# Midtown Corridor Alternatives Analysis Scope of Work

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# Part 1: Study Area Maps

#### Attachment A: Existing and Planned Transit Service



July 2011



### Attachment B: Corridor Boardings by Stop Midtown Corridor AA - Corridor Boardings by Stop



#### Attachment C: Photographs of Corridor Alignments

Lake Street



The Midtown Greenway



# Part 2: Scope of Services

### **Midtown Corridor AA Scope of Services**

#### 1. PROJECT SUMMARY

The purpose of the Midtown Corridor Alternative Analysis (AA) is to determine, in detail, the benefits, costs and impacts of implementing a transitway along either the Midtown Greenway or Lake Street through south Minneapolis and to recommend a locally preferred alternative (LPA) for transit services in the Midtown Corridor.

The desired outcomes of the Midtown Corridor transitway, if implemented, are to:

- Increase ridership through high-quality, frequent and reliable transit service
- Enhance connections with the region's system of transitways and regular route bus service
- Improve mobility by offering more attractive transportation choices in the corridor
- Catalyze transit-oriented development along a key commercial corridor

In doing so, the Midtown Corridor transitway will help reach the Metropolitan Council's goal of doubling transit ridership by 2030 and support *The Minneapolis Plan for Sustainable Growth*'s vision for sustainable, urban neighborhoods and a core downtown that are livable, walkable, healthy, safe, and economically competitive.

The AA will help Metro Transit, the Metropolitan Council, the City of Minneapolis, Hennepin County, neighborhood and community groups and other decision makers to understand how a transitway can improve transit service and increase transit ridership while also encouraging local sustainable development within an established urban environment.

#### 2. BACKGROUND

#### A. Study Area

As shown in Appendix A - Figure 1, the study area extends approximately 4.4 miles east-west between the future Southwest LRT West Lake Station and Hiawatha LRT's Lake Street/Midtown Station. Between these points the corridor crosses major north-south arterial streets as well as the Uptown Transit Center, the Chicago-Lake Transit Center, and the planned I-35W and Lake Street BRT Station.

Two parallel alignments, Lake Street and the Midtown Greenway, will be included in the analysis:

- Lake Street, a former streetcar corridor and current high-frequency bus corridor, is the primary
  east-west commercial corridor in south Minneapolis and contains a mix of retail and residential
  uses. Lake Street is the principal corridor for both automobile and transit traffic in south
  Minneapolis. Data from Minneapolis Public Works shows that in its busiest areas the average
  daily traffic counts along Lake Street can exceed 22,500 vehicles, including 244 weekday bus
  trips. Lake Street borders 14 diverse Minneapolis neighborhoods within the study area.
- One block to the north, the Midtown Greenway is a former Chicago Milwaukee St. Paul & Pacific Railroad corridor. About 2.6 miles of the former rail corridor between Hennepin Avenue and Cedar Avenue runs in a trench below grade with cross-street bridges approximately every block;

the remainder of the corridor runs at-grade. The Midtown Greenway is now home to an active bicycle and pedestrian trail that runs the length of the study area.

#### Land Use

The City of Minneapolis has completed several land use studies along the corridor, including the *Lyn-Lake Small Area Plan*, the *Uptown Small Area Plan* and the *Midtown Greenway Land Use Development Plan*. These plans encourage intensifying land use to support transit and creating a more walkable, pedestrian-friendly environment. Other transit-related recommendations include:

- Promote a safe, vibrant and active environment with calmed streets and widened sidewalks. Focus investments toward developing an enlivened, pedestrian-friendly public realm.
- Encourage redevelopment projects to be transit-supportive by integrating bicycle and pedestrian amenities as well as accessible and visually appealing transit stops into projects.
- Promote opportunities for additional public green space, dedicated parks, trail connections and public art along the Greenway edge, especially near transit stops and higher-intensity developments.
- Support compact development and promote mixed use in existing commercial areas. Create a more lively and diverse urban environment.
- Focus the most intensive development near future transit stops and existing commercial nodes and encourage the provision of open space and active stormwater management in new developments.

Minneapolis planning staff anticipates that general growth patterns would occur around the following comprehensive plan land use features:

- Transit Station Area: Lake Street/Midtown
- Growth Center: Wells Fargo/hospitals area
- Major Retail Center: Hiawatha & Lake
- Major Retail Center: Nicollet & Lake
- Major Retail Center: Calhoun & Excelsior
- Activity Center: Lake Street/Midtown LRT Station
- Activity Center: Chicago & Lake
- Activity Center: Nicollet & Lake
- Activity Center: Lyn-Lake
- Activity Center: Uptown

The Lake Street corridor has several large scale development projects in the planning or implementation phases that will increase housing density. The most significant of these developments involve the old industrial properties a block off the corridor, just north of the Midtown Greenway. Several industrial sites are already in the redevelopment process, such as the Bennett Lumber site that has three large parcels and will likely eventually create 1,000 housing units in several phases. This site lies between the Hennepin (Uptown) and Lyndale (Lyn-Lake) Activity Centers. Over time, similar land use conversions are likely along the Greenway further east.

The proposed Southwest LRT station at the western end of the corridor (Calhoun/Excelsior Major Retail Center) is another site where planners believe significant increase in job and housing density will occur. The site has all the characteristics for significant investment: large parcels under single ownership, existing successful retail, commercial, and housing developments, and many transportation alternatives.

The existing Hiawatha LRT Lake Street-Midtown Station is also forecast to have substantial increases in housing density nearby. A 6.5 acre former school site is proposed for redevelopment to include housing (approximately 550 units) and some services. Additional redevelopment sites are likely to add up to another 700 units. The center has significant retail and commercial that will continue into the future, but no notable change in job intensity is expected. According to Minneapolis planning staff, housing growth along the LRT line at this station has significantly exceeded original market forecasts.

The Uptown Activity Center continues to be the focus of significant investment in high density housing and new commercial development. Substantial land use change is expected at the Nicollet & Lake Activity Center/Major Retail Center in conjunction with the City of Minneapolis' intent to reopen Nicollet Avenue north of Lake Street. While the timing of this change is uncertain, it will result in substantial new development on the site as well as serving as a catalyst for redevelopment of surrounding property.

Finally, the area east of I-35W includes larger commercial parcels at the Wells Fargo campus and at the Midtown Exchange between Columbus and 10th avenues. The Abbott-Northwestern and Allina health centers are also nearby. This area has exhibited strong commercial and institutional growth trends in recent years. Larger industrial parcels near Hiawatha Avenue continue to be guided for industrial development. The future land use plan suggests a preference for mixed-use development for one of the industrial properties, supporting consideration of industrial development mixed with office or residential elements (such as live-work housing), and that would provide various options for transitions from the industrial edge at the west to the residential communities at the east.

