

# Transportation Advisory Board

of the Metropolitan Council of the Twin Cities

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## Information Item

**DATE:** November 3, 2017  
**TO:** Technical Advisory Committee – Planning Subcommittee  
**PREPARED BY:** Cole Hiniker, Multimodal Planning Manager (651-602-1748)  
**SUBJECT:** 2040 TPP Update – Preliminary Draft Transit Chapter

Attached is the preliminary draft of Chapter 6: Transit Investment Direction and Plan for TAC Planning review, prepared as part of the 2040 TPP Update. This memo summarizes the key themes of the changes to the chapter as well as outstanding issues that are not yet addressed.

### Summary of key changes:

- Updates to key statistics, trends, and recent transit improvements
- Improved discussion of transit modernization and expansion under bus and support system, and relationship to the Regional Solicitation
- Acknowledgement of emerging shared mobility technology in transit
- Cleaned up, more focused, and updated discussion of transit facilities resulting from studies and community outreach efforts (e.g. Better Bus Stops initiative)
- Moved discussion of modern streetcar into the transitway modal introduction and moved all transitway statuses into their appropriate revenue scenario discussion. This does not show up as a change in order to more clearly indicate how the text for these pieces was edited.
- Removed and refocused references to the Counties Transit Improvement Board
- Updated transitway project details and current statuses
- Added additional tiers of statuses to the Increased Revenue Scenario to recognize the progress made on a number of corridors that are awaiting funding

### Outstanding issues not yet addressed:

- Most updated maps are not yet available and are noted appropriately in the draft (in the figure titles)
- A number of discussions are awaiting conclusions in the coming months to be included in the draft: TDM coordination across chapters, park-and-ride study results, Highway 169 BRT study recommendations
- Rush Line and Riverview corridor statuses are awaiting funding detail from Ramsey County that may allow the projects to be moved to the Current Revenue Scenario
- Table 6-7 will document basic statistics for transitway corridors, but this is currently under development
- The Transit Investment Plan Financial Summary has not yet been updated pending the completion of the finance chapter

Council staff will take comments on this draft before releasing a revised version for further discussion for consideration by TAC Planning to release for public comment. Please contact Katie White ([katie.white@metc.state.mn.us](mailto:katie.white@metc.state.mn.us)) for questions on how to submit comments on the initial draft.

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## Chapter 6

# Transit Investment Direction and Plan

Residents and businesses view a strong public transit system as an essential part of a transportation system that will serve a **prosperous, livable, equitable** region. The federal government, state government, and the region have all acknowledged that a **sustainable** future must include a variety of options for travel within urban areas. Transit service and facilities must be located where they will bring a strong return on the investment. Park-and-ride facilities are best located in suburban and developing areas, while high-frequency bus service is best located in urban neighborhoods. In order to be good **stewards** of public investments, the region must invest in transit strategically with solutions that broadly strive toward this plan’s regional goals and objectives, and integrate with land use and other regional systems. In this way, transit benefits the entire region, including places with no or limited service.

The region’s transit investment plan plays a role in realizing all of the goals of the Transportation Policy Plan. However, the transit investment plan also plays roles in addressing the specific performance-based objectives. The objectives provide the foundation for investment factors that are used to set transit investments priorities. Table 6-1 helps link to parts of the transit investment plan that summarize investments or guide investment decision-making.

**Table 6-1: Linking Transit Investment Direction and Plan to Goals and Objectives**

Goal	Objectives Guiding Investments	How are these objectives reflected in the plan?
<b>Transportation System Stewardship</b>	<p>A. Efficiently preserve and maintain the regional transportation system in a state of good repair.</p> <p>B. Operate the regional transportation system to efficiently and cost-effectively move people and freight.</p>	<p>This plan fully funds the existing transit system and has tools to ensure that it is managed to be efficient and cost-effective [<i>insert link to investment summaries</i>]. Investments in expansion will also consider cost-effectiveness as an investment factor to get the most out of new projects [<i>link to investment factors</i>].</p>
<b>Safety and Security</b>	<p>A. Reduce crashes and improve safety and security for all modes of passenger travel and freight transport.</p> <p>B. Reduce the transportation system’s vulnerability to natural and man-made incidents and threats.</p>	<p>Safety and security are essential elements of the transit system. Their consideration should be integrated with all investments. Specific investments opportunities are also discussed in the plan [<i>insert link to Safety and Security</i>].</p>
<b>Access to Destinations</b>	<p>A. Increase the availability of multimodal travel options, especially in congested highway corridors.</p>	<p>Providing access is a fundamental role of the transit system. This plan has multiple considerations for increasing ridership and the</p>

	<p>B. Increase travel time reliability and predictability for travel on highway and transit systems.</p> <p>D. Increase transit ridership and the share of trips taken using transit, bicycling and walking.</p> <p>E. Improve multimodal travel options for people of all ages and abilities to connect to jobs and other opportunities, particularly for historically under-represented populations.</p>	<p>availability of transit throughout the investment factors. Equity is also an important investment factor to address gaps in access to opportunity that exist in the region [<a href="#">insert link to investment factors</a>].</p>
<b>Competitive Economy</b>	<p>A. Invest in a multimodal transportation system to attract and retain businesses and residents.</p> <p>B. Improve multimodal access to regional job and activity centers identified in <i>Thrive MSP 2040</i>.</p>	<p>This plan includes transitway system investments that will make the region a more attractive place to live and do business. The plan also includes an Increased Revenue Scenario that will broaden the investments to include more bus service, allowing transit to serve more parts of the region [<a href="#">insert link to investment summaries</a>]. Connecting to jobs is an important emphasis on the investment factors [<a href="#">insert link to investment factors</a>].</p>
<b>Healthy Environment</b>	<p>A. Reduce transportation-related air emissions.</p> <p>C. Increase the availability and attractiveness of transit, bicycling and walking to encourage healthy communities and active car-free lifestyles.</p>	<p>This plan includes investment factors that consider the impacts on the environment, particularly pollution related to congestion [<a href="#">insert link to investment factors</a>]. Additional impacts could be related to land use planning that encourages car-free lifestyles [<a href="#">insert link to “Land Use and Local Planning”</a>].</p>
<b>Leveraging Transportation Investments to Guide Land Use</b>	<p>A. Focus regional growth in areas that support the full range of multimodal travel.</p> <p>C. Encourage local land use design that integrates highways, streets, transit, walking and bicycling.</p>	<p>This plan is intended to help shape the growth of the region with transit investments as catalysts for livable places. Investment factors help guide transit to areas that are adequately planning for high-density, livable places [<a href="#">insert link to investment factors</a>].</p>

## The ~~Public Transit~~-Existing Transit System

The regional transit system consists of different types of services, programs, and related infrastructure that serve a variety of roles.

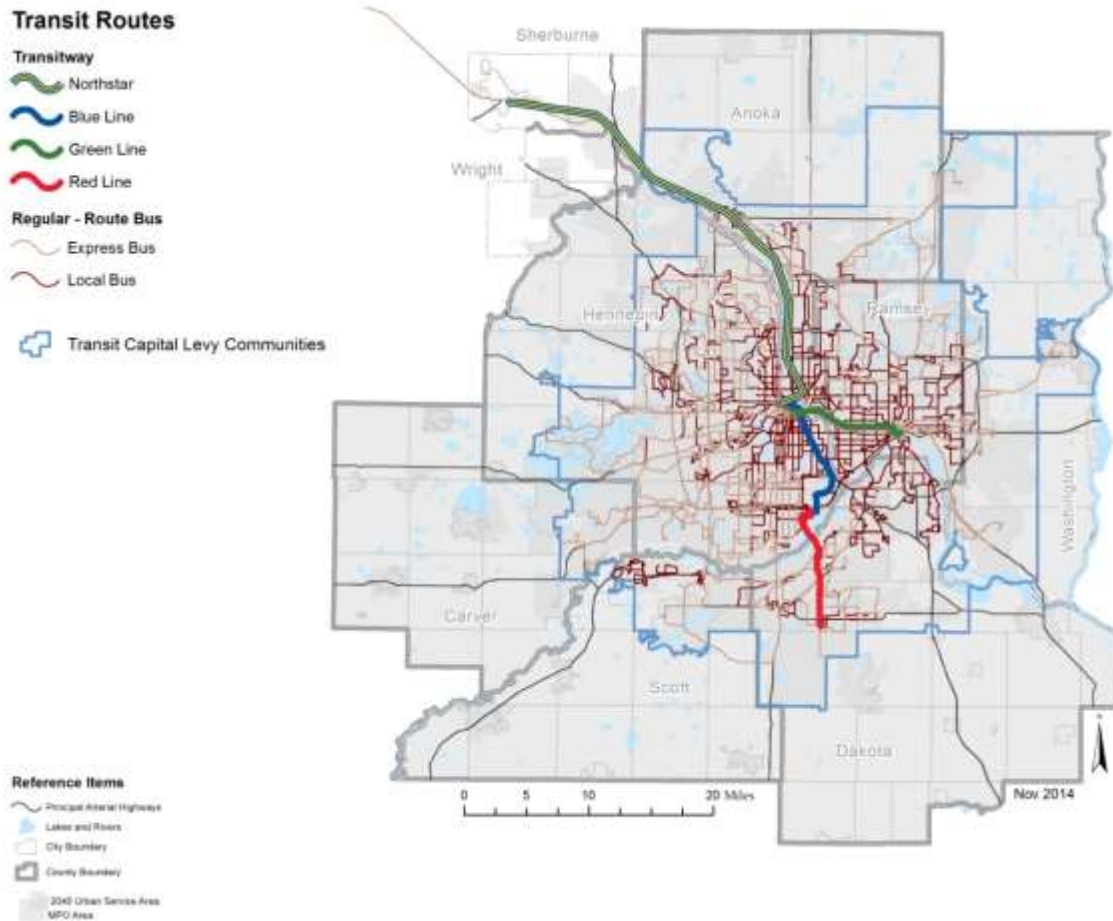
### Types of Services

Six types of public transit service currently operate in the Twin Cities area:

- Regular-route bus service is provided on a fixed, published schedule along specific routes, with riders getting on and off at designated bus stops. Regular-route service is provided using a variety of bus types that operate local service and express service. The ~~11-12~~ bus routes in the high-frequency network carried about 30% of the region's average weekday riders in ~~2013~~2016.
- Light rail transit (LRT) service is provided by electrically powered trains operating at high frequencies in primarily an exclusive right-of-way. Light rail uses specially designed transit stations and amenities.
- Bus rapid transit (BRT) service is provided at high frequencies with unique buses and specially designed facilities and amenities similar to light rail.
- Commuter rail lines operate on traditional railroad track powered by diesel trains with limited stops. Commuter rail typically serves morning and evening commuters.
- Dial-a-ride is a shared-ride service that allows customers to schedule pickup times. There are two types of dial-a-ride service in the region: general public dial-a-ride and Metro Mobility service mandated by state and federal law.
- Public vanpools are made up of five to fifteen people, including a volunteer driver, commuting to and from work destinations throughout the region on a regular basis in a subsidized van. Vanpools typically serve origins and destinations not served by regular-route bus service.

Currently about ~~212-217~~ regular bus routes operate in the region: ~~110-111~~ local and ~~102-106~~ express. Also in service are two light rail lines (Blue Line and Green Line), ~~one-two~~ BRT lines (the A Line and Red Line), and one commuter rail line (Northstar). These services are shown in Figure ~~1-36-1~~.

Figure 1-36-1: Existing Transit System by Service Type (NOT YET UPDATED)



## Transit Service Providers

A number of providers operate transit service in the region. The size, geographic service area, and service types of these providers vary, but the Council works with each provider to ensure the transit system is integrated and cohesive in addressing the region’s needs. Providers include:

- Metropolitan Council
  - Metro Transit is the largest transit provider in the region and operates most of the region’s regular-route bus service, and all light rail and commuter rail lines.
  - Metropolitan Transportation Services manages a variety of contracted services including regular-route bus, Metro Mobility [Americans with Disabilities Act \(ADA\)](#) service, Transit Link general public dial-a-ride, and the Metro Vanpool service.

