system expansions. Given that CTA has demonstrated need for both formula and New Starts funding, it is prudent that CTA take all necessary steps to obtain funding from both sources and not focus on just one while passing up the other. CTA does not propose diverting its federal formula funds to support system extensions and expansions.

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<sup>5</sup> CTA is also conducting concurrent Alternatives Analysis studies for other candidate New Starts expansion projects that have been authorized by the U.S. Congress—including extending the Red Line to 130<sup>th</sup> Street, extending the Orange Line to Ford City, and extending the Yellow Line to Old Orchard.

**Other Specific Comments on this Topic:**

**Comment:**

109. Can the CTA do more transit expansion via a model like that used recently in Madrid where government finances expansion partly via anticipated growth in property values?

**Response:**

A financial plan to secure funds for the local share will be developed in the future, once a LPA is selected. Innovative funding strategies such as the one described in the comment will be considered in the development of the financial plan.

**Comment:**

111. Would different types of rolling stock on the L increase the CTA's operating costs? If so, how and to what extent?

**Response:**

CTA's existing rolling stock (rail vehicle) standards (including physical dimensions and primary mechanical specifications) are such that any rail vehicle can be used on any line throughout the system. Although there are subtle technological differences between rail vehicles procured at different times, CTA's existing rail fleet types are essentially interchangeable. This feature sets Chicago apart from many other urban railways in the U.S. and internationally, where rail vehicles are unique to specific lines and are physically incapable of operating on other lines within the same system.

By having the capability to operate its rail vehicles on any line in its system, CTA may allocate its rolling stock resources to meet the ridership needs of individual lines. This allows the overall fleet size to be managed more efficiently than if the vehicles were not inter-operable across lines—particularly during periods when vehicles need to be removed from service temporarily for overhauls and heavy maintenance, as such activities can be planned on a system-wide basis rather than line by line. While the exact financial impact of this feature on CTA operating costs is not able to be calculated with precision (and is not relevant to this Alternatives Analysis study<sup>6</sup>), it is clear that inter-operability of the rail vehicle fleet provides cost efficiency benefits to CTA.

### **13. Project Cost Estimation**

**General Comment:**

Please describe the project cost estimating process and how these estimates are used to make decisions regarding alternatives advanced in the study.

**Pertains to specific comments:**

104, 112, 114, 115, 116, 117, 118, 120, 122, 123, 185, 191, 194, 213, 221, 233, 243

**Response:**

Constructing transportation facilities, purchasing transit vehicles, providing new transit services, and maintaining existing services require a significant financial commitment. Transit capital investments can last several generations and can require continuing public financial support for maintenance and operations. FTA guidelines require that all of these factors must be considered when evaluating the feasibility of an alternative and in determining which alternatives advance for more detailed analysis.

In Screen 2, the costs used in the analysis were preliminary and conceptual in many cases, based on general knowledge of the costs associated with each alternative being evaluated. For example, in the comparison of the medium capacity alternatives of BRT and LRT, experience from projects with similar

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<sup>6</sup> If an HRT alternative is ultimately selected as the Locally Preferred Alternative for the Circle Line, it will be necessary that the vehicles used for this service are operable on other CTA rail lines, because all of the HRT alternatives assume that the ultimate Circle Line service will utilize some parts of the existing CTA Red, Pink, and Orange Lines in addition to newly built track.

infrastructure needs in other U.S. cities indicates that LRT in this context would cost two to four times as much as BRT, but would yield comparable benefits—such as capacity and travel times. As a result, although highly detailed and precise economic costs regarding the expenses to create a BRT or LRT system were not determined (and are not appropriate at this stage per FTA guidance), LRT was not advanced to Screen 3 because the identified economic factors strongly indicated that there would be higher costs for the LRT system with little or no advantages over a BRT system.

A second example of how preliminary and conceptual costs were used to evaluate alternatives can be seen in the corridors evaluated. The Western Avenue corridor did advance through step two in Screen 2. However, in step three, when additional criteria were used to evaluate Western Avenue, it was determined that the added expense of this corridor outweighed its benefits relative to the Ashland and Ashland-Ogden corridor alternatives. For instance, in the HRT evaluation in step three the amount of new track and subway structure needed in the Western corridor would be approximately four miles more than for either of the Ashland alternatives, because of the existing Pink Line infrastructure along Paulina Avenue that could be leveraged by the Ashland alternatives. This additional infrastructure would significantly increase capital and operating costs, out of proportion to the incremental benefits. The Screen 2 analysis did in fact conclude that the Western corridor would be expected to have somewhat higher HRT ridership than either of the two Ashland corridors, but the additional costs required to build and operate HRT in the Western corridor outweighed the anticipated ridership benefits.