#### B. Lake Street

Metro Transit currently operates two bus routes along Lake Street: Route 21, which provides frequent, all-day local service, and Route 53, which offers peak-period limited-stop service. Both routes continue to St. Paul past the eastern boundary of the Midtown Corridor study area.

**Route 21** begins at the Uptown Transit Center, on Hennepin Avenue just north of Lake Street, and follows Lake Street/Marshall Avenue to Snelling Avenue. The route turns north to the Midway Shopping Center at Snelling and University, and then follows Hamline and Selby into downtown St. Paul. The following three route patterns operate on weekdays:

- 21A operates the full alignment to downtown St. Paul
- 21D turns back at Summit and Finn (University of St. Thomas)
- 21E turns back at Lake Street and 27th Avenue (just east of the Lake Street/Midtown LRT Station)

Combined frequencies west of the Mississippi River are generally 6 to 10 minutes throughout the weekday. Service frequencies east of Summit and Finn are commonly 15 to 20 minutes. Route 21 is part

of Metro Transit's Hi-Frequency Network between the Uptown Transit Center and Cretin Avenue. Saturday frequencies along the trunk potion of Route 21 are generally 6 to 10 minutes. Sunday frequencies are 6 to 15 minutes.

Within the limits of the proposed Lake Street corridor, Route 21's alignment serves the Uptown Transit Center (located on Hennepin Avenue, on the bridge over the Midtown Greenway), the Uptown commercial district, Calhoun Square, K-Mart at Nicollet Avenue, the I-35W/Lake Street stop, the Chicago/Lake Transit Center and Midtown Exchange (east of Chicago Avenue), South High School, Hi-Lake Shopping Center, and the Lake Street/Midtown Station on the Hiawatha LRT line. Lake Street changes to Marshall Avenue as the road crosses the Mississippi River into St. Paul.

Route transfer opportunities to and from Route 21 within the defined Midtown Corridor are as follows:

- Uptown Transit Center Routes 6, 12, 17, 23, 53, 114, 115
- Lyndale Routes 4, 113
- Nicollet Avenue Route 18
- I-35W and Lake Street Multiple routes
- 4th Avenue Route 11
- Chicago Lake Transit Center Routes 5, 39, 53
- Bloomington Avenue Route 14
- Cedar Avenue Routes 22, 27, 111
- Lake Street/Midtown Station Routes 7, 27, 53, 55 (Hiawatha LRT)

**Route 53** provides limited-stop service originating at the Uptown Transit Center at Lake Street and Hennepin Avenue and follows Lake Street and Marshall Avenue to Snelling Avenue and the Midway Shopping Center at Snelling and University avenues. Route 53 then continues to downtown St. Paul. Service frequencies are generally 20 to 30 minutes, operating in the peak periods, eastbound in the morning and westbound in the afternoon only. Transfer opportunities to and from Route 53 within the Midtown Corridor are the same as those noted for Route 21.

Both routes will be extended from their current western terminal at the Uptown Transit Center to the West Lake Station once Southwest LRT begins operating.

Three other routes operate on a portion of the proposed Midtown Corridor: Routes 12 and 17 (urban local) and Route 114 (limited-stop to U of M). These routes operate on Lake Street between Excelsior Boulevard and Hennepin Avenue.

#### **Route Measures**

Route 21 has the third-highest average daily ridership of all Metro Transit routes, with a subsidy per passenger that is significantly lower than the Metro Transit urban local average. It serves considerably more passengers per hour than the average urban local route but collects a lower average fare per passenger, partly attributed to the high level of transfer activity. Route 53 also has a lower per-passenger subsidy than the average urban local route productivity near the urban local average.

Current Route 21 and Route 53 average daily ridership (Metro Transit fall 2011 APC data) is as follows:

- Route 21 Weekdays: 13,850
- Route 53 Weekdays: 750
- Route 21 Saturdays: 11,250
- Route 21 Sundays: 7,650

Overall, Route 21 is slightly below the systemwide average for on-time performance on weekdays, while Route 53 is marginally better. Both routes have more delays in the westbound direction. Route 21's weekend performance follows the same pattern, slightly below the regional average and weaker in the westbound direction. The pie chart below shows delay factors measured for Route 21 trips between the Uptown Transit Center and the Hiawatha LRT Lake Street-Midtown Station.



Source: Arterial Transitway Corridors Study, 2011

#### C. The Midtown Greenway

The Midtown Greenway, owned by the Hennepin County Regional Rail Authority (HCRRA), is a former Canadian Pacific/Soo Line rail corridor. The property was purchased by HCRRA in 1993 for the purpose of constructing light rail transit or other transportation systems and associated facilities. The Greenway is located approximately one block north of Lake Street between France Avenue and Hiawatha Avenue, and shifts to roughly three blocks north of Lake Street between Hiawatha Avenue and the Mississippi River. The right of way is generally 100 feet wide between France Avenue and Hiawatha Avenue, but the width between the embankments varies considerably. Between Hiawatha Avenue and the Mississippi River, the Greenway consists of approximately the southerly 30 feet of the active Canadian Pacific/Soo Line rail corridor.

In the late nineteenth century, south Minneapolis experienced growth whereby development leapfrogged the at-grade railway line. With the many street at-grade crossings, conflicts between residents and trains mounted. The City of Minneapolis demanded that the railroad provide safe crossings by lowering their tracks and constructing a bridge structure at each crossing. The resulting set of bridges created a transportation grid over the rail trench. Within this corridor lies the Chicago Milwaukee and St. Paul Railroad Grade Separation Historic District. The historic district lies parallel to 29th Street between Humboldt and 20th Avenues South (approximately 2.8 linear miles). There are thirty-eight bridges within the historic district between and including Hennepin Avenue and Cedar Avenue. Of these, twenty-six are considered historic and were constructed to carry streetcars, buses, automobiles, and pedestrians. In addition, there is one historic bridge, 29th Street West, located adjacent to the corridor between Colfax and DuPont avenues.

The Chicago Milwaukee and St. Paul Railroad Grade Separation Historic District's period of significance is from 1912 to 1916, with a historical function related to transportation, specifically railroads. Its current function is transportation, and its sub-function is pedestrian transportation.