- Suburban transit providers operate regular route and, in some cases, dial-a-ride service for 12 suburban communities. These providers are: Minnesota Valley Transit Authority, SouthWest Transit, and the cities of Maple Grove and Plymouth.
- University of Minnesota provides regular-route bus service around and between the Minneapolis and Saint Paul campuses.
- There are transit services in the Twin Cities urbanized portions of Wright and Sherburne counties. Tri-CAP currently provides weekday dial-a-ride and deviated rural-route service within the City of Elk River and Trailblazer provider similar services within St. Michael and Albertville. More information on these services can be found in MnDOT’s Annual Transit Report.
- Small transit services or individual routes are occasionally operated by other local communities as unique or demonstration services.

## Transit Service Areas

Regular-route service is primarily provided by the Metropolitan Council and the suburban transit providers within the Transit Capital Levy Communities, the communities within the seven-county region where a property tax is levied to pay for transit capital needs. The Transit Capital Levy Communities are established in state law but have changed in response to the growing region, most recently with the additions of Lakeville, Forest Lake, Columbus, and Maple Plain.

The ~~federal Americans with Disabilities Act (ADA)~~ requires complementary service for certified riders who want to travel where regular-route transit service is available but are unable to use the regular-route system due to a disability. The state has established additional service areas beyond that through law.

Dial-a-ride service is provided for the general public in areas of Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties where demand cannot be served on regular-route transit. Dial-a-ride service is also available in the contiguous urbanized portions of Sherburne and Wright counties.

## Transit Capital and Infrastructure

The Union Depot in downtown Saint Paul serves as a multimodal hub that connects local bus service, light rail transit, intercity bus services, Amtrak passenger rail, and potential future transitways. In 2014, a second regional multimodal hub opened in downtown Minneapolis at Target Field Station, where two light rail lines serve and additional lines will come together in the future to meet the downtown Northstar commuter rail station and other services.

The regional transit system requires an average of about 1,300 regular-route buses, ~~74~~91 light rail vehicles, 18 commuter rail vehicles, 6 commuter rail locomotives, and ~~425~~584 dial-a-ride buses to operate.

In ~~2013~~2016, the region had ~~110~~109 park-and-rides with nearly ~~30,000~~34,200 spaces served by bus and rail transit. ~~Additional spaces and facilities are planned to open in~~

~~2014~~. The region also has ~~28~~26 transit centers with facilities that improve waiting conditions and the transfer experience between buses and trains. With the opening of the Green Line in 2014 and the A Line in 2016, the region has ~~47~~86 transit stations serving existing light rail, BRT and commuter rail lines.

Facilities have been built to give transit advantages over general traffic including:

- ~~About 300~~337 miles of bus-only shoulders
- ~~33~~7 miles of bus-only lanes on city streets
- ~~94~~95 highway ramp meter bypasses
- ~~53~~66 miles of managed lanes
- 7 miles of exclusive busways

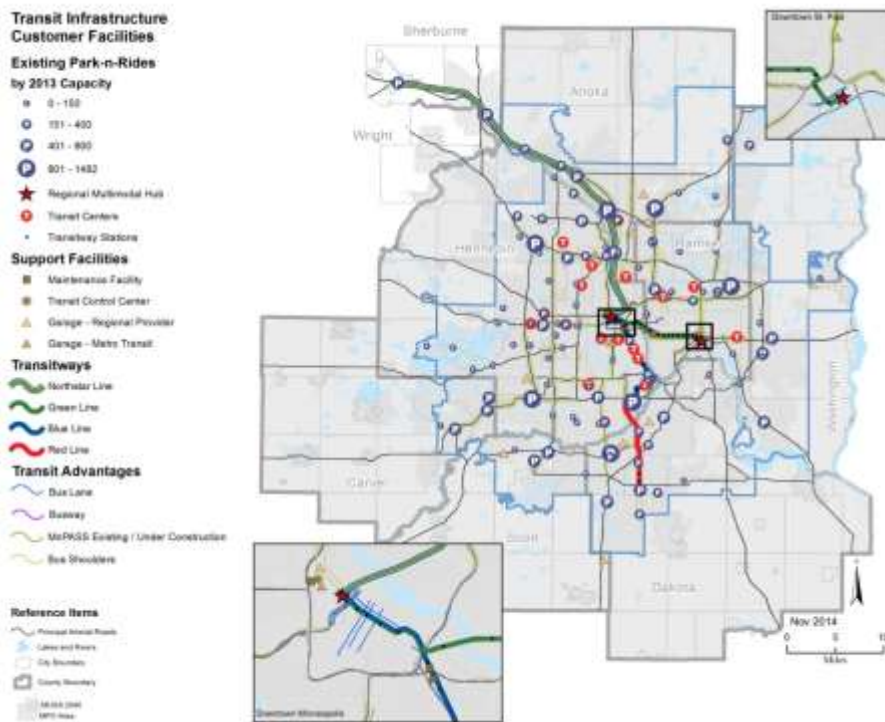
The region is also supported by a substantial system of transit support facilities, both public and private, that includes bus garages, maintenance buildings, rail support facilities, and operations centers.

### Better Bus Stops: Equity in Bus Stop Modernization

Metro Transit created the Better Bus Stops program in 2014 to enhance access to opportunity and committed to install 150 new shelters and enhance 75 existing shelters by adding lighting, heaters, or pedestrian improvements. Investments are focused in areas of concentrated poverty where more than half of residents are people of color.

A portion of the grant funding was directed to community engagement in communities traditionally underrepresented in decision-making and who are most impacted by decisions. The community engagement was successful in fostering greater transparency in Metro Transit's bus stop improvement decisions, and gathering information about transit customer and community priorities useful for the agency's shelter placement guidelines.

Figure 1-46-2: Existing Transit Infrastructure (NOT YET UPDATED)



## Transit System Improvements since the Last Plan

Previous versions of the Transportation Policy Plan set a goal of doubling transit ridership by 2030 by expanding the bus system and building a network of transitways. The region has made significant progress in building transit capacity for future growth in the region. The bus system has expanded to new markets, particularly the reach of express service and park-and-rides, and continues to grow service in the strongest markets. New and improved transitways have opened and several additional transitways are in development. Examples include:

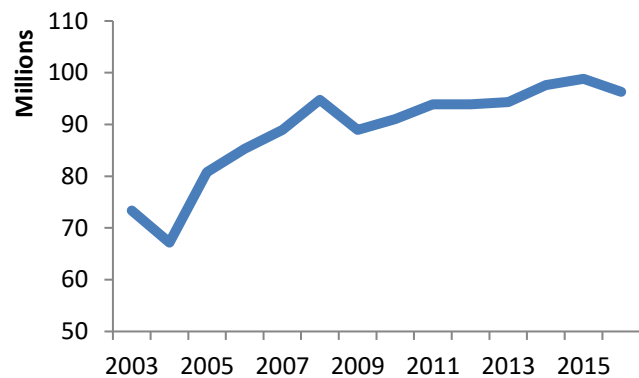
- Park and ride capacity has been nearly doubled since 2003, from 15,000 to 30,000, with many facilities newly built or expanded resulting in added capacity for future growth.
- The Urban Partnership Agreement built needed express bus capacity and amenities in downtown Minneapolis on Marquette and Second avenues.
- Urban and suburban local service has been redesigned to better serve new transitways as they open, particularly along light rail lines.
- A number of changes to the transit system have contributed to better performance including improved branding, smartcard fare collection technology (Go To system), low floor and hybrid vehicles, and improved customer information.
- Transit Link was implemented in 2009 to better coordinate general public dial-a-ride service in the region. The region's first arterial bus rapid transit line, the A Line,



opened in 2016, improving connections from the METRO Blue Line and Green Line to additional neighborhoods in St. Paul, Minneapolis, and Roseville.

- Metro Transit set a new single-day record of nearly 370,000 rides, bolstered by the recent additions of the A Line, METRO Green Line, and METRO Red Line.
- A new online bus rapid transit station opened to replace an existing offline station on the METRO Red Line, generating over 20% more daily rides based on early indications, improving service speed and reliability and increasing ridership.
- Several new park-and-ride facilities opened throughout the metro area, creating transit capacity for future growth of the region.
- A new mobile app was introduced by Metro Transit that includes trip planning features and a new mobile ticketing platform.
- Progress continued on the development of the METRO Green Line and Blue Line extensions, the METRO Orange Line, the METRO Gold Line, and several arterial bus rapid transit corridors.
- The high frequency service network expanded with the introduction of service improvements to routes 2 and 11. Ridership on both routes increased by over 15% after being introduced to the high frequency network. Additional expansion of the high frequency network is being currently being explored.

**Transit System Ridership**



The transitway system is also expanding:

- The all-day frequent service on light rail and highway bus rapid transit lines underwent a rebranding process that was implemented with the opening of the second line (Red Line). The system was branded as “METRO” with color designations for each line.
- METRO Blue Line (Hiawatha) opened as the first light rail line in 2004 and improvements since then have added and expanded stations to meet demand.
- Northstar opened as the first commuter rail line in 2009.
- METRO Red Line (Cedar Ave) opened as the first bus rapid transit line in 2013.
- METRO Green Line (Central Corridor) opened as the second light rail line in 2014.

The result of these improvements has been increased use and demand for transit services. In the last decade, but prior to the opening of the Green Line: Since 2003, the year before first light rail opened in 2004 (METRO Blue Line), the region has seen:

- Transit ridership has increased by about 25%.
- Productivity, measured in riders per hour, has increased by about 17%.
- Park-and-ride usage is up about 80%. Transit rides increase by over 30%
- Park-and-ride users increase by nearly 70%
- Five operating transitways now account for one out of every four transit rides

## Passenger Travel beyond the Region

Each mode of transportation best serves a specific trip distance, providing its own unique characteristics and values for interstate and international mobility. The vast majority of intercity passenger movements occur by automobile, especially on the National Highway System roads maintained by MnDOT and other states. The Twin Cities region is also served by Amtrak passenger rail service and a number of intercity bus companies and airlines.

Amtrak provides connections to Portland, Seattle, and Chicago. Trains arrive and depart once a day in each direction and Amtrak coordinates with intercity bus companies throughout the region for service beyond the current station stops along their routes. In 2014, Amtrak relocated its platform and services to the newly renovated Union Depot in downtown Saint Paul. Target Field Station along the BNSF tracks in downtown Minneapolis currently serves the Northstar commuter rail, but could also be utilized by intercity passenger trains in the future. Both Target Field Station and the Union Depot renovation have been constructed in the last 10 years as multi-modal stations.

MnDOT has primary responsibility for planning intercity passenger rail in Minnesota; the Council participates on advisory committees to assure that any new or upgraded rail service is consistent with other regional plans. Consistent with the Minnesota State Rail Plan, MnDOT is currently studying several potential new high-speed rail services to link the Twin Cities with Chicago, Duluth, and Rochester and Duluth. ~~For information on these studies, see the MnDOT passenger rail webpage.~~ Other recent proposals ~~These corridors would increase the number of conventional-speed train trips to serve increasing demand for passenger travel to eastern Wisconsin and Chicago, as well as to and from the Bakken oil fields in western North Dakota and Montana. For information on these studies, see the MnDOT passenger rail webpage.~~

Regionally, intercity bus service provides ground transport connections to several important destinations in the upper Midwest and the Twin Cities in particular, including service to Minneapolis-Saint Paul International Airport as well as key stations in downtown Minneapolis and Saint Paul. Recent upgrades to attract passengers include Wi-Fi on buses, in addition to express bus services with travel times that are more competitive with the private automobile. Most intercity bus service in Minnesota is operated by private national service providers such as Megabus, Greyhound, and Jefferson Lines. However, the State of Minnesota maintains an interest in enhancing statewide connectivity via partnerships with nonprofit and local public transit providers who operate in rural areas. MNDOT's Intercity Bus program provides "feeder service" to and from small towns in greater Minnesota

to supplement the express routes crossing the state. Jefferson Lines's route to Duluth is an example that makes local stops in 8 rural communities along I-35. The Metropolitan Council has no role in planning or providing these intercity bus services. Intercity bus service continues to remain a presence in the region, with recent upgrades to attract passengers. These include Wi-Fi on buses and express services that provide bus travel times that are more competitive with the private automobile. Intercity buses are all privately operated. Providers include Megabus, Greyhound, and Jefferson Lines. These providers serve destinations throughout the upper Midwest and have key stations in both downtown Minneapolis and Saint Paul. Although the Council has no role in planning or providing these intercity bus services, MnDOT does work with these operators and provides some subsidies to support bus service in Greater Minnesota

See Chapter 9 for air travel beyond the region.