The upcoming Screen 3 analysis will examine capital and operating costs in more detail as well as how the various cost factors apply to the alternatives being considered. In Screen 3, the reduced number of alternatives creates a manageable set of alternatives to be examined in detail. In accordance with FTA guidance, the analysis in Screen 3 will include a capital cost comparison, an operating and maintenance cost comparison, as well as a comparison of the estimated annualized cost per boarding.

#### **14. Potential Circle Line Impacts on Existing CTA Services**

**General Comment:**

How would the Circle Line impact current CTA services, both during construction of the new service and ultimately during operation of the new service?

**Pertains to specific comments:**

125, 126, 127, 128, 129, 131, 188, 225, 257

**Response:**

It is premature at Screen 2 of the Alternatives Analysis to fully assess impacts that the Circle Line could have on existing CTA services during construction and operation. At this point there are two significantly different technologies being considered (Bus Rapid Transit and Heavy Rail Transit) in addition to two corridors being considered (Ashland and Ashland-Ogden). Each of these alternatives would have unique benefits and impacts to the CTA system. Screen 3 of the Alternatives Analysis study will look in greater detail at the remaining alternatives and how they may interact with the current CTA system. Some of the benefits and impacts (such as potential connections with existing CTA and Metra services) may be sufficiently characterized at this time to assist in the evaluation process, while others (such as specific details of possible complimentary bus or train routings) cannot be fully considered until later in the project planning and design process—possibly during the Environmental Impact Statement or Preliminary Engineering phase when the federal process requires potential impacts to be assessed in much greater detail.

**Other Specific Comments on this Topic:**

**Comment:**

130. Will the Circle Line junction with the Red and Orange lines be grade separated “flying junctions” or “flat junctions” where trains on one line block those on the other?

**Response:**

Flat junctions, where trains must cross each other's path, can reduce the overall capacity of a train line relative to grade-separated ("flying") junctions. When new heavy rail transit systems are designed, care is taken to avoid flat junctions if at all possible. However, various factors including space constraints, environmental considerations, and cost implications also influence the final design decisions. If an HRT alternative is selected as the Locally Preferred Alternative, detailed design of junctions would take place in Preliminary Engineering and Final Design phases of project development.

**15. Potential Circle Line Connections with Existing Regional Transit Services**

**General Comment:**

Will the Circle Line connect with existing CTA and Metra lines? Will I be able to transfer from one service to another?

**Pertains to specific comments:**

132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 188, 224, 250

**Response:**

A key goal of the Circle Line is to utilize and integrate existing regional transit infrastructure to the greatest extent possible. CTA's bus and rail lines, Metra's commuter rail lines, and Pace's suburban bus services are interrelated. The Circle Line will be designed to make convenient connections between all transit services with which it intersects. At this stage in the Alternatives Analysis study, suggested connection points between the Circle Line, CTA bus and rail lines, and all Metra commuter rail lines have been identified. All of the corridors presented in Screen 2 contemplate strengthening connections between the Circle Line and intersecting CTA rail, CTA bus, Metra rail, and Pace bus services within the study area. These connections will be further described and analyzed in Screen 3.

As a part of the Alternatives Analysis process, CTA meets regularly with its counterparts at Metra, RTA, the Chicago Department of Transportation, the Illinois Department of Transportation, and the Chicago Metropolitan Agency for Planning to promote coordination within the region's transportation network.

**16. Potential Circle Line Economic and Environmental Impacts**

**General Comment:**

What will be the economic and environmental impact of the Circle Line?