#### **Bicycle and Pedestrian Trail**

Today, the Midtown Greenway bicycle and pedestrian trail connects the Minneapolis Chain of Lakes with the Mississippi River. With only thirteen street intersections (most of which are low volume) and one railroad crossing, this 5.7 mile trail gives cyclists an opportunity to safely travel near and along the bustling Lake Street corridor. On its west end, the Midtown Greenway connects to the Southwest LRT Trail, which provides a direct connection to the suburbs of St. Louis Park, Hopkins, and beyond. According to the City of Minneapolis, the east end of the trail will eventually cross over the Mississippi River into the Prospect Park neighborhood of Minneapolis. It is anticipated that the Midtown Greenway will eventually connect with St. Paul, as that city begins to build a sister trail between Prospect Park and downtown St. Paul.

The Midtown Greenway trails were built in three phases, moving from the western to the eastern end. The first was completed in 2000, the second phase in 2004 and the third phase in 2006. Although it was constructed in a period of only a few years, it took decades of planning and a considerable amount of resources from Hennepin County, the City of Minneapolis and the Federal Government. The HCRRA acquired property from Canadian Pacific Railway, purchased a grain elevator, and cleaned up contaminated soils to allow for trail construction. The City of Minneapolis operates/maintains the trail.

As shown in the figure below, up to 3,000 daily riders use the Midtown Greenway bicycle path.



#### **Daily Riders Along the Midtown Greenway**

Source: 2010 Minneapolis Bicyclist and Pedestrian Count Report

#### D. Transportation Problems and Needs

Minneapolis is a dense, built urban environment with a vibrant downtown at the center of a complex network of highways and a growing regional transit system that is in various stages of implementation:

- The Hiawatha LRT and Northstar commuter rail lines are in operation.
- The Central Corridor LRT, Southwest LRT, and Bottineau Transitway lines are in various stages of construction, design, and planning.
- The initial phases of the I-35W highway BRT system have been completed (the dynamic priced shoulder lanes and the I-35W and 46th Street BRT station) and additional planning and design is underway (the Lake Street BRT station and additional corridor planning).
- The start of a feasibility study of arterial BRT on 11 high ridership urban corridors throughout the Twin Cities, including Lake Street.

The City of Minneapolis is projected to grow by an additional 60,000 residents and 40,000 jobs by 2030, according to the Metropolitan Council. The City's comprehensive plan, *The Minneapolis Plan for Sustainable Growth*, is the policy framework for achieving and exceeding these growth projections in ways that promote economic development, strengthen the social and cultural fabric of the city, and value the natural environment and livability while creating conditions for economic opportunity for current and future generations. Specifically, the plan directs this growth into a pattern of corridors and nodes to provide density in areas that are well served by transit and are close to commercial, cultural and natural amenities. In general, these areas are downtown Minneapolis, the local bus corridors that are the city's historic main streets, and LRT station areas.

South Minneapolis lacks transit service that is a reliable, attractive alternative to the automobile and will ultimately encourages people to live, work and develop in areas that can be served by transit in a cost-effective manner and reduces congestion on city streets. As shown in Attachment A, south Minneapolis has strong transit service oriented towards downtown with the Hiawatha LRT, three "Hi-Frequency" bus routes and seven regular bus routes. Service to downtown will be further enhanced by the Southwest LRT, which has recently begun preliminary engineering, and the I-35W BRT, which will be phased in over the next 8-10 years.

A stronger east-west connection between these routes will greatly increase access along the corridor, particularly for riders travelling to destinations other than downtown. Both the reverse-commute market to the south metro and the in-commute market to job centers along Lake Street are currently underserved by transit. Transit service crossing the Midtown Corridor, including the recent LRT and BRT transitway investments, can only open up these job markets if it is complemented by fast, frequent and reliable east-west connecting service.

Transit moving east-west through south Minneapolis has remained largely unchanged for decades. Bus service along Lake Street, the primary commercial corridor in south Minneapolis, is impeded by slow travel speeds and poor reliability. Traffic congestion, signal delay and boarding delay all contribute to today's slow service. Over the past several years, ridership on Routes 21 and 53 serving Lake Street has stagnated, in contrast to overall ridership growth in the region. Improvements in the Midtown Corridor

will help connect to strong existing north-south transit service through south Minneapolis and strengthen transit ridership in the corridor.

South Minneapolis is in need of a faster, more efficient east-west transit solution than the existing local bus service provides. Relative to the region as a whole, residents of the study area are highly dependent on transit for their everyday travel needs. A demographic analysis of the study area shows that 49.7 percent of the residents are considered low-income and that the corridor averages 30 percent fewer cars per driver than the region. As such, improvements to transit in the Midtown Corridor have the potential to greatly enhance travel options available to area residents.

The desired outcomes for transit improvements in the Midtown Corridor are to:

- Increase ridership through high-quality, frequent and reliable transit service
- Enhance connections with the region's system of transitways and regular route bus service
- Improve mobility by offering more attractive transportation choices in the corridor
- Catalyze transit-oriented development along a key commercial corridor

#### E. Previous Transportation Planning Efforts

#### Metropolitan Council 2030 Transportation Policy Plan

The Midtown Corridor is identified as a future transitway using either bus or light-rail in the Metropolitan Council's 2030 Transportation Policy Plan. Streetcar is not one of the transitway modes recommended in the Policy Plan; however, the Plan states that the Metropolitan Council "will collaborate with local units of government to determine where and when streetcars may be appropriate."

#### Arterial Transitway Corridors Study

The 2030 Transit Master Study and other studies screened high ridership arterial transit corridors for their potential for light rail or dedicated busways. These studies showed that substantial ridership growth could be achieved through faster and higher frequency service. Candidate corridors are in highly developed areas with very limited right-of-way available, meaning that light rail or dedicated busways are most likely not feasible. These areas also have existing high density and mixed-use development characteristics that foster strong existing and potential transit ridership. Furthermore, local communities have focused growth on these corridors through infill and redevelopment opportunities.

The purpose of the *Arterial Transitway Corridors Study* is to develop a facility and service plan to enhance efficiency, speed, reliability, customer amenities and transit market competitiveness on high demand local bus corridors identified for the nine Arterial Bus Rapid Transit corridors in the Metropolitan Council's 2030 Transportation Policy Plan, plus Hennepin Avenue and Lake Street in South Minneapolis. The results of the study are expected to help define the enhanced bus alternative for the Midtown Corridor AA. The project will be completed in March 2012.

#### Minneapolis Streetcar Feasibility Study

Completed in 2007, the City of Minneapolis worked with a project management team including Metro Transit, Metropolitan Council, Hennepin County, MnDOT and a 30-member project steering committee

to evaluate the possibility of modern streetcar on seven corridors within the city. The purpose of the feasibility study was to determine the physical, operational and financial feasibility of providing streetcar service as a high quality transit and urban circulator option on the most heavily used corridors in Minneapolis, to improve the quality of transit service in those corridors, and to support the city's objectives for strengthening these neighborhoods and directing growth into existing transit corridors.