## **Transit Investment Direction Overview**

The following are brief descriptions of the different sections of the transit investment plan.

**Transit Planning Basics** – An important part of understanding the transit investment plan includes understanding the many factors that influence the design of the transit system. Local development patterns and demographics – factors external to transit providers – as well as route and network design decisions made by transit providers are important factors in of the success of a transit system. Certain factors are used to establish Transit Market Areas, a regional transit planning tool designed to match transit demand to the types and levels of service provided. Regional Transitway Guidelines help guide the planning and implementation of transitways. Local governments and transit providers need to work together to best align these factors in order to maximize the success of the transit system and its potential integration with communities.

**Bus and Support System Investment Plan** – The bus system will continue to be the workhorse of the regional transit system by providing the majority of transit trips, providing essential connections to transitways, and providing options throughout the entire region. The bus and support system plan includes the following elements to address current and future needs:

- Tools to manage the transit system to be cost-effective within available resources
- Alternatives that can be provided where regular-route service is not available or accessible for those with a disability
- Opportunities for expansion and improvement of bus service, and a process for identifying priorities from that vision
- Opportunities for expansion and improvement of transit facilities that better support a good customer experience and system operations
- Other elements of the transit system that support its effective, safe, secure, and reliable operation

These elements, and the processes and plans that support them, are described in more detail in Bus and Support System Investment Plan [[insert link](#)]. [The plan does not identify specific investments in the bus and support system. Rather, the plan identifies general investment categories and investment strategies.](#)

**Transitway System Investment Plan** – The region will also need to build, operate, and maintain a system of transitways that will improve service in high-demand corridors and connect more areas of the region with frequent, reliable transit service. Equally as important, transitways provide the permanence and attraction to developers, residents, and businesses that will help shape the high-density, mixed-use, livable development patterns that are growing in demand and that are the focus of many *Thrive MSP 2040* outcomes. Land use planning and implementation by local governments will also help shape investments in transitway corridors. The first priority will be to operate and maintain the existing transitway system. Expansion of the transitway system will be guided by investment factors that will assist the region in setting priorities for investment that have the greatest return for the region. The transitway system includes a number of options to match appropriate investments with needs throughout the region. These elements, and the processes and plans that support them, are described in Transitway System Investment Plan [[insert link](#)]. [The plan identifies specific project investments in the transitway system.](#)

**Investment Summary** – The transit investment plan includes a financial summary that illustrates the level of investments planned across the elements in the plan within two revenue scenarios:

- A Current Revenue Scenario that identifies planned investments within reasonably expected revenue assumptions
- An Increased Revenue Scenario that identifies a level of investment needed to build out and expand the transit system

## Transit Planning Basics

The transit system is a network of routes, facilities, and services that need to be well designed and managed to best achieve regional goals, including good stewardship of public resources. This is especially true in a fiscally constrained situation, where available funding only allows for implementing and operating the highest priority projects in the plan.

A number of demographic and urban design factors exist that are generally outside the control of transit providers and that help shape the design and determine the potential success of transit investments. Demographic factors are, for the most part, outside the direct control of any agency or government body, though they can be affected by agency actions over time. Urban design factors are generally managed by the land use planning efforts and development controls of local governments. A successful transit system requires the cooperation of transit agencies and local governments within their respective roles.

In addition to demographic and urban design factors, a number of transit route and network design factors guide the design of transit service and ultimately influence the overall success of the transit network. Transit providers shape these factors in the design of the transit system to manage it relative to land use.

## Demographic Factors

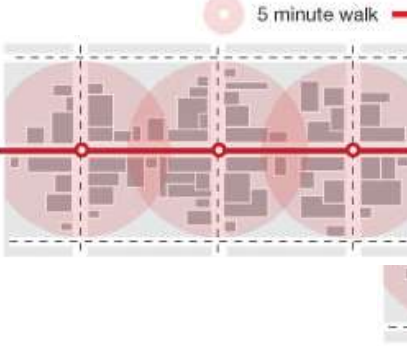
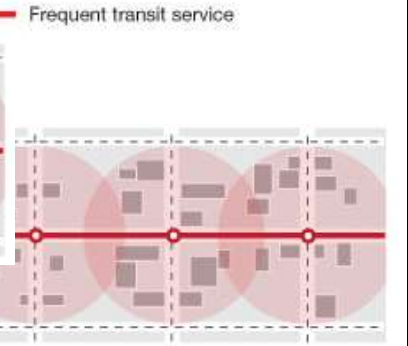




Demographic factors are outside the direct control of transit providers but play a significant role in the design of transit service. While these factors are out of the direct control of transit providers, the impact of transit investment can indirectly influence these factors [by providing access to opportunity](#). These factors include:

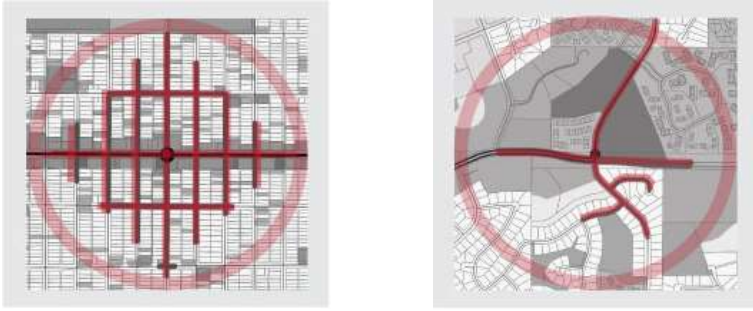
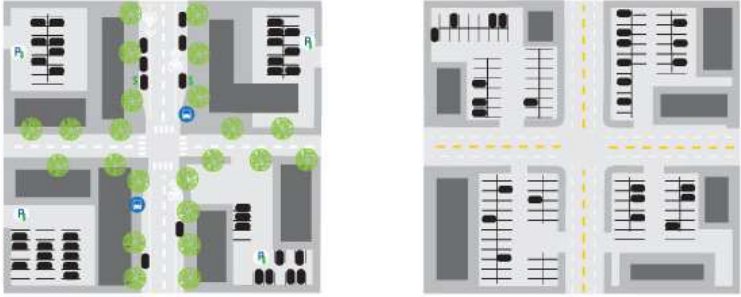
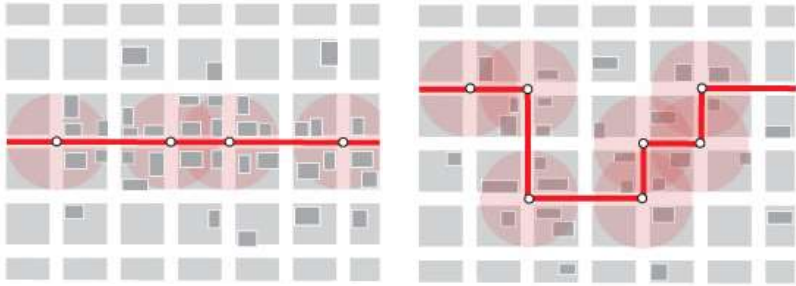
- Auto-ownership or the number of cars available in households
- Demographics such as household income, number of children, age, disability, and marital status
- Job status and unemployment rate

Demographic factors also include areas of concentrated poverty and areas of concentrated poverty where at least 50% of the residents are people of color, which are a special feature in *Thrive MSP 2040*. More information on these is discussed under Transit Market Areas [[insert link](#)].

## Urban Design Factors

Urban design factors that fall within the control of local governments, such as land use, planning, and infrastructure design, also influence the design [and potential success](#) of transit services. Local governments and transit agencies need to work together to best match transit service with local land use and maximize the opportunities for the success of the transit system. For communities that desire more transit service, local governments can choose to plan for transit-supportive land use, but the changes will [likely](#) take place over time. ~~Investments in transit service will need supportive land use to be sustainable.~~ The following factors are the primary components of effective local transit service. Express and commuter services are discussed separately.

Urban Design Factor	More Transit Supportive	Less Transit Supportive
<p><b>Encourage population and activity density</b></p> <p>Density supports transit because there are more people and activities within walking distance of nodes. Additionally, people living in dense areas are more likely to use transit because better transit options can be provided in order to be more competitive with driving.</p>		
<p><b>Design for a pedestrian-friendly environment</b></p> <p>All transit users are pedestrians for at least some portion of the beginning and end of their trip. A pedestrian-friendly environment encourages transit use by providing a comfortable walking environment and minimizing the walking distance from the transit stop to front doors.</p>		
<p><b>Encourage a mixed-use land use pattern</b></p> <p>Transit is most effective when it serves a variety of trip purposes and destinations. Mixed-use development patterns encourage travel patterns with many origins and destinations throughout the day, making transit more effective and easy to provide for a variety of purposes.</p>		

<p><b>Develop an interconnected street network that maximizes pedestrian and bicycle access and allows for simple route design</b></p> <p>An interconnected street network minimizes barriers and maximizes the area that is accessible within a short walk or bike to a transit stop, allowing each stop to serve more people. In addition, it supports the design of simple, direct routes that are efficient and easy to understand.</p>	
<p><b>Support travel options that encourage or complement using transit</b></p> <p>Transit is more effective in areas where the cost of driving and parking are comparable to the cost of using transit, and alternatives like car-sharing, bicycling, and walking are available and convenient.</p>	
<p><b>Plan for linear growth in nodes along corridors</b></p> <p>A linear pattern of development along corridors is easier to serve with transit. Transit routes that are linear and consistent are most effective to provide and easier for customers to understand. This also requires coordination across community boundaries.</p>	

The factors listed above describe the general relationship between local land use decisions and transit planning. More detail on these factors and the considerations for local communities on land use planning around transit is available in “Land Use and Local Planning” [[insert link](#)].

## Transit Route and Network Design Factors



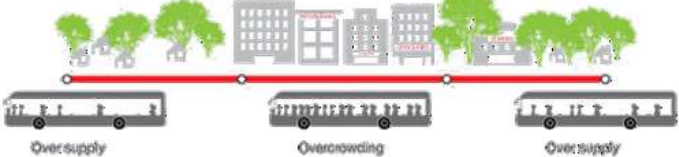
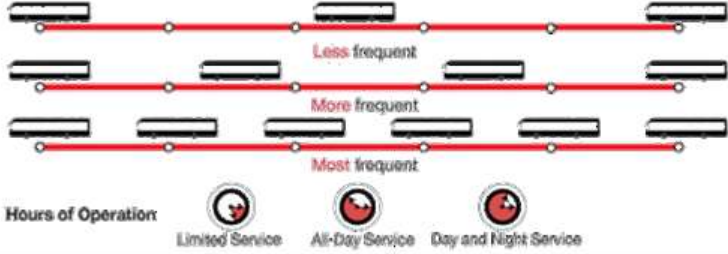
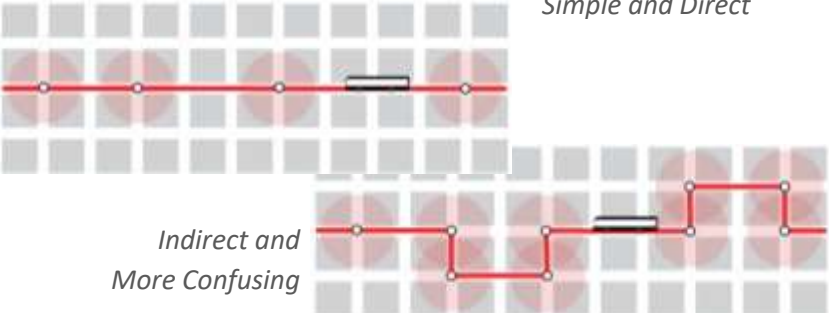
The quality and design of transit service is an important part of the success of transit. Regional transit providers must weigh the potential benefits of transit investments against the costs, in order to best manage the system to be cost-effective and efficient. This applies to times when

the transit system is stable, when the transit system is expanding, and when the transit system is facing cuts. There are also different factors for the design of local transit service and express and commuter transit service.