**Pertains to specific comments:**

143, 144, 145, 146, 147, 148, 149, 150, 151, 192, 248

**Response:**

An Environmental Impact Statement (EIS) will analyze in detail the social, economic, and environmental consequences and benefits of the proposed Circle Line. The environmental review process required by the *National Environmental Policy Act* of 1969 (NEPA) and related laws includes environmental impact analyses and the preparation of documentation for public review. Per FTA guidance, the environmental evaluation begins upon completion of the Alternatives Analysis study, and it will result in a detailed written statement on the anticipated environmental impacts of the Circle Line and the steps that will be taken to reduce any negative impacts to the community and the natural environment.

Typically, environmental reviews for proposed transit projects address the potential impact areas of air and water quality, noise and vibration, historic and cultural properties, parklands, contaminated lands, displacement of residences and businesses, and community preservation. During the federal environmental review process, the CTA will work concurrently with state and other local agencies to also comply with state and local environmental laws.

Regarding the economic impact of the Circle Line, FTA guidance requires an economic analysis of the Circle Line to be conducted as a part of Screen 3 of the Alternatives Analysis. In general terms, it may be noted that numerous transit studies, including one conducted recently by the U.S. Department of Transportation, have found that for every \$1 billion invested in transit projects, 47,500 jobs are created or sustained.

**Other Specific Comments on this Topic:**

**Comment:**

142. How will the fare structure differ between BRT, HRT, LRT?

**Response:**

At this time it is not anticipated that the fare structure for the Circle Line would be different than that for other CTA rail lines.

**17. Relationship of Circle Line to Other Proposed Transit Projects**

**General Comment:**

Are other proposed transit projects also being considered by the CTA, and if so, what is their relationship with the Circle Line project?

**Pertains to specific comments:**

4, 6, 8, 12, 13, 189, 190, 191, 192, 193, 214, 215, 217, 222, 239, 242

**Response:**

A key feature of the Federal Transit Administration's Alternatives Analysis process is its ability to evaluate all transit projects from across the United States by a common set of standards. In this way, the benefits and costs of a project can be objectively measured in comparison to all others, and grant funding may be recommended based on project need. If multiple projects in the same region are evaluated highly on their own merits, multiple projects in the same region may be recommended to receive funding. It is not unusual for a large region such as Chicago to seek and receive federal funding approval for several major transit initiatives at the same time. In the late 1990s, CTA won federal "New Starts" grant funding approval for both the Cermak (Douglas) Branch reconstruction and the Brown Line capacity expansion project at the same time. Metra has also received New Starts funding for multiple New Starts projects at the same time. The New York City region recently received funding approval for two multi-billion dollar New Start transit projects at the same time.

The most recent federal transportation funding legislation, SAFETEA-LU of 2005, authorized CTA to seek federal New Starts grant support for five proposed major transit improvements including: the Circle Line; the Red Line Extension to 130th Street; the Orange Line Extension to Ford City; the Yellow Line Extension to Old Orchard; and the Ogden-Carroll-Navy Pier Transitway. In order to qualify for New Starts funding, the first formal step CTA is required to perform is a comprehensive Alternatives Analysis study for each proposed improvement. CTA has initiated Alternatives Analysis Studies for each of these proposed projects. Each study will follow the same federally mandated process as the Circle Line study is now undergoing (including multiple rounds of screening evaluation with public input at each stage), but each study will specifically address the unique transportation needs within their study areas.

**Other Specific Comments on this Topic:**

**Comment:**

5. The Circle Line appears to be a part of a larger plan which is not being discussed or presented-when will that be presented and by whom?

**Response:**

In order to qualify for federal funding, regional transportation projects must be included in an official Regional Transportation Plan. Chicago's Regional Transportation Plan is prepared by the Chicago Metropolitan Agency for Planning (CMAP<sup>7</sup>) with input from local and state government agencies (including CTA), community organizations, and the general public. The plan is updated regularly and the Circle Line project is included in the plan. The most recent update of the 2030 Regional Transportation Plan was prepared in 2006 and involved extensive public outreach meetings throughout the region in May and June of 2006. Additional information on this plan can be found on CMAP's "Shared Path 2030" Web site [www.sp2030.com](http://www.sp2030.com).

**Comment:**

7. Are Considerations for light rail connections of Ogilvy / Union Stations to North Ave. / Michigan Ave. still in the works?

**Response:**

In the context of broader central area traffic and circulation improvements, the City of Chicago Department of Transportation is currently conducting an analysis of creating improved transitway connections between the West Loop Metra/Amtrak stations and the North Michigan Avenue area. It has not been determined whether improved facilities may be used by buses, light rail, or other modes. CTA continues to advise CDOT on the aspects of this initiative that relate to transit service and other proposed public transit improvements.