The feasibility study evaluated fourteen of the most heavily used transit corridors for streetcar and proposed a long-term network of seven streetcar corridors that is a 20-50 year vision for streetcar service in Minneapolis. The long-term network includes the Midtown Corridor between the future Southwest LRT and existing Hiawatha LRT; Lake Street was also studied, but not recommended for the long-term network. The operating plans and cost estimates in the Feasibility Study for the Midtown Corridor assumed a single-track design with passing tracks where necessary.

Three years after the feasibility study the City completed a second streetcar study, the *Minneapolis Streetcar Funding Study*, to better understand whether the City has the funding tools to implement an initial streetcar line. The study concluded that there are viable, city-controlled funding tools that could contribute to development of an initial, downtown-based streetcar line in the \$100-150 million capital cost range if 50 percent of the capital costs were covered by future federal funding; however, because the Midtown corridor does not run through downtown and does not benefit from the revenue-generating potential in downtown, the proposed funding tools would not be sufficient to fund a Midtown streetcar line.

#### Pre-planning for the Midtown Corridor Alternatives Analysis

In late 2011 and early 2012, Metro Transit, with input from the City of Minneapolis, Hennepin County and the Southwest LRT Project Office, evaluated site constraints at the two expected terminals of the Midtown Corridor: the West Lake Station and the Lake Street-Midtown Station. These studies were completed prior to the AA in order to inform planning efforts already underway at those two locations. The results of these studies will be available to the proposer and will be incorporated into the AA planning work.

#### 29th Street and Southwest Busway Feasibility Study

In 1999, Hennepin County and Metro Transit conducted a study to determine the feasibility of constructing and operating limited-stop, rapid-transit busways in the 29th Street corridor, now known as the Midtown Greenway, and in the southwest corridor from Hopkins to downtown Minneapolis (now a part of the Southwest Transitway). The study concluded that based solely on ridership forecasts and cost estimates, the busway was 'technically' feasible.

#### Vintage Rail Trolley Study, 29th Street and Southwest Corridors

In 2000, the Hennepin County Regional Railroad Authority (HCRRA) in partnership with the Metropolitan Council completed the *Vintage Rail Trolley Study* as an addendum to the *29th Street and Southwest Corridors Busway Feasibility Study*. This study evaluated the feasibility of constructing and operating a vintage rail trolley as a precursor to future LRT service in the 29th Street (Midtown Greenway) and the Southwest Transitway from Hopkins to downtown Minneapolis.

#### The Feasibility of a Single-Track Vintage Trolley in the Midtown Greenway

Although a previous study of trolleys in the Midtown Greenway had been conducted (*29th Street and Southwest Corridors Vintage Rail Trolley Study*), the Midtown Greenway Coalition undertook this study to assess the feasibility of a vintage trolley designed to minimize costs and environmental impact on the Midtown Greenway Corridor by operating on a single set of tracks with passing bays. The earlier work assumed a dual set of tracks, one for each direction of travel.

#### Midtown Corridor Historic Bridge Study

In 2007, the City of Minneapolis and Hennepin County conducted a planning study for the bridges of the Chicago Milwaukee and St. Paul Railroad Grade Separation Historic District. Included in the study were a review of potential repair or rehabilitation limitations, a narrative of the original construction methods, and a discussion of foreseeable effects of additional bridge removals on the historic district.

#### F. Other Projects, Plans, and Initiatives

#### Southwest LRT

The Southwest LRT is a proposed 14-mile light-rail transit line connecting downtown Minneapolis to high growth areas in the southwest suburbs. The LRT line will increase transportation system capacity in an area of high travel demand, respond to travel demand created by existing and planned residential and employment growth, provide a competitive travel option that will attract 'choice' riders (who have a choice between transit and driving) and serve transit dependent populations. This line will also be an expansion of the region's transitway system comprised of the Hiawatha LRT line, the Northstar Commuter Rail, the Central Corridor LRT line (opening 2014), and the Bottineau Corridor (proposed). On September 2, 2011 the FTA announced that Southwest LRT could move forward with preliminary engineering.

Two possible alignments that were studied traveled along a portion the Midtown Greenway. They exited the Cedar Lake Trail (Segment 4) north of the West Lake Station, and then traveled along the Greenway until approximately Nicollet Avenue, with stations at Hennepin and Lyndale avenues. The alignments using the Greenway, 3C-1 and 3C-2 (www.southwesttransitway.org/possible-routes.html), were ultimately dropped due to higher capital costs with the same level of ridership, the duplication of service in an area that already has strong transit alternatives, and their impact on the local bus service network.

#### Regional Transitway Guidelines

The Metropolitan Council is leading an effort to develop Regional Transitway Guidelines that will identify important technical considerations and guidance for transitway development. The effort is focused on LRT, commuter rail, highway BRT, and arterial BRT at this time but has identified the streetcar mode for possible inclusion as a future revision of the Guidelines. The Guidelines recommend that the general information in the Guidelines be used as a base for decision-making for transitway projects in planning stages where streetcar is being considered. The Guidelines are organized by topic area including service operations, station spacing and siting, station and support facility, runningway, vehicles, fare-collection systems, technology and customer information, identity and branding, and project development,

leadership and oversight. The final Regional Transitway Guidelines were adopted by the Metropolitan Council February 13, 2012.

#### Corridors of Opportunity Initiative

Metropolitan Council and a broad consortium of policymakers, foundations, community organizations and leaders are currently undertaking the Corridors of Opportunity Initiative to promote sustainable, vibrant and healthy communities, using the region's emerging transitway system as a development focus. This project is funded by a \$5 million U.S. Department of Housing and Urban Development "Sustainable Communities" grant and \$16 million in grants and loans from Living Cities, a consortium of foundations and financial institutions. The six principles of this initiative are: equity, economic competitiveness, transparency, sustainability, collaboration, and innovation. The Midtown Corridor is not one of the seven transitway corridors included in this initiative; however, the goals, outcomes, and implementation tools being developed through this initiative may be relevant to the Midtown Corridor. This effort is anticipated to continue through 2013.