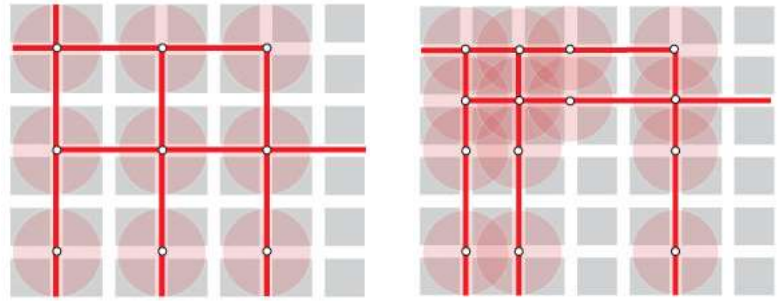
### **Local Route and Network Design**

The most important factors that transit providers look for when designing local transit routes and networks are:



Transit Design Factor	Illustration
<p><b>Serve a variety of trip purposes and destinations</b>            Transit will generate higher ridership and more balanced passenger loads if it is designed to serve a number of different trip purposes along the route and throughout the day.</p>	
<p><b>Design routes with strong anchors at both ends</b>            Transit is more efficient with balanced passenger loads in each direction. Important destinations at each end help to distribute demand evenly and limit overcrowding of vehicles and over-supply of service.</p>	<p><i>Balanced Demand</i></p>  <p><i>Unbalanced Demand</i></p> 
<p><b>Match level of service to demand</b>            Transit will be more effective if the type and level of service provided is appropriate to the demand for transit. This allows providers to get the most out of high-demand areas while still serving lower-demand areas.</p>	
<p><b>Design simple, direct routes</b>            Transit service is more efficient to provide and easier for customers to understand when routes are designed in simple, linear patterns without complicated paths.</p>	<p><i>Simple and Direct</i></p>  <p><i>Indirect and More Confusing</i></p>

**Avoid duplication of service**  
 Routes should be spaced far enough apart so that they do not compete with one another for riders at the expense of service coverage in other areas.



*Less Duplication More Duplication*

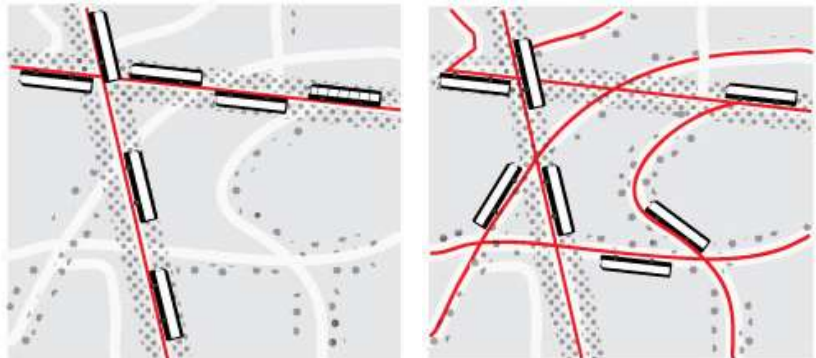
**Provide useful customer information and comfortable amenities**

Transit ridership grows and the user experience is better when customers can easily understand the system and are comfortable while waiting at or leaving a stop and riding on a bus or train.

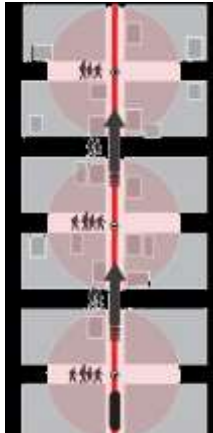
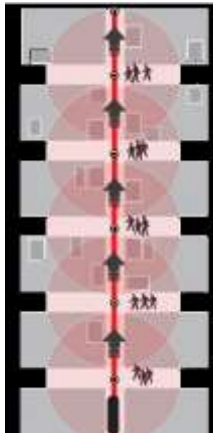


**Balance frequency and coverage**

An effective transit network finds a balance between providing fast, frequent routes that offer more convenience and providing coverage to more area but with infrequent, less-convenient service.



*More frequent, less coverage Less frequent, more coverage*

<p><b>Balance walking distance and travel speed</b></p> <p>Routes with more stops provide shorter walks to transit but at slower travel speeds. A transit network needs to balance between providing fast service with fewer stops and slower service with many stops.</p>	<p><i>Faster service, less access</i></p> 	<p><i>More access, slower service</i></p> 
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### Commuter and Express Route Design

The factors that guide the design of express routes are somewhat different from those covered in the above section for local routes. Express routes are focused on providing fast, reliable trips into major regional centers. The most important factors for express service success are high-density origins and destinations at both ends of the route (such as at a park-and-ride and downtown) and demand management that balances parking supply and cost with the demand for parking and access for transit. The level and location of congestion can also be a substantial factor in the success of express bus services.

## Transit Market Areas

### Market Areas Overview

An important underlying element to the transit investment plan is the definition of Transit Market Areas. Transit Market Areas are defined by the demographic and urban design factors that are associated with successful transit service. There are five Transit Market Areas as well as some unique Market Area features. The Transit Market Areas are generally associated with community designations in *Thrive MSP 2040* as follows:

- Transit Market Areas I and II are mostly Urban Center communities where urban form and density are most supportive of transit. These areas also have the largest concentrations of transit-dependent residents in the region. Transit service in these areas focuses on providing a dense network of local routes with high levels of service to accommodate a wide variety of trip purposes. Market Area II will typically have a similar route structure to Market Area I, but lower levels of service, as demand warrants.
- Transit Market Area III is primarily Urban along with portions of the Suburban, Suburban Edge, and Emerging Suburban Edge and is generally characterized by overall lower density and less transit-supportive urban form along with some pockets of denser development. The primary emphasis of transit service in this area

- is express and commuter service with some suburban local routes and dial-a-ride service providing basic coverage access.
- Transit Market Area IV is primarily Suburban Edge and Emerging Suburban Edge along with portions of Suburban, and is generally characterized by consistently low-density development and an urban form that does not support frequent local transit service. Transit service in Market Area IV is primarily peak-period express and commuter service oriented to park-and-ride facilities that can effectively capture the lower density transit demand. Local trips are provided by general public dial-a-ride services.
  - Transit Market Area V is generally all forms of Rural and Agricultural but does include the unique freestanding town centers of Stillwater, Waconia, Forest Lake, and Hastings; Market Area V is generally characterized by low-density development or undeveloped land not well suited for regular-route transit service outside of limited peak-period express and commuter service.

### Unique Market Areas

The *Emerging Market* overlays are unique areas of Transit Market Areas II and III where significant pockets of higher density exist but surrounding conditions still limit the success of local transit. These areas should be a focus for future development that will connect them with areas of higher transit intensity, specifically looking at extensions s of existing routes or connections.

*Freestanding Town Centers* are unique areas that grew independently of Minneapolis and Saint Paul and act as suburbs but are still separated from the urban and suburban areas by rural land. These areas typically have small downtowns of their own but also export many workers to other regional centers. Local transit services that connect to the region would not be as effective serving these areas given their location in the region, despite their relatively concentrated nature. However, these areas may still have express service demand and possible demand for small circulator services.

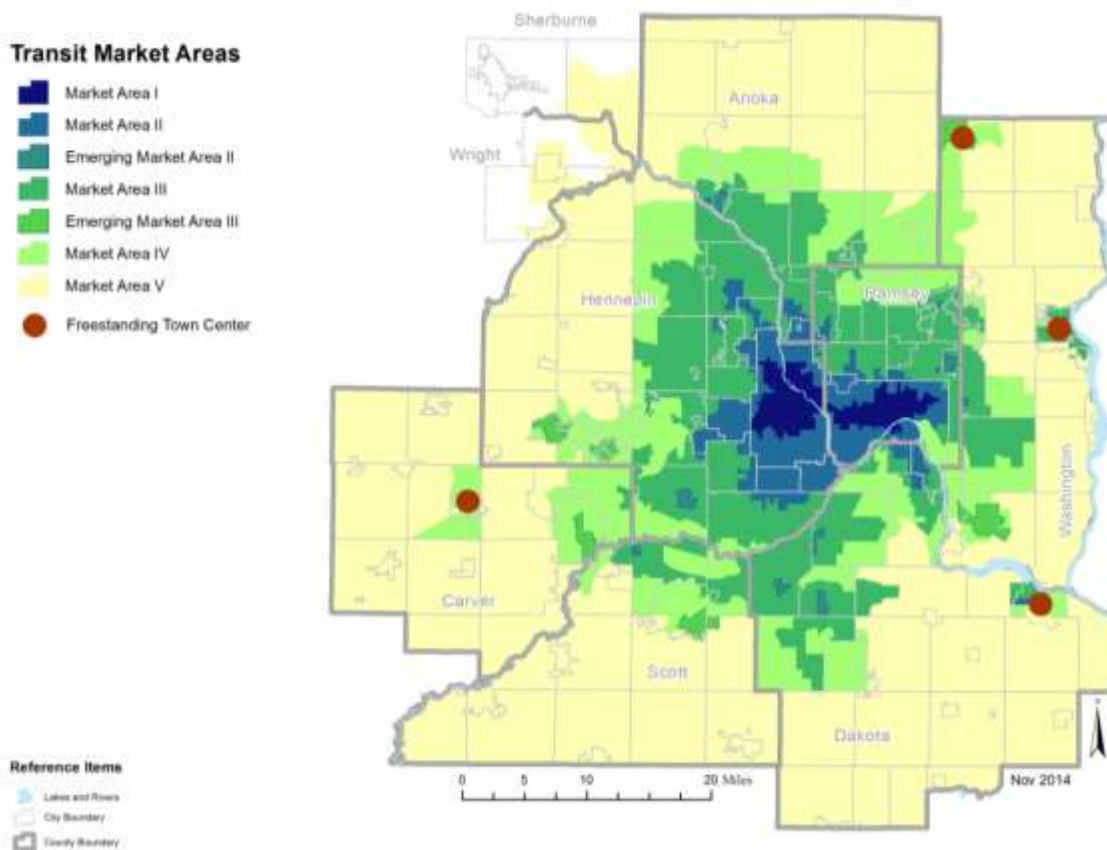
The Council and regional transit providers will also coordinate their efforts with MnDOT and transit services that connect beyond the seven-county metropolitan region. The Transit Market Areas do not address the feasibility of these kinds of services, which are coordinated on a case-by-case basis.

Two additional areas of emphasis in *Thrive MSP 2040* are important for consideration in transit service design, the special features of Areas of Concentrated Poverty, Areas of Concentrated Poverty where at least 50% of residents are people of color, and Job Concentrations. Residents of Areas of Concentrated Poverty must overcome a legacy of private disinvestment to access the opportunity of the region. In transit, this often means considering higher levels of service, better amenities, or unique service types focused on providing better access to jobs or education. These areas are also highly correlated with poor household access to a private

[vehicle](#). Job Concentrations have good potential to be served with transit because of their density and level of activity. Many of these concentrations will need to adapt and continue adding density and diversifying land uses to be truly transit-oriented. This will need to be coordinated with continued investments in transit access to these areas as well as better transit facilities.

The Transit Market Areas are shown in Figure 6-16-3 and described in more detail in Appendix G [[insert link](#)]. Transit Market Areas are primarily used to design the regional bus system, but some guidance on their application to transitways is discussed in the Regional Transitway Guidelines [[insert link](#)].