**Comment:**

11. What cities have recently tackled a similar project? What was the result? What was the percentage cost overrun?

**Response:**

Similar circular urban railways exist in many cities throughout the world and their example has provided guidance to CTA in developing the Circle Line concept for Chicago. World cities with operational or planned circle lines that CTA has studied include<sup>8</sup>: Atlanta\*, Beijing, Berlin, Boston\*, Bucharest\*, Chennai\*, Copenhagen\*, Daejeon\*, Delhi, Glasgow, Kolkata\*, London, Madrid\*, Moscow, Nagoya\*, Osaka, Oslo\*, Paris, Seoul, Shanghai\*, Singapore\*, and Tokyo\*. Where they are in operation, these circular railways form the backbone of their regions' transit networks because their unique ability to connect many other transit lines and regional destinations to one another. Many U.S. cities, including New York, Los Angeles, Washington, Boston, Dallas, Houston, and Atlanta, and nearly every international city of equivalent size to Chicago is currently engaged in planning or construction for multi-billion dollar urban rail transit investments, often involving underground construction (see the Web site [www.urbanrail.net](http://www.urbanrail.net) for information on urban railways in other cities). The consultant team and CTA staff have and will continue to use their understanding of other transit systems, including cities with circle lines, to define the characteristics of the alternatives to be analyzed for meeting the identified needs in Chicago.

Cost and construction performance data for other urban railway projects varies significantly from one project to another and are not part of the Circle Line alternatives evaluation. Preliminary cost estimates are required by FTA for the Locally Preferred Alternative at the conclusion of the Alternatives Analysis process and will be prepared for the Circle Line project in accordance with FTA guidance.

**Comment:**

14. Has the 2016 Olympics been looked at in the planning?

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<sup>7</sup> CMAP was created in 2006 by the merger of the Chicago Area Transportation Study (CATS) and the Northeastern Illinois Planning Commission (NIPC).

<sup>8</sup> Cities denoted with an asterisk (\*) have circle lines that are currently being planned or have opened within the past ten years. Other cities have older circular urban railways.

**Response:**

The Chicago region remains a competitive choice to host the 2016 Summer Olympic Games. The Chicago region's extensive public transit system (including CTA, Metra, and Pace) is already a key asset and competitive advantage relative to other prospective Olympic host cities. All of the region's transit system improvements, including upgrades to the existing system as well as expansions, are expected to further enhance the competitiveness of Chicago's Olympic bid. A 2016 Games in Chicago would also provide a logical target date for the completion of significant regional transit system improvements.

**18. General Customer Service Questions/Compliments/Complaints**

**Pertains to specific comments:**

153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 184, 187, 195, 210, 216, 217, 219, 220, 238

**Response:**

CTA Customer Service representatives were also in attendance at the public meetings for the Circle Line and were available to answer specific questions on existing CTA services and to take suggestions for improvements to those services. Many questions submitted to the Circle Line study team also covered these topics, which are outside the purview of the study itself. The study team notes these questions and comments for the record and has referred them to the CTA Customer Service Department for an independent response and filing through CTA's established Customer Service procedures.

**19. Other**

**Pertains to specific comments:**

180, 182, 183, 214, 226, 227, 235, 236, 251, 254, 258

**Response:**

This section includes general comments, overall viewpoints, or other observations that can be characterized as public input to the study process. Many comments do not ask a question but rather point out specific views on the subject, which have been noted for the record by the study team.

**Other Specific Comments on this Topic:**

**Comment:**

179. How far is real time information screen from today?

**Response:**

Implementation of real time traveler information systems throughout the CTA bus and rail systems are being pursued independently of the Circle Line study.

**Comment:**

181. Who owns the Bloomingdale Line?

**Response:**

Canadian Pacific Railway currently owns the unused freight railroad right-of-way along Bloomingdale Avenue in the northern part of the Circle Line study area. As discussed in Topic 4, this alignment is not being considered for Circle Line use. Other parties have proposed using the Bloomingdale right-of-way as a greenway and/or recreational path corridor. This greenway proposal is unrelated to the Circle Line.