#### DOT-HUD-EPA Partnership for Sustainable Communities

In 2009, the U.S. Department of Housing and Urban Development, Department of Transportation, and the Environment Protection Agency developed the Partnership for Sustainable Communities to help communities nationwide improve access to affordable housing, increase transportation options, and lower transportation costs while protecting the environment. The Partnership coordinates federal housing, transportation, water and other infrastructure investments. The Partnership's six livability principles are: value communities and neighborhoods; coordinate policies and leverage investment; support existing communities; enhance economic competitiveness; promote equitable affordable housing; and provide more transportation choices.

#### I-35W Lake Street Transit/Access Project

The City of Minneapolis, Hennepin County, MnDOT and Metro Transit are currently partnering to develop a 30 percent level design for several potential infrastructure improvements in the vicinity of I-35W and Lake Street, which intersects the Midtown Corridor. One of the improvements being designed is a transit station in the median of I-35W at Lake Street, connecting to transit service along Lake Street as well as the Midtown Greenway. The station is would be part of a larger highway BRT project along the I-35W corridor.

#### Nicollet-Central Urban Circulator Alternatives Analysis

The City of Minneapolis is initiating an alternatives analysis for transit improvements on Nicollet and Central avenues between 46<sup>th</sup> Street S in south Minneapolis and 40 Street NE in Columbia Heights, crossing the Lake Street and Midtown Greenway corridor. The alternatives analysis will begin in the spring of 2012.

#### G. Documents and Resources for Review

The selected proposer will be provided with all relevant information that has been gathered and analyzed to date. Once selected, the proposer is responsible for understanding the work to date so as not to duplicate what is already known and in order to be in position to build on the work that has

already occurred. Past plans and studies should be viewed not only as a source of information but also as a source of community input. Below is a list of the documents that will be provided for review by the selected proposer.

#### **Transportation**

- Metropolitan Council 2030 Transportation Policy Plan, 2010 <u>http://www.metrocouncil.org/planning/transportation/TPP/2010/index.htm</u>
- Arterial Transitway Corridors Study Draft Technical Memos, 2011
   <a href="http://www.metrotransit.org/arterial-study.aspx">http://www.metrotransit.org/arterial-study.aspx</a>
- Metropolitan Council Regional Transitway Guidelines, 2011
   <a href="http://www.metrocouncil.org/planning/transportation/transitways/index.htm">http://www.metrocouncil.org/planning/transportation/transitways/index.htm</a>
- Minneapolis Streetcar Feasibility Study, 2007 <u>http://www.minneapolismn.gov/www/groups/public/@publicworks/documents/webcontent/convert\_270445.pdf</u>
- Minneapolis Streetcar Funding Study, 2010 <u>http://www.minneapolismn.gov/www/groups/public/@publicworks/documents/webcontent/convert\_285079.pdf</u>
- Southwest Transitway Locally Preferred Alternative Evaluation Documents, 2009
   <u>http://www.southwesttransitway.org/technical-documents/cat\_view/9-draft-environmental-impact-statement-documents/12-deis-evaluation-documents.html</u>
- Access Minneapolis Citywide Transportation Action Plan, 2009
   <a href="http://www.minneapolismn.gov/publicworks/transplan/comp/public-works\_transplan\_citywideactionplan">http://www.minneapolismn.gov/publicworks/transplan/comp/public-works\_transplan\_citywideactionplan</a>
- Midtown Corridor Historic Bridge Study, City of Minneapolis, 2007 <u>http://www.minneapolismn.gov/www/groups/public/@council/documents/webcontent/conver</u> <u>t\_255799.pdf</u>
- I-35W Lake Street Transit/Access Project, ongoing
   <u>http://www.35Lake.com</u>
- The Feasibility of a Single-Track Vintage Trolley in the Midtown Greenway, 2001 http://midtowngreenway.org/railtransit/documents/single\_track\_full.pdf
- Minneapolis Bicycle Master Plan, 2011
   <a href="http://www.minneapolismn.gov/bicycles/projects/plan">http://www.minneapolismn.gov/bicycles/projects/plan</a>

#### Land Use and Planning

- The Minneapolis Plan for Sustainable Growth, City of Minneapolis, 2009 http://www.minneapolismn.gov/cped/planning/plans/cped\_comp\_plan\_2030
- Midtown Minneapolis Land Use and Development Plan, City of Minneapolis, 2005 <u>http://www.minneapolismn.gov/www/groups/public/@council/documents/webcontent/conver</u> <u>t\_265597.pdf</u>

- Midtown Greenway Land Use and Development Plan, City of Minneapolis, 2007 http://www.minneapolismn.gov/cped/planning/plans/cped\_midtown-greenway
- Lyn-Lake Small Area Plan, City of Minneapolis, 2009
   <a href="http://www.minneapolismn.gov/cped/projects/cped\_lyn-lake">http://www.minneapolismn.gov/cped/projects/cped\_lyn-lake</a>
- Uptown Small Area Plan, City of Minneapolis, 2008
   <u>http://www.minneapolismn.gov/cped/planning/plans/cped\_uptown-plan</u>
- Phillips West Master Land Use Plan, 2009
   <a href="http://www.minneapolismn.gov/cped/planning/plans/cped\_phillips\_west">http://www.minneapolismn.gov/cped/planning/plans/cped\_phillips\_west</a>
- Hiawatha/Lake Station Area Master Plan, 2001
   <a href="http://www.minneapolismn.gov/cped/planning/plans/cped\_lakemidtown">http://www.minneapolismn.gov/cped/planning/plans/cped\_lakemidtown</a>
- Corcoran Midtown Revival Plan, 2002
   <a href="http://www.minneapolismn.gov/cped/planning/plans/cped\_corcoran">http://www.minneapolismn.gov/cped/planning/plans/cped\_corcoran</a>
- Southwest LRT Station Area Strategic Planning: Minneapolis, 2010 http://www.southwesttransitway.org/station-area-planning.html
- Metropolitan Council Corridors of Opportunity Initiative, 2011 <u>http://www.metrocouncil.org/planning/COO/index.htm</u>
- DOT-HUD-EPA Partnership for Sustainable Communities, 2011 <u>http://www.sustainablecommunities.gov</u>

In addition, this project is being funded in part through a Federal Transit Administration (FTA) grant. The grant application submitted to FTA in July 2011 is available on Metro Transit's website:

 Midtown Corridor AA - FTA Alternatives Analysis Program Application <u>http://www.metrotransit.org/midtown-transitway.aspx</u>

#### 3. PROJECT INFORMATION

#### A. Project Stakeholders

Metro Transit is the lead agency for this project. The project will be closely coordinated with key partner agencies, including the City of Minneapolis, Hennepin County, and MnDOT. Other key stakeholder groups include neighborhood and business associations, special service districts, property owners, residents, developers, and transit riders. It is anticipated that the following groups will advise and manage the project:

- Policy Advisory Committee (PAC) This committee will include elected and appointed officials from the City of Minneapolis and partner agencies. This committee will provide overall policy guidance on the project and recommend a locally preferred alternative (LPA) to the Metropolitan Council.
- Technical Advisory Committee (TAC) This committee will include staff from Metro Transit, the Metropolitan Council, Minneapolis Public Works, Minneapolis Community Planning and Economic Development, Hennepin County Transportation, Hennepin County Transit & Community Works and MnDOT. The TAC will advise Metro Transit on technical issues, review

documents, and provide key communications links with the staff of the organizations represented.