**Figure 6-16-3: Transit Market Areas**



## Regular-Route System Design

For the regular-route bus system, the guidelines on transit service design in Appendix G: Regional Transit Design Guidelines and Performance Standards ([link](#)) cover a number of topics including:

## Regional Transit Design Guidelines and Performance Standards Topics

- Transit Market Areas and Service Options – the service types that are appropriate for the different Transit Market Areas
- Network Design and Access
  - ~~Stop Spacing – the distance between bus stops on a route~~
  - Route Spacing – the distance between bus routes
  - ~~Stop Spacing – the distance between bus stops on a route~~
- ~~Route Structure~~
  - ~~Route Deviations – diversion of some or all service on a route to serve nearby land uses~~
- Service Levels
  - Service Span – the number of hours/day and days/week a transit service operates
  - Service Frequency – the average time between transit trips on a route
- Facility Siting and Design
  - ~~Bus Stop and Station Design – the siting, dimensions, and amenities of bus stops and stations~~
  - ~~Park and rides – the siting and sizing of park and rides~~
  - Customer Facility Features – features at customer facilities that improve the customer experience
- Performance Standards
  - Productivity – passengers per in-service hour
  - Cost Effectiveness – the subsidy required to operate a route, per passenger

The application of these design guidelines impacts the cost and productivity of transit service. More detail on how these are used in transit investment decisions is discussed in Bus and Support System Investment Plan [[insert link](#)]. ~~The full detail on these guidelines and standards is available in Appendix G [[insert link](#)].~~

In addition to these guidelines regarding the design of transit service, there are two performance standards that are used to evaluate *individual transit routes* once they are in operation. These performance standards are Subsidy per Passenger and Passengers per In-Service Hour. Performance standards are discussed in more detail in Appendix G. These measures may differ from those developed to inform the Transportation Policy Plan on the performance of the *overall transit system*, which are discussed in Chapter 12 [[insert link](#)].

## Transitway Design

For transitways, the region has developed the *Regional Transitway Guidelines* (2012). These guidelines assist in the development of transitways in planning, design, or operation and establish technical best practices for nine transitway elements. These elements are:

## Regional Transitway Guidelines Topics

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>• Service Operations</li> <li>• Station Spacing and Siting</li> <li>• Station and Support Facility Design</li> <li>• Runningway</li> <li>• Vehicles</li> </ul> | <ul style="list-style-type: none"> <li>• Fare-Collection Systems</li> <li>• Technology and Customer Information</li> <li>• Identity and Branding</li> <li>• Project Development, Leadership, and Oversight</li> </ul> |
|---|---|

The guidelines are not intended to be design standards or specifications. Rather, they establish consistent, general practices that ensure transitways are developed in a consistent and equitable manner as the region’s transit network continues to grow and expand. The guidelines are intended to be flexible enough so that each transitway can boast its unique characteristics and opportunities and planners can address its unique challenges. The guidelines are also intended to be a living document, evolving over time as the region’s experience with transitways continues to grow. The full details on the Regional Transitway Guidelines are available from the Metropolitan Council [[insert link](#)].

The guidelines will be updated ~~through a work program item [[insert link to “Work Program”](#)]~~ on an as needed basis to address outstanding issues ~~identified in the first version~~, including the addition of dedicated bus rapid transit ~~characteristics, the addition of land use guidelines~~, and updated best practices, ~~as needed~~.

## Definitions of Transit Modernization and Expansion through the Regional Solicitation

This transit investment plan ~~refers to improvement~~ discusses two unique funding opportunities to improve the transit system in the Current Revenue Scenario in two different categories: modernization and expansion. ~~The application of these definitions may evolve with new opportunities and innovation.~~ These categories of funding coincide with the application categories for federal flexible funding through the Regional Solicitation. The needs in these categories will likely evolve over time and the Regional Solicitation allows for regular reviews of the focus and criteria used to rank project submittals. In addition, there are certainly projects that address both expansion and modernization and in some instances, there may be a gray area between the categories. The following is a general description of the needs basis for modernization and expansion projects.

### **Modernization**

~~—The focus of transit M~~ modernization is to improve the the improvement of existing transit systems to better suit current needs and current transit riders. The focus of transit modernization will generally be to make transit more attractive to existing transit riders. This could include making the systems more efficient, more effective, more user-friendly, investments that offer faster, more reliable travel times or investments that improve the overall customer experience. Other opportunities for modernization should be explored through preservation and maintenance investments that could improve efficiency,

effectiveness, or ~~or more~~ environmental ~~impactly friendly~~. Modernization ~~is~~ projects will usually involve a capital investment, but can also include increased impacts to operating investments. Some modernization investments may even reduce operating costs, such as energy efficiency improvements.

-Examples of modernization projects include:

- Improved bus shelters and comfort amenities at existing bus stops
- Technology and customer information improvements at existing bus stops
- Transit advantages such as bus shoulders or transit signal priority
- Energy efficiency improvements at a ~~n existing facility~~ bus garage, ~~or additions of customer amenities at existing stops or stations.~~
- 

## Expansion

The focus of transit ~~E~~expansion is to the addition of something new or additional capacity in the improve the transit system to attract new transit riders or invest in future transit needs. The focus of transit expansion will generally be to add capacity, services, or facilities that grow (or facilitate the growth of) transit system use. Expansion projects will generally include a mix of capital and operating investments, since new facilities and service generally require additional ongoing costs.

Examples of expansion projects include:

- New transit routes
- New facilities that are not replacing existing ones
- Added park-and-ride capacity at an existing facility



## Bus and Support System Investment Plan

Bus and support system investments include all elements of the transit system that are not specific to transitways, including: regular-route bus service, Metro Mobility, Transit Link and other dial-a-ride programs, vanpool, customer and support facilities, and other support systems. The transit system is operated efficiently and cost-effectively today because of the management tools already in place in the region. The primary role of the transit system is serving people, measured in ridership. The different investment opportunities in the transit system are aimed at serving people, whether through maintaining a route already on the streets, adding service to serve new customers, improving the user experience on transit, or making it more efficient to serve people better.

This section of the plan discusses the types of transit services that will be provided in the region and how they are managed, the facilities and amenities that support these services, and the potential for a better transit system for the people of the region. Investments in the regular-route bus system are guided by the Transit Market Areas and Regional Transit Design Guidelines discussed above. The specific details about how transitways fit into this system are discussed in Transitway System Investment Plan [*insert link*].

### Transit System Management

Management of the transit system is an essential part of transit investment and stewardship of the system. A well-managed transit system ensures that public resources for transit are used as efficiently and cost-effectively as possible to meet the needs of transit customers while also considering the impacts and benefits to low-income populations and populations of color. The following are general descriptions of how the region will manage the transit system effectively by coordinating the efforts of multiple regional transit providers.

#### Route Performance Analysis

Transit providers should review their transit service annually using the performance standards outlined in Appendix G [*insert link*] to ensure that their transit services are being provided to an efficient and cost-effective standard consistent with rest of the region.

Additionally, the Council will prepare an annual Regional Route Performance Analysis that reports the performance of each route as compared to the performance standards defined in this plan. Routes that do not meet the performance standards should be reviewed for adjustment or possible elimination.

#### Coordination among Transit Services

Coordination among the regional transit providers is essential to ensure that the transit system functions seamlessly and offers user-friendly rider experience. Coordination efforts include identifying opportunities for timed-transfers, providing locations for transfers between dial-a-

ride services and regular routes, and connecting services offered by different providers. The Council will promote coordination of transit services through the regional transit policies and procedures, which outline procedures for fleet management, procurement, and facilities ownership and management. This includes coordination with services that connect to areas outside the seven-county region, when necessary. The Council will also encourage and facilitate communication and coordination among transit providers to ensure well-coordinated schedules.

### Transit Fare Structure

Regional transit fare policy will be designed to achieve a variety of goals. Fares should be simple and easy to understand to improve customer service and fare compliance. They should reflect the costs of providing service while mitigating the negative impacts to low-income and transit-reliant riders. The most recent fare increase occurred in October 2017, the first increase since 2008.

Fare policy should take a common regional approach to provide seamless travel for riders among providers and modes. It should promote ridership growth while maintaining or increasing the revenue recovery rate. New fare technology, including new fare media and off-board fare collection, will play an important role in transit fare policy and service delivery. Improvements in fare collection technology should ensure regional compatibility while supporting the need to modernize the fare system.

Regional efforts to mitigate negative impacts of fare increases include Metro Transit's Transit Assistance Program (TAP). The TAP provides qualified, low income transit riders a discounted, \$1.00 fare for a full year. Riders that qualify for TAP access discounted fares via a TAP card. Low income riders can apply to TAP individually or through one of several organizations that have partnered with Metro Transit for the program.

### Competitively Procured Services

Contracting the operation of transit services can be an appropriate and cost-effective way to meet new service demand, demonstrate new routes or service types, provide efficiencies on certain routes, properly align service expertise with providers, or maintain service in response to fiscal pressures. Decisions about which routes should be contracted to a private provider will be based on service demand and funding levels.

Service contracts should be structured in a manner that promotes healthy competition. Metro Transit will continue to be the primary provider of regular-route transit services in its service area. The Council will review the amount of contracted service every two years. Twenty percent of regular-route bus service, measured in National Transit Database revenue hours, is the target for private contract operations.

## Vehicle Fleet

The bus is the most basic element of the transit system. Buses should be comfortable, clean, and designed to meet customer needs. The region utilizes a variety of bus types to match the appropriate vehicle to the service it is providing. The existing bus fleet is over 1,700-800 vehicles, including dial-a-ride buses. These vehicles need to be maintained and replaced when they are past their useful life, which varies by bus type. Fleet replacement is the top capital investment priority for maintaining the existing transit system. Vehicles are also equipped with various types of equipment that allow them to better serve customers and provide more efficient operations. Innovation in equipment and general vehicle design is ongoing, and regional transit providers will explore modern features as appropriate. The region will work to maintain a bus fleet that is integrated and not overly specialized to specific services, routes, or corridors. Bus rapid transit services may have sub-fleets, but these should also be integrated across corridors. This will allow for more flexibility in operations and reduce the total number of buses and spare buses required, which saves the region money and reduces demand on support facilities. The regional *Fleet Management Procedure* outlines standards and is available on the Council’s website [*insert link*].

## Transit Provider Operating Policies

The Council will coordinate regional policies and procedures that apply to all transit providers, and will provide for a high-quality, seamless, and coordinated regional transit system while respecting the local autonomy of individual providers. These policies and procedures will ensure that transit resources are distributed equitably and transparently and facilitate an efficient system. A list of the key operating policies for transit providers is included in Table 6-2. Copies of any of these materials are available are available through the Council or directly from transit providers.

**Table 6-2: Transit Provider Operating Policies**

Policy	Description
<b>Regional Route Performance Analysis</b>	All regional transit providers will submit route performance information to the Council every year for review and inclusion in the Regional Route Performance Analysis.
<b>Transit Fare Structure</b>	All regional transit providers will adhere to the regional fare structure and prices established by the Council unless otherwise exceptions are specifically justified and granted.
<b>Fleet Management Procedures</b>	The Council’s fleet management procedure guides fleet decisions, including vehicle type and configuration, acquisition, use, maintenance, replacement schedule, ancillary equipment, and disposal. The policy also reflects fleet modernization, including alternative fuels such as low-sulfur diesel, bio-diesel and ethanol, and alternative vehicles such

	as hybrid electric. All regional providers will adhere to the procedures and policies for regional transit vehicles.
<b>Facilities Ownership Procedures</b>	The facilities ownership procedure establishes the requirements for owning and maintaining a regional transit facility. All public regional transit facilities will be available for use by any regional transit provider.
<b>Procurement Procedures</b>	All regional transit providers will follow procurement procedures that are consistent with state and federal laws and guidance, when appropriate.
<b>Regional Service Improvement Plan</b>	All regional transit providers must submit proposals for service improvement to the Council in order to be considered for <u>regional</u> expansion funding for transit.
<b>Regional Operating Revenue Allocation Procedures</b>	The region will distribute operating revenues using procedures that allocate resources to the region’s priorities, including the preservation of existing transit services and documented expansion priorities.
<b>Title VI Policy</b>	Title VI of the Civil Rights Act of 1964 requires considerations of discrimination through public investments for transit providers.

## Alternatives to the Regular-Route Transit Network

While the regular-route transit system is planned to meet the needs of the majority of transit users, some customers can be more effectively served through demand-responsive alternatives. This is typically the case for those living in areas that cannot be cost-effectively served with the regular-route transit network and for people whose disabilities prevent them from being able to use the regular-route transit system. Because these services complement the regular-route transit system, they continually adapt to the service levels provided on the rest of the system.

### Metro Mobility

Metro Mobility will meet the requirements of the Americans with Disabilities Act (ADA) by providing transit service to people with disabilities certified as not able to use the regular-route transit system. Under the ADA, the region is required to provide complementary paratransit service within 3/4 of a mile of all local regular-route transit service during the same times that the service operates. Minnesota state law also requires the service to be provided in areas beyond the requirements of the ADA.

Metro Mobility continues to experience intense pressure for growth as demand for ADA service increases with the aging population of the seven-county metro area and other demographic changes. Recent history has indicated growth of up to 10% annually for the program. In recent years, Metro Mobility has seen an average annual growth in ridership of 7 percent. Each new

ride requires a subsidy (at nearly \$22-24 per passenger), unlike regular-route bus service, which becomes more cost effective with additional demand. Because Metro Mobility is an essential service for the people it serves and is required under federal and state law to complement the regular-route system, the substantial growth of this program is considered as an investment in the operation and maintenance of the existing transit system, rather than transit system expansion.

### **Transit Link and Other Dial-a-Ride Programs**

Dial-a-ride service provides a public transit option for travel that is not served by the regular-route transit network. The Metropolitan Council contracts with local governments and private companies to provide county-based general public dial-a-ride service, known as Transit Link. Although Transit Link is available to the general public, typical users are the elderly, people who do not own a car, people too young to drive, and persons with disabilities traveling outside the Metro Mobility service area. Some suburban transit providers also provide citywide dial-a-ride services with non-regional funds in place of regular-route service that would not be effective. Growth or reduction in these services will be addressed as a consideration of the overall transit system and as demand warrants. The expansion of the regular-route bus system may result in reduced demand for Transit Link, as more people will have access to regular-route service. However, the expansion of Suburban Edge and Emerging Suburban Edge communities at low densities may increase the demand for this type of service.

In Wright and Sherburne counties, dial-a-ride and deviated routes are the primary transit services beyond access to the Northstar Commuter rail line. Services are available to the public on weekdays. The services are funded with local resources and state and federal transit resources from MnDOT.

### **Metro Vanpool**

Commuter vanpools are made up of five or more people, including a volunteer driver, commuting to and from work at destinations throughout the region on a regular basis. The Metro Vanpool program provides financial assistance for vans serving locations or times not well served by the regular-route transit network.

### **Emerging Shared Mobility Technology**

Recent advances in shared mobility technology provide new alternatives and complements to the regular route transit network. Shared mobility services such as ridesharing services and microtransit have been defined by their ability to leverage smart phone technology (though they are not needed to access service), providing on-demand service, and being dynamically routed to efficiently serve demand in real time. On-demand shared mobility services have the potential to more effectively serve low-density, auto-oriented areas that have proven difficult to serve with fixed-route service. SouthWest Prime, a service operated by SouthWest Transit, provides on-demand, door-to-door, transit service that can be accessed through a smart phone,

Internet browser, or phone call. A significant difference from traditional dial-a-ride programs is that rides do not have to be scheduled in advance. On-demand shared mobility services could complement existing transit in the region by serving as a first-and-last mile connection from transit hubs to low-density or isolated destinations or replacing low performing fixed-route services and flex-route services.

## Regular-Route Service Expansion Opportunities

The regular-route bus system includes bus service that operates on a fixed route, stopping at designated bus stops and following a consistent schedule. There are a number of different service types within the regular-route bus system designed to serve the different Transit Markets Areas. The different service types reflect the general trade-off between frequency of stops and speed of service, along with matching level of service to anticipated demand. Express service has fewer stops and faster speeds while local service stops more frequently but travels slower. Together, the collection of regular-route services make up a network that allows people to transfer between services and access many destinations beyond a single line. More information about specific route types can be found in Appendix G [*insert link*].

The regular-route bus system will need to expand to meet growing demand and improve access to destinations, especially for those who rely on transit. Since expansion of the regular-route bus system will typically respond to development patterns and is more flexible than large investments in facilities or transitways, the needs of the system can change more frequently, especially in emerging markets. However, the expansion of the bus system will also provide valuable connections to the transitway system across all route types and extend its reach to broader areas. This will not only support bus system expansion to new customers but also ensure the success of transitway investments. The following are general descriptions of the types of improvement opportunities for service expansion.

### Local Routes

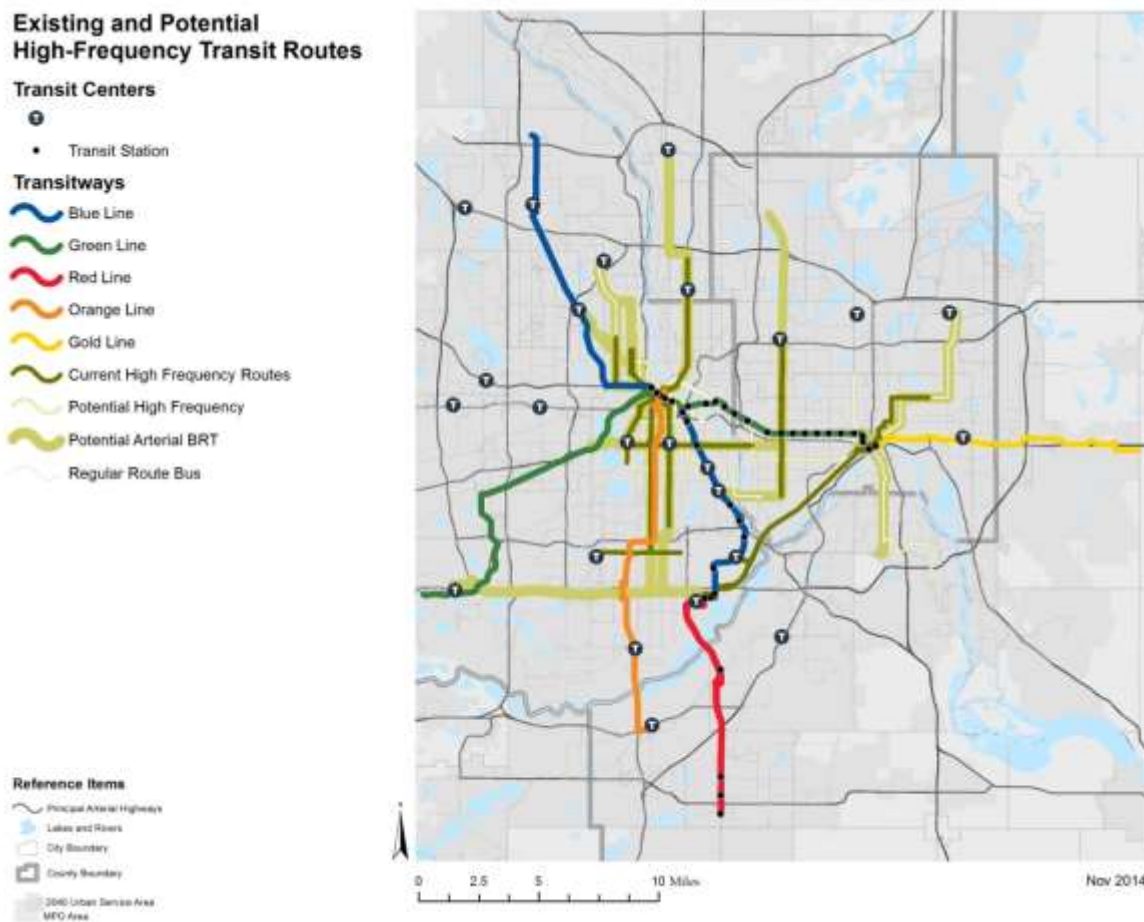
Local routes play a number of different roles and make up the basic structure of the regular-route bus system. These routes operate primarily on city streets in both the urban core and suburban areas and stop frequently, typically every one to two blocks. Local routes provide people with the highest level of access but often come with the trade-off of potentially slower, less reliable trips.

**Core Local Routes** – These routes generally serve urban areas along dense corridors. They comprise the basic framework of the all-day bus network, providing people with essential connections to major activity centers and transitways. Expansion of core local routes will concentrate on providing more frequent and a longer span of service on existing routes to meet growing customer demand along these corridors.

**High-Frequency Transit Routes** – These are generally the highest-demand routes in the system. These routes serve a significant portion of the total ridership across the transit network (5840%

of the region’s average weekday riders in 2016<sup>3</sup>, including METRO Blue Line and Green Line). High-frequency routes receive the highest level of all-day service – at least 15-minute frequency from 6 am – 7 pm on weekdays and 9 am – 6<sup>7</sup> pm on Saturdays. These routes often have highly visible passenger-customer facilities at major stops. Existing and proposed high-frequency transit service is shown in Figure 6-26-4, including planned METRO lines and arterial bus rapid transit lines, ~~which would all meet the standards for high-frequency~~. The Land Use and Local Planning section of this plan specifies the intensity and level of activity needed to support this level of investment. Local governments are encouraged to identify potential high-frequency corridors in cooperation with regional transit providers for consideration. A local example is the Primary Transit Network identified in the City of Minneapolis’ comprehensive plan.

**Figure 6-26-4: Existing and Potential High-Frequency Transit Routes and METRO Lines (NOT YET UPDATED)**



**Supporting Local Routes** – These routes serve urban areas on crosstown corridors that typically do not connect to a major regional center, such as one of the downtowns. They are designed to complete the grid of urban bus routes and facilitate connections to core local routes and

transitways. Expansion of supporting local routes will focus on adding new routes to fill in the grid and provide better service coverage to moderately dense areas of the region. Frequency and span on existing routes will also be improved to better serve customer needs. With more intense development along these corridors, some supporting local routes may be reclassified as core local routes to reflect a more transit-supportive development pattern.

**Suburban Local Routes** – These routes provide access to the transit network across large portions of the lower-density portions of the transit service area, mostly in Transit Market Areas II and III. These routes tend to operate with less frequent trips and fewer hours of service. Suburban local bus service will be expanded in areas where there are coverage gaps or existing frequency or span of service do not meet expected demand. Improvements will focus on expanding suburb-to-suburb service and connections to major transfer points. Improvements will reduce the need for customers to transfer downtown to get to their destination, and improve access to jobs and other destinations outside of the urban core.

### **Commuter and Express**

Commuter and express routes are designed primarily to bring people from urban and suburban residential areas to jobs in the region’s major employment areas. These routes generally operate to serve the most common work start and end times. Future demand for commuter and express service, and associated demand for park-and-ride facilities, is determined based on analysis of population and employment trends along with a projection of future mode share for transit for commuter trips. [\(UPDATE PENDING PARK-AND-RIDE STUDY\)](#)

As commuter and express routes generally travel longer distances over the region’s highway network, they will be expanded in coordination with transit advantages to provide a congestion-free alternative in congested highway corridors. Existing routes may be improved to add reverse-commute service to connect urban residents with suburban jobs and to provide mid-day service to provide commuters the flexibility to return home if needed. An important part of express bus service is the presence of a transit advantage to bypass highway congestion. For additional details, go to the Transit Advantages discussion [\[insert link\]](#). Express bus services can also be coordinated with highway bus rapid transit transitway [\[insert link to Transitway System Investments\]](#) services and facilities. A map of 2040 express bus service corridors and the ~~2030~~ park-and-ride system are shown in Figure 6-3 under Park-and-Ride Facilities.

### **Service Expansion Priorities and the Regional Service Improvement Plan**

To improve short- and medium-range planning efforts and prioritize transit service growth, regional transit providers should [evaluate their ~~prepare a~~ service improvement plan every two years and prepare or update them regularly, as needed](#). The plan should identify priorities for service expansion in their service territory for at least the next two to four years. Providers will be asked to submit their projects to the Council for consideration in the Regional Service Improvement Plan, which will evaluate them for prioritization. Each submittal should include a



project description, resources needed for implementation, projected year of implementation, project readiness including capital facility coordination, and data for a technical evaluation.

The Regional Service Improvement Plan will evaluate proposed service improvements based on a number of factors. Specific technical measures will be determined based on data availability and methodologies developed in coordination with all regional transit providers. Table 6-3 includes factors that will be the basis of the Regional Service Improvement Plan technical evaluation, and descriptions of the considerations for measuring these factors.