 Project Management Team (PMT) – The smallest of the groups, the PMT will consist of select staff members from Metro Transit, the Metropolitan Council, the City of Minneapolis and Hennepin County who have experience with project management. The PMT will lead the planning process and facilitate coordination between the consultant, the FTA and the other project committees.

#### B. Description of Conceptual Alternatives

A significant amount of transit planning has already been completed for the Midtown Corridor through the Access Minneapolis Transportation Action Plan, the Minneapolis Streetcar Feasibility Study, the Minneapolis Streetcar Funding Study and the Arterial Transitways Corridor Study. The Midtown Corridor AA will build on these previous studies applying useful information on the nature of the corridors/alignments, communities and travel markets, urban street and utility network, and financial funding opportunities. The AA will complete an objective evaluation of no-build, transportation system management, bus, LRT and streetcar transit technology alternatives to address the long-term transit needs and goals within the corridor.

#### **Description of Transit Service Alternatives**

As defined by the FTA, an alternatives analysis (AA) is the first step of the New Starts project development process. AA is the local forum for evaluating the costs, benefits, and impacts of a range of transportation alternatives designed to address mobility problems and other locally-identified objectives in a defined transportation corridor, and for determining which particular investment strategy should be advanced for more focused study and development. At a minimum, the Midtown Corridor AA will evaluate the following six alternatives:

- No-build
- Transportation system management (TSM)
- Enhanced bus
- Dedicated busway
- Streetcar
- Light-rail transit

These alternatives will be structured to maintain a high level of access while improving the speed, reliability and quality of transit service in the corridor. It is possible that additional alternatives, other propulsion technologies and/or hybrid alternatives may be identified and evaluated during the AA process. Additional factors to consider when evaluating the transit service alternatives include:

- Stop spacing and location
- Fare collection
- Service frequency/span of service
- Transit signal priority
- Shelters, lighting and other passenger amenities
- Vehicle type, capacity and design

#### **Description of Alignments**

As previously mentioned, this corridor has at least two possible alignments: the Midtown Greenway and Lake Street. Both are already heavily used transportation corridors. The Midtown Greenway offers bicycle and pedestrian commuters and recreational users a grade-separated trail. In contrast, on Lake Street the primary transportation options are automobiles, bus transit and pedestrians, with bicycles playing a secondary role.

The grade-separated nature of the Midtown Greenway alignment would allow all of the transit alternatives to avoid common impediments to transit speed such as traffic signals, traffic congestion, and many pedestrian crossings. This ensures that any alternatives would provide a faster and more consistent operating speed than the Lake Street alternatives. However, these gains in travel time are made at the expense of service visibility, convenient ease of access to and visibility of major destinations along the Lake Street corridor, and added capital and operating cost of providing vertical circulation at stations.

The Lake Street alignment would provide transit service at grade largely within the existing Lake Street right-of-way. Unlike the Midtown Greenway alternatives, these options provide direct access to destinations on Lake Street. The service would be much more visible to existing and potential customers, but it would come with the cost of slower and more variable travel speeds when compared to the Midtown Greenway alternatives.

Each alternative will be measured based on its ability to increase accessibility and mobility for travelers in the Midtown Corridor, including its impact to the existing local bus service, automobile traffic, and pedestrian and bicycle traffic, as well as usage to be determined by independent ridership forecasts. Other items for consideration differ with each alignment. Specifically:

- Key considerations for the Midtown Greenway alignment include impacts to the existing bicycle and pedestrian trail, potential impacts to existing bus service on Lake Street, vertical access to street level and visibility of the service to/from the retail environment on Lake Street, and potential impacts to historical features in the corridor.
- Key considerations for the Lake Street alignment include the impacts on the existing local bus service, general purpose traffic (assuming some form of signal enhancement), pedestrian space (where there are new curbside improvements for transit riders) and connections to the LRT stations at both ends of the corridor.

#### 4. SCOPE OF SERVICES

The scope of work for the AA is described in this section. The proposer is encouraged to provide suggested refinements to the work plan and schedule based upon experience with similar transit planning studies, the Federal Transit Administration's Alternatives Analysis process, and in preparation for potential future NEPA processes. Proposers are encouraged to consider tasks that should be modified or added to the work plan as outlined in the RFP.

#### A. Project Initiation

Upon receiving the Notice to Proceed, the selected proposer will schedule a kick-off meeting with Metro Transit's project management team and identify relevant issues for the AA process based upon a review of existing documents, corridor conditions, and technical advisory committee input. A tour of the corridor may also be included in the initial or follow-up meeting. The proposer will synthesize relevant issues and identify how these issues are to be addressed in the AA work plan, including potential refinements to the work plan. Metro Transit will approve any changes to the work plan. **Metro Transit responsibility:** Identify key stakeholders and assist in coordinating schedules for kick-off meeting.

Proposer will deliver: Kick-off meeting and relevant issues memorandum.

#### B. Review and assess previously completed work

The concept of establishing a transitway in the Midtown Corridor has been studied for many years. As a result, there is a great deal of published information that can be called on to inform this project. The proposer will review and summarize the findings of these studies to address transitway concepts and land use development along the corridor and at station locations. In addition, the proposer will review other transportation and land use resources from the area to assess anticipated future conditions. **Metro Transit responsibility:** Provide known previously completed work.

**Proposer will deliver:** Technical memorandum summarizing previously completed work including key directions that will guide the alternatives analysis.

#### C. Develop problem statement, goals, objectives and evaluation criteria

The proposer will review and refine the initial problem statement, goals, objectives and evaluation criteria based upon FTA guidance and other policy guidance, such as the Access Minneapolis Transportation Action Plan, the Streetcar Feasibility Study, the Arterial Transitway Corridors Study, the Regional Transitway Guidelines (particularly section 10.8 Capital Investment Criteria), the Corridors of Opportunity Principles, and the DOT-HUD-EPA Sustainability Partnership Principles. The proposer will present and further refine this information through the advisory committees and public involvement process. The problem statement, goals, objectives and evaluation criteria will create the framework for the development and evaluation of alternatives and the content of the AA.