**Table 6-3: Regional Service Improvement Plan Technical Investment Factors**

Technical Factors	Description and Example Measures
<b>Cost-Effectiveness</b>	Cost-effectiveness for transit service is typically measured relative to ridership. This region has standards for “subsidy per passenger,” but other measures could also be considered.
<b>Access to Destinations and People Served</b>	Transit access provides opportunities for people to ride and for transit to be productive. This region has standards for “passengers per in-service hour.” Additional measures could consider access to job concentrations as methodologies become more understood.
<b>Equity</b>	The transit system plays an important role in providing access and opportunity to a number of disadvantaged groups, including people with disabilities, people of color, and low-income populations. This includes a large portion of the region’s transit-dependent population.
<b>Peak-Period Transportation Benefits</b>	The transit system provides additional capacity to the transportation system when it is most needed, during peak travel times. This benefits the region by shifting trips and miles traveled from driving alone to riding transit; this can reduce traffic congestion. Both of these can also positively impact air quality and contributions to climate change.

The Regional Service Improvement Plan will provide the technical evaluation of submittals for service expansion and may consider other factors through discussions with transit providers. Additional factors will need to be considered by policymakers when prioritizing service expansion, including regional balance and community support. The Regional Service Improvement Plan will be updated every two years as new data becomes available or as needs have substantially shifted, to adapt to the changing demands for bus service. For example, the Plan may be updated when new regional transitway investments are identified in the TPP and feeder routes need to be evaluated, or prior to the next major update of the TPP.

## Transit Facilities Expansion and Modernization Opportunities

Transit facilities compose the built environment of the transit system. Passenger-Customer facilities are the places where transit customers access transit vehicles, ranging from bus stops to large and complex multimodal transit centers/hubs. Support facilities include the necessary “behind the scenes” infrastructure that supports transit providers and their operations, such as bus garages, communications control centers, and bus layover facilities. Transit advantages are roadway improvements that improve person throughput by reducing the factors that hinder efficient transit operation, such as bus shoulders, transit signal priority, or curb bump-outs.

- ~~Bus garages and bus maintenance facilities~~
- ~~Rail operations and maintenance facilities~~
- ~~Facilities to support the cleaning and maintenance of the transit network~~
- ~~Bus layover facilities~~
- ~~Transit police stations~~
- ~~Communications control centers~~
- ~~Employee training facilities~~
- ~~Administration buildings needed to keep the system operating smoothly~~

The network of transit facilities must be strategically improved and expanded to serve the region’s growing transit system. Improvements to transit facilities will improve the customer experience and maximize the efficiency of transit investments.

### Passenger-Customer Facility Expansion and Modernization

Passenger-Customer facilities – ~~transit-bus~~ stops, transit centers, transit stations, multimodal hubs, and park-and-ride facilities – are essential to provide convenient and attractive access to transit service. Such facilities support the regular-route bus and rail system and provide transfer points for the dial-a-ride system. Passenger-Customer facilities are most successful when they are well-integrated with the surrounding landscape context. Every customer facility should provide ADA accessibility, safety, comfort, and information for customers to feel secure in using the transit system. ~~Ideally, the passenger facility and surrounding context should provide a high quality, safe, and attractive pedestrian environment, since all transit trips begin and end with pedestrian or bicycle travel~~. Passenger-Customer facilities also serve as an important point of transfer between transit services, including bus-to-rail transfers. Detailed guidelines for passenger-customer facility amenities can be found in Appendix G: Regional Transit Design Guidelines and Performance Standards.

### Bus Stops

Bus stops are established locations for customers to get on and off the bus and are the basic most frequently used transit passenger-customer facility. They are essential for providing access to transit for the vast majority of customers ~~with access to transit service throughout the transit system~~. There is a greater density of bus stops in Market Areas I and II, where development density and urban design are best suited for walk-up access to transit. Transit providers work

with local communities to provide pedestrian connections and signage at each stop. Features that modernize the bus stop - such as concrete improvements for accessibility, enhanced transit information, shelters, or electrical connections to support heat and light in shelters - improve the customer experience. While not all bus stops can have the same level of amenities throughout the system, some stops warrant an additional level of investment. Many areas of the region can benefit from improved amenities at bus stops, especially areas with high usage. An important part of improving the transit system will be looking at opportunities to improve the customer experience at existing bus stops. Every bus stop should provide a minimum level of safety, comfort, and information for customers to feel secure in using the transit system.

~~Basic access to transit is essential. All bus stops should be ADA-accessible. With 13,000+ stops in the network, the Council will work toward the improvement of older stops that do not meet current best practice for accessibility. Local governments and transit providers should coordinate their efforts to ensure that all regular route transit stops are accessible year-round. This coordination is particularly important in the winter months when snow and ice create an additional barrier for all customers.~~

### **Transit Centers**

Transit centers are locations where two or more transit routes converge, providing provide comfortable and convenient locations for passengers-customers to connect to other routes and services in the system. They typically have multiple bus stops and bus service is timed for easy transfers. Buses also frequently layover at transit centers.

Transit centers are typically located at major activity centers or transitway stations, and may be located at a park-and-ride. Transit centers in Market Areas I and II typically serve transit customers who walk up to begin the transit trip or transfer from another route. In Market Areas II, III and IV transit centers anchor local transit routes by creating places outside of the downtowns where routes come together to offer customers more route choices. The region has a network of transit centers that will be maintained to anchor local transit routes and facilitate connections. Urban transit centers typically serve many local routes, while suburban tTransit centers in Market Areas III and IV typically have associated park-and-ride facilities that serve express routes and connecting local routes. Transit centers provide customers with shelter, transit information, and other features to enhance the transit customer experience. Transit centers may need to be modernized to meet customers' needs for accessibility, safety, and comfort, and new transit centers may need to be added or improved as transit services expand throughout the region.

### **Transit Stations**

Transit stations are passenger-customer facilities associated with transitways. They provide the public access to light rail, commuter rail and bus rapid transit services. New transit stations are typically developed as transitways are constructed, but can also be added incrementally before or after a full transitway is in operation. As the transitway system matures, transit agencies

~~modernize transit stations through refurbishments and upgrades for service reliability, safety, and customer comfort. Transit stations will generally have a similar level of investment as transit centers.~~

More information regarding transit station investment can be found in the “Transitway System Investment Plan.”

### **Regional Multimodal Hubs**

In addition to transit stations, there are two regional multimodal hubs in the system that connect light rail and commuter rail transit to a number of other existing and planned services. The Union Depot in downtown Saint Paul is served by the Green Line, local and express bus service, Amtrak passenger rail service, and a number of intercity bus services. Target Field Station in downtown Minneapolis is served by the Green Line and Blue Line light rail, Northstar commuter rail, and other bus services that connect in downtown Minneapolis. More information regarding planned transitway connections to these hubs can be found in “Transitway System Investment Plan.”

### **Passenger Amenities Customer Facility Features**

Regional transit providers offer a range of ~~amenities features~~ at ~~bus stops and other passenger customer~~ facilities to improve the customer experience. ~~Passenger Customer facility features amenities may~~ include ~~pedestrian connections and accessibility, customer information in static and real-time signage,~~ shelters, shelter lighting or heaters, trash ~~and recycling~~ receptacles, seating, security cameras, ~~good pedestrian access,~~ bicycle parking and storage, ~~fare payment and vending machines, landscaping, and public art.~~ ~~and customer information in both static and real-time formats.~~

~~Passenger Customer facility features amenities~~ create a more comfortable, accessible and attractive waiting environment for transit customers, as well as enhanced ~~d~~ customer safety. ~~Customer information increases customer satisfaction and reassures them that they can depend on transit.~~ ~~Passenger amenities Customer facilities~~ can also benefit the surrounding neighborhood by making transit a more attractive travel option for nearby people and businesses, and by contributing to the overall character of the streetscape. ~~Amenities are placed at passenger facilities depending upon multiple factors including number of people served, number of limited mobility boardings, and number of transit transfers.~~ ~~Comfortable~~

### **Investing in customer facilities means time passes more easily for transit customers**

Customer facilities at transit stops have a proven positive influence on the customer experience, according to research from the University of Minnesota.

The wisdom in the old saying “time flies when you’re having fun” means that transit customers perceive wait times different based on the features provided. At transit stops with no features - such as benches, shelters, and real-time transit information – the research found that transit customers perceived waiting times to be at least twice the actual wait. Facilities with features significantly reduce perceived waiting times. A 5-minute wait feels like only 3.2 minutes for transit customers with access to shelters.

The full findings of the research from the University of Minnesota are reported in “Perceptions of Waiting Time at Transit Stops and Stations”.

~~waiting areas and transfer facilities are particularly important at major transfer locations such as transit stations or transit centers. The placement of amenities is evaluated to ensure that the various types of amenities are located equitably across the region.~~

More specific policy and guidance for ~~passenger amenities and bus stops~~facility features rests with the region’s transit providers. For example, Metro Transit has a policy on the prioritization and placement of shelters. Some cities have regulations on the placement of benches.~~The Council’s work program also includes a Metro Transit-led effort to develop Bus Stop Facility Guidelines to detail the opportunities for improving bus stops throughout their service area [insert link to “Work Program”].~~

### **Park-and-Ride Facilities**

Park-and-ride facilities are surface lots and structured ramps predominantly located outside of the Urban Center ~~and that are~~ served by express bus, bus rapid transit, or rail. Park-and-rides are important tools for creating the locations with the customer density required to provide cost-effective transit service from suburban and rural areas.

The *2030 Park-and-Ride Plan* (2010) documenteds the ~~needs~~anticipated demand by regional travel corridors and provided recommendations for future park-and-ride facilities. The plan includedds a methodologies for determining facility need and integration with the transit system, analyzing market areas, and considering site selection and facility design. The plan also includes a park-and-ride demand forecast model for estimating future need based on a number of factors that contribute to park-and-ride use. This model has been updated to reflect Thrive MSP 2040 forecasts but also takes into account these factors affecting park-and-ride demand:

- INSERT LIST OF FACTORS PENDING PARK-AND-RIDE STUDY

The model is available for the seven-county region and may be used by all regional transit providers to estimate future park-and-ride needs and planning efforts, including project submittals through the regional solicitation.

Park-and-rides are optimally located in a congested travel corridor, upstream of major traffic congestion, with service to major regional destinations. Facility design takes into account the cost of construction and land acquisition; site access for vehicles, pedestrians, and cyclists; site visibility; future expansion potential; community and land use compatibility; environmental constraints; and opportunities for joint-use ventures and transit-oriented development. The region is shifting away from providing small facilities to concentrate on fewer, larger facilities with higher more frequent levels of service. Larger regional facilities serving multiple cities increase the attractiveness of the service to all residents of the region. Transit providers will continue to coordinate with local communities in planning and designing park-and-rides to integrate park-and-rides into local development patterns. Transit-oriented development and joint-use ventures associated with park-and-ride locations may become more prevalent over time as the region’s transitway system and land use development matures.

Expansion of the park-and-ride system has been a focus ~~over the last decades~~ since the late-1990s, with usage growing annually by ~~six to as much as nine~~ 20 percent. ~~The system today includes 96 park-and-ride facilities consisting of over 32,000 vehicle parking spaces. To meet long-term regional demand, an expanded number of park-and-rides with a total capacity of nearly 35,000 vehicle parking spaces are currently planned through year 2030 to serve transit customers using express bus service and transitways. Existing, planned expansions, and new park-and-rides through 2030 are shown in Figure 6-3.~~ The previously developed 2030 park-and-ride need has been largely built, with nearly 35,000 spaces in the system. While opportunities still exist to expand park-and-ride capacity in certain locations, the system is not expected to expand as dramatically and quickly as past decades. The system currently operates at around 50-60% of capacity and can accommodate much of the demand expected through 2040. The existing park-and-ride system and express bus corridors are shown in Figure 6-5.