Metro Transit responsibility: Input and guidance.

**Proposer will deliver:** Document presenting the problem statement, goals, objectives and evaluation criteria.

#### D. Community, neighborhood and stakeholder outreach

A comprehensive approach will be developed to engage partner agencies, corridor neighborhoods and businesses, key stakeholders, and the general public throughout the AA process. The outreach program will include policy and technical advisory committees, public meetings, presentations at neighborhood and business associations, websites and social media, a variety of communication tools, and direct outreach to non-traditional populations and organizations. Public meetings, public open houses and/or public hearings will be held at key points in the AA process including, at a minimum: (1) discussion of problems, goals, objectives, evaluation criteria and alternatives, and data gathering (2) evaluation of alternatives, (3) presentation of the draft AA, and (4) selection of the locally preferred alternative. Given the diversity of the population in the study area, project information will be translated, as appropriate, and translators will be available at public meetings when needed. All meetings regarding the project will be held in locations within the corridor that are easily accessible by all populations including persons with disabilities and those individuals without access to automobiles.

At a minimum, the proposer will:

- Prepare a stakeholder engagement plan.
- Prepare presentation materials for advisory committee meetings, public meetings, and other stakeholder presentations.
- Staff the meetings of the advisory committee including organizing, scheduling, notifying and participating in all meetings and preparing summary notes for all meetings.
- Prepare and provide logistical support, including associated fees, for the public meetings, public open houses and/or public hearings, including scheduling meetings, preparing presentation and meeting materials, and preparing meeting summary notes.
- Track public comments and response and provide to Metro Transit upon project completion.
- In conjunction with Metro Transit Marketing staff, prepare content for the project website, to be maintained by Metro Transit staff.
- With a demonstrated ability to engage the Latino and Somali populations, translate project information and provide translation services at stakeholder engagement events.
- Prepare a draft and final report summarizing the stakeholder engagement process and stakeholder feedback.

It is expected that business associations, neighborhood associations and other stakeholder organizations will request project updates and presentations at their regularly scheduled meetings. In most cases, Metro Transit staff intends to respond to these requests; however, in some cases additional assistance may be needed. The proposer is encouraged to include in the work plan assistance and attendance at a minimum of 2 stakeholder organization meetings per month throughout the duration of the project. **Metro Transit responsibility:** Maintaining the project website, issuing media announcements, and maintaining project email lists. We will facilitate connections with existing stakeholders, assist in coordinating meeting locations and address day-to-day inquiries.

**Proposer will deliver:** Stakeholder engagement plan; stakeholder engagement summary report; newsletters, website content, presentation materials, public meetings, advisory committee meetings, meeting notes, translation services, and other engagement tools identified in stakeholder engagement plan.

#### E. Define alternatives at a conceptual level

The proposer will identify transit alternatives, including at a minimum a no build alternative, a transportation systems management alternative, an enhanced bus service alternative, a streetcar alternative and a light-rail transit alternative. This task may require a three-tiered approach: first, identifying a universe of alternatives and evaluating those alternatives based on preliminary information; next, screening alternatives that fail to meet the unique needs of the corridor and; finally, conducting a more detailed definition of alternatives for the most promising alternatives. A detailed physical assessment of both alignments within the Midtown Corridor will be conducted as a part of this task to identify existing transit facilities, infrastructure condition, and any specific physical constraints that will need to be addressed as part of the construction and/or operation of the proposed alternatives. Existing transit operations will be identified and initial concepts will be developed for runningway, stop spacing, station location, and alternative termini. This task will need to be closely coordinated with Task G -Develop Operating Plans. Concept layouts to approximately 10% engineering level will be developed for each alternative. Maintenance facility needs will be identified for each rail alternative. Previous work on streetcar operations in the Midtown Greenway would be re-evaluated, and additional work would be completed to identify a feasible location for a maintenance facility and the necessary track alignment and/or street network to access the proposed facility. Concept designs will need to address integration of the transitway with other corridor needs including bus operations, traffic, parking, bicycle facilities and pedestrian/sidewalk uses. The information prepared in this task would provide the base data and alignment information needed to complete subsequent technical analyses. FTA concurrence with the alternatives will be sought.

#### Metro Transit responsibility: Input and guidance.

**Proposer will deliver:** Technical memorandum defining the alternatives, including maintenance facility location, assessment of physical constraints and infrastructure condition; 10% engineering level concept designs, including horizontal layout, vertical profiles, and typical cross-sections. Animations and three-dimensional renderings for the most promising alternatives may be needed during public engagement process.

## F. Technical methodologies, alternatives screening, conceptual design, & detailed definition of alternatives report

The development and definition of project alternatives is expected to be an iterative process. The initial set of corridor alternatives developed will most likely include a broad range of options defined in very conceptual terms. Initial activities under this task will focus on narrowing this set of alternatives based on the evaluation criteria. The goal will be to evaluate and refine the alternatives as needed to identify those options that have a high feasibility for implementation. It is expected that several cycles of analysis and review will take place during this task as the stakeholders build consensus on the screening results.

The purpose of clearly identifying methodologies is to reach consensus amongst the agency stakeholders on the approaches, methods and assumptions that will be used to conduct the technical analysis and alternatives screening. These should spotlight data used for the analysis and basic input assumptions and identify techniques that will be used to analyze benefits and impacts. Methodology reports are intended to be interim documents completed early in the process. As the project unfolds, the reports can be modified as necessary to maintain a thorough record of the technical approach to the project. Metro Transit responsibility: Input and guidance.

Proposer will deliver: Technical memorandum describing evaluation methodologies.

#### G. Develop operating plans

The proposer will develop operating plans for each alternative, including other corridor transit services. This will be a critically important task, particularly for alternatives in the Midtown Greenway which might have single track/lane constraints due to bridge pier locations. These constraints may require detailed analysis to determine realistic transit frequencies that can reliably operate. The operating plans will define the frequency and span of service, stop locations (spacing), fare collection system, traffic operations (such as queue jumping and signal priority), and other factors that would impact operating speed, boarding and dwell times, service reliability, and overall service quality. It is anticipated that operating plans will be revisited as ridership forecasting work is done and as plans are vetted in the public involvement process. Sensitivity analysis on concept operating plans will inform development of refined concept-level operating plans. These will consider a range of frequency and speed considerations at the conceptual level, as described in the ridership forecasting section.

**Metro Transit responsibility:** Provide information on existing transit operating conditions. **Proposer will deliver:** Technical memorandum describing operation plans for each alternative.

#### H. Develop ridership forecasts

The proposer will conduct ridership forecasting associated with the AA work. Initial forecasting will be completed using the Twin Cities Travel Demand Model and following FTA requirements for forecasting. All ridership forecasting work will be validated and will be done in close coordination with the Metropolitan Council's forecasting staff. Forecasting work will begin with a detailed model validation phase. A second analysis will evaluate corridor operating plans, as well as sensitivity tests for a range of options as described above. In addition, the proposer shall propose enhancements to the regional forecasting model to account for micro-scale transit specific issues that is not typically captured by regional-level models, including identification and forecast for urban center pedestrian activity and impact of special generators on transit ridership. Reasonableness checks will be utilized to ensure that the forecasts are defensible and appropriate for decision-making. The model will explore and report complementary and competing relationships between the alternatives and the existing bus service provided in the Midtown Corridor, particularly between the Midtown Greenway alignment and local bus service on Lake Street. Multiple iterations of the forecasting models are anticipated to optimize the operating plans for both the bus and streetcar alternatives. Finally, sensitivity analyses will be conducted to estimate probable variation in system patronage with changes in system characteristics such as headway and travel speed. The results of the sensitivity analyses will be used to optimize the operating plan for the streetcar, LRT and BRT alternatives.

**Metro Transit responsibility:** Provide existing ridership figures for transit service in the corridor; facilitate discussion with Metropolitan Council's forecasting staff.

**Proposer will deliver:** Technical memorandum documenting ridership forecasting methodology and results.

#### I. Prepare capital cost estimates

The proposer will prepare capital cost estimates for the alternatives. For Lake Street alternatives, the proposer will complete a condition assessment to determine if complete street reconstruction is required in any segments. The assessment will also identify any physical constraints or special needs that would have a significant impact on capital cost, as well as any needed right-of-way acquisition. Cost estimates will be prepared utilizing unit costs from recent Twin Cities' construction projects, supplemented by national experience in streetcar, LRT and BRT projects. Unit costs will be adjusted to the targeted year-of-opening based on anticipated annual inflation rates. Costs will include track work, roadway/paving, bridge modifications, signals and communications, stations and shelters, equipment, utilities, structures, vehicles, maintenance facility, modifications to existing facilities (for example, curb extensions), project development/design, project administration, and all other items necessary for design and construction of each alternative.

**Metro Transit responsibility:** Share knowledge of existing vehicle costs. **Proposer will deliver:** Technical memorandum documenting capital cost estimates and methodology.

#### J. Estimate operating and maintenance costs

The proposer will estimate operating and maintenance costs based on the operating plans prepared previously and the ridership forecasts and reflecting current and anticipated unit costs in the Twin Cities market. Operating and maintenance cost will be generated in current dollars and adjusted to targeted opening year using an annual inflation rate. This work should include the estimated *net* increases or decreases in operating cost for all transit services in the corridor associated with each alternative. **Metro Transit responsibility:** Provide operating costs for existing transit service in corridor. **Proposer will deliver:** Memorandum documenting operating and maintenance costs and methodology.

#### K. Assess environmental, historic and community issues.

An initial assessment of potential environmental impacts will be undertaken for the corridor including air quality, noise, vibrations, traffic, energy consumption, cultural and historic resources, native plants and animals, parklands, floodplains, wetlands, lakes, water resources, stormwater management, environmental justice, land use and other significant environmental, social and/or economic impacts. It is anticipated at this time that there will be at least two areas of significant concern to residents and businesses along the Midtown Corridor: traffic/parking impacts along the Lake Street alignment and potential impacts to the bicycle and pedestrian trail along the Midtown Greenway alignment. Traffic impacts will be analyzed using traffic operations modeling and simulation tools. Industry standards and federal guidelines for modeling these impacts will guide this work. Note that this assessment is separate from the NEPA process.

The identification of cultural resources and the evaluation of impacts on historically significant structures will also be an important consideration and must meet appropriate federal standards for such review. The Chicago Milwaukee and St. Paul Railroad Grade Separation District (overlapping the Midtown Greenway alignment) was listed on the National Register of Historic Places in 2005. Defining characteristics of the historic district include the trench edge that delineates the depressed corridor, the bridges and the visual tunnel they create, and the industrial nature of the corridor, including the hard edges of the trench, the track beds, the commercial elevations, and the volunteer foliage.

#### Metro Transit responsibility: Input and guidance.

**Proposer will deliver:** Documentation of these elements and a concept mitigation plan, including an examination of the impacts that each alternative would have to key characteristics contributing to the corridor's historic status, and examples of how other regions have addressed these issues.

#### L. Evaluation of alternatives

The proposer will evaluate the alternatives based on the evaluation criteria described in Task C, utilizing the technical data developed in the previously described work tasks and consistent with the currently defined FTA Small Starts evaluation and rating process. The comparison of alternatives will be vetted through the public involvement process described in Task D. In order to support local decision-making, the current FTA cost-effectiveness index (CEI) will be calculated for each of the transit alternatives. Based on the ridership forecasts discussed above and additional analyses to consider FTA-approved "non-included attributes," FTA's SUMMIT software program will be applied to estimate the transit system user benefits (TSUB) associated with each alternative. It is important that the evaluation of alternatives be structured in a manner that may be clearly communicated to stakeholders and the general public. **Metro Transit responsibility:** Input and guidance.

Proposer will deliver: Memorandum documenting evaluation of alternatives methodology and results.

#### M. Prepare final AA documentation

The proposer will prepare draft and final AA documents for review by FTA, partner agencies, advisory committees and the public. The proposer will also prepare the necessary technical reports as required by FTA to document the technical methodologies used to develop the AA.

Metro Transit responsibility: Input and guidance.

Proposer will deliver: Final AA document meeting FTA requirements and associated memoranda.

#### Complete list of proposer deliverables:

- Memo #1: Relevant issues
- Memo #2: Summary of previously completed work
- Memo #3: Problem statement, goals, objectives and evaluation criteria
- Stakeholder engagement plan; stakeholder engagement summary report; newsletters, website content, presentation materials, public meetings, advisory committee meetings, meeting notes
- Memo #4: Definition of alternatives
- Memo #5: Evaluation methodologies
- Memo #6: Operating plan
- Memo #7: Ridership forecasting results and methodology
- Memo #8: Capital cost estimates and methodology
- Memo #9: Operating and maintenance cost estimates and methodology
- Memo #10: Summary of environmental, historic and community issues with concept mitigation plan
- Memo #11: Evaluation of alternatives results and methodology
- Final AA report