~~Much of the existing capacity was built to serve future demand as the region grows. The park-and-ride plan will be updated to reflect any changes to forecasted demand that may have resulted from *Thrive MSP 2040* forecast updates and to reflect evolving plans being developed for transitways. An updated Park-and-Ride Plan will replace the details included in this section and Figure 6-3.~~

Figure 6-36-5: 2030 Park-and-Ride System and Express Bus Corridors (NOT YET UPDATED)

### 2030 Park-and-Ride System and Express Bus Corridors

#### Park-and-Rides

##### 2030 Capacity

- 0-150
- 151 - 400
- 401 - 800
- 800 +

- New Park-and-Rides
- Expanded Park-and-Rides
- Existing Park-and-Rides

Express Bus Corridor

#### Transitway

- Northstar Line
- Blue Line
- Red Line
- Green Line
- Orange Line
- Gold Line

#### Reference Items

- Principal Arterial Highways
- Lakes and Rivers
- City Boundary
- County Boundary
- 2040 Urban Service Area
- MPO Area



## Support Facility Expansion and Modernization

The regional transit system must have sufficient facilities to support efficient and cost-effective transit services. For buses, these support facilities include garages and bus maintenance facilities, bus layover facilities at route terminal points, and dispatching and control centers. For rail, these support facilities include operations and maintenance facilities, train storage facilities, layover facilities, and logistics facilities such as control centers. In addition, system-wide support facilities are needed for the maintenance of passenger-customer facilities, transit police force, employee training, customer service centers, and administration. As the transit system expands, and the types of services available and the number of riders increases, support facility capacity must increase as well. ~~Metro Transit is working to develop a system wide plan to anticipate the support facility needs of the growing transit system.~~

## Bus Support Facilities

As the bus fleet expands to meet anticipated ridership growth, bus garages, bus layovers and vehicle storage will need to be increased. This will be accomplished by expanding existing

facilities and constructing new facilities. Maximum use of existing garage facilities should be made but over-crowded bus garages lose operating efficiency, making it more difficult to provide the quality of transit service expected in the region. Bus garage expansion should precede fleet expansion. Currently, Metro Transit uses five bus garages to provide for daily maintenance and storage of vehicles, with an additional facility serving needs for more intensive vehicle repair. Other regional transit providers have support facilities as well, either through direct ownership or through agreements with private operators. These facilities support bus rapid transit vehicles as well as regular-route vehicles. ~~These facilities also age and require maintenance, including possible long-term replacement.~~ Existing garage facilities in the region are aging and the need to maintain or replace them will emerge as an issue that will need to be addressed in the coming decades. Their use and effective life can be maximized with maintenance and modernization efforts, including investments that result in operating efficiencies.

Bus layover facilities provide a physical space for transit vehicles to stage, an opportunity for route recovery time, and driver break rooms and restrooms. Bus layover facilities are typically located at the terminus of transit routes and may be co-located with customer facilities. These facilities enable the system to operate cost-effectively and on time. Additional layover facilities will be needed in both downtowns, the University of Minnesota, and some suburban locations.

### **Rail Support Facilities**

Rail support facilities presently include two light rail transit operations and maintenance facilities, a rail operations support facility, and the Northstar commuter rail maintenance facility. Additional transitway rail service will generate need for additional operations and maintenance facilities. Options to improve or expand existing facilities as well as construct new facilities will be evaluated based upon the planned transitway network, corridor-specific planning efforts, and system-wide facilities planning.

### **System-wide Support Facilities**

Transit control centers are an essential communications, safety, security, and service link for regional transit service. ~~Metro Transit operates two transit control centers; one supports bus operations the other supports rail operations.~~ Control centers monitor schedule adherence and coordinate the daily activities of ~~Metro Transit~~ buses, trains, Metro Mobility and dial-a-ride services, service vehicles, training vehicles, and other mobile units. They also dispatch vehicles to respond to on-street incidents and to support transit police. As the bus and rail system expand, the transit control centers will also need to expand.

Facilities that headquarter maintenance crews are needed to keep passenger-customer waiting environments facilities clean and in good condition. As ridership grows, passenger-customer facility maintenance capacity must expand to meet the maintenance needs of more heavily used existing facilities and of new facilities.



Transit police support facilities are composed of a central headquarters and small local substations. Administrative offices are also part of the support facilities that contribute to a well-functioning transit system. These system-wide support facilities must have the capacity to support the transit system as it grows.

## Other Transit System Improvements

### Expansion of Transit Advantages

Transit advantages are roadway improvements that improve person throughput by reducing the factors that hinder efficient and attractive transit service. These advantages include but are not limited to bus shoulders, high-occupancy vehicle lanes and MnPASS, ramp-meter bypasses, traffic signal queue jumps, transit signal priority, and curb extensions.

Growing roadway congestion will make it increasingly more difficult for buses to move around the region. Right-of-way that provides a fast travel alternative for rail and bus transit should be pursued when transit volumes justify, ~~but opportunities for implementation are limited. However, a number of roadway improvements can be made to provide transit advantages that maintain travel times and reliability. These improvements~~ Transit advantages benefit transit operations and can work to relieve congestion for both transit and solo drivers alike. Current efforts to implement bus rapid transit in the region, along freeways as well as higher density urban arterial roads, provide faster, more reliable travel times, reduced waiting time for service, and attractive transit amenities and options for commuters who currently drive.

On state highways, transit advantages can include bus-only shoulders, dedicated bus lanes, MnPASS lanes, ramp meter bypasses, and transit stations adjacent to or ~~between-on~~ roadways (see Figure ~~6-46-6~~). Opportunities for further implementation of bus-only shoulders are limited as the system is nearly built out. MnPASS lanes are highway lanes that are shared by transit, high-occupant vehicles, and single-occupant vehicles (SOVs) that opt to pay a toll to use the lane. SOV usage is controlled by varying the toll price based on real-time traffic conditions. Prices are set to maintain a consistent flow of traffic. MnPASS lanes, like those in the I-394 and I-35W corridors, provide a significant transit advantage by offering a congestion-free alternative for transit riders. This strategy can dramatically increase the overall number of people that can travel through a corridor in a given amount of time. The development of the region's MnPASS system is discussed in "Highway Investment Direction and Plan" [*insert link*].

On city streets and signalized highways, improvements include dedicated bus lanes, dynamic parking lanes, traffic signals that are coordinated with transit service and/or provide transit priority, curb extensions that allow buses to avoid pulling into and out of travel lanes, and queue jump lanes, among others. These improvements all work to provide faster trips for customers, improve the attractiveness of transit, and significantly increase the people capacity of city streets.

While some express and local transit corridors are currently well supported by transit advantages, there are a number of locations that need improvements to maintain or improve transit travel times and reliability. In addition, opportunities to coordinate with planned road improvements, or to adequately serve planned community development projects through enhanced transit service, provide high returns on capital transit infrastructure investment. Corridors with high levels of congestion and high existing and potential transit ridership should be prioritized for new transit advantages. The timing of these projects will be dependent on opportunities associated with roadway projects, where coordination is essential to project delivery, but may also be coordinated with transitway projects.

**Figure 6-46-6: 2040 Transit Advantages Bus Shoulders and MnPASS (NOT YET UPDATED)**



## Marketing Transit

Marketing transit can significantly increase awareness of service and lead to higher ridership. The Council and regional transit providers will increase the value, benefits, and usage of transit services through a variety of advertising and promotional programs. Additionally, the Council will pursue opportunities for partnerships with other transit-supportive services including

bicycle- and car-sharing services. Annual transit marketing plans will be developed by the Council based on input from stakeholders.

Transit providers will also form partnerships on travel demand management strategies including working with Transportation Management Organizations to broaden the awareness of transit to more businesses and employees. For additional detail, go to “Travel Demand Management” discussion [*insert link*]. [\(TDM SECTION CHANGES PENDING OTHER CHAPTER UPDATES\)](#)

## Safety and Security

Working with transit providers and communities, the Council will continue to strive to provide a safe and secure environment for passengers-customers and employees on vehicles and at transit facilities. The Metropolitan Transit Police department is an important component of this effort. Through a variety of means, the Transit Police enhance safety, increase ridership, and preserve the quality of regional transit infrastructure. These include regular patrols and rides on transit vehicles, partnerships with other law enforcement agencies and community organizations, and innovative programs such as community service officers.

Transit infrastructure is another important component of safety and security. These investments include cameras on transit vehicles and at stations, and improved lighting at transit stops and stations, among others. An important component of safety and security is good design of facilities, including the consideration of Crime Prevention through Environmental Design principles. Additionally, the Council will continue to invest in employee awareness and public education campaigns to improve transit safety.

In addition to promoting safety and security during regular transit operations, the Council and Metro Transit also have an important role in regional disaster preparedness. The Council maintains an emergency management plan to coordinate between Metro Transit and the various regional and state public safety agencies in the event of an emergency situation.

## Current Revenue Scenario Bus and Support System Investments

The bus system is the largest and most important part of the transit system because it serves all parts of the region. Bus and support system investments are limited by reasonably expected resources, and opportunities to invest are dependent on these constraints. The following summarizes the components of the system that are assumed to be funded in the plan’s Current Revenue Scenario. The first priority for investing in the region’s bus and support system is continuing to operate and maintain the existing system.

<b>Operate and Maintain the Existing Bus and Support System</b>
<ul style="list-style-type: none"><li>• Operating and managing the bus network and routes consistent with Regional Transit Design Guidelines and Performance Standards</li></ul>

- Operating Metro Mobility, including anticipated growth needed to meet demand
- Operating the Transit Link dial-a-ride service and providing Metro Vanpool subsidies
- Operating and maintaining the support systems for the transit system, such as shelter and public facility maintenance and customer information
- Maintaining and replacing vehicles
- Maintaining or replacing existing capital facilities and other equipment to support operations and a positive customer experience, including a modest expansion of bus stop amenities

Beyond ongoing operations and maintenance, opportunities for expansion and modernization of the transit system are limited and available primarily through competitive grant programs. This includes the regional solicitation, which distributes federal Congestion Mitigation and Air Quality (CMAQ) and Surface Transportation Program (STP) flexible funds such as surface transportation block grants within the metropolitan area, or other federal, state, and local programs. The opportunities include:

#### **Expand and Modernize the Bus and Support System**

- Expansion of transit capital vehicles or facilities to serve new markets or provide an improved experience for existing customers, such as enhancements to customer information signage, retrofits to existing transit stations, and placement of additional passenger-customer waiting shelters and bike amenities
- Start-up operating funding for limited expansion of transit service for demonstration purposes, including exploring innovative service models and new technologies
- Modernization of transit facilities or systems to improve the customer experience, provide more efficient transit operations, or improve the operating capabilities of regional transit providers

The opportunities for bus operating and capital expansion will be prioritized based on an evaluation through the Regional Service Improvement Plan, the Regional Solicitation, or other more specific plans that focus on short-term regional transit needs.

### **Increased Revenue Scenario Bus and Support System Investments**

The region will need additional resources to realize the vision for the transit system in this plan that goes beyond the limited opportunities in the Current Revenue Scenario.

Additional resources would allow the region to expand existing services and add new service to parts of the region. Expansion and modernization of transit facilities will enhance the transit customer’s experience on multiple levels. Access to a bus stop or passenger-customer facility

might be improved through a better pedestrian connection, provision of secure bike storage, or a more conveniently located park-and-ride. A transit user’s wait for the bus would be improved with shelters at more bus stops and more amenities at passenger-customer facilities such as heaters, lights, and transit information. These passenger-customer facilities would be in clean, good condition because investments in maintenance support facilities would be commensurate with passenger-customer facility expansions and improvements. Once on the bus, a transit customer’s ride might be more reliable or comfortable because the vehicle has been cleaned and maintained at an updated bus garage that operates at its optimal capacity. Better access to customer support, from police to transit information, would be made possible under this scenario because of investments made in support facilities.

<b>Expand and Modernize the Bus and Support System – Increased Revenue Scenario</b>
<ul style="list-style-type: none"> <li>• An average of at least 1% annual growth in the regular-route bus service over 25 years (at least 25% growth in total), with near-term improvements guided by the Regional Service Improvement Plan, that includes:               <ul style="list-style-type: none"> <li>○ Improved local service frequencies and hours of service to attract new riders to the system and improve access and reliability for existing riders, including an expansion of high-frequency arterial routes</li> <li>○ Expanded coverage of local service with an emphasis on connections between high-density residential neighborhoods, regional job concentrations, and transitways</li> <li>○ Expanded commuter and express service to new markets and improved service in markets that are overcapacity</li> </ul> </li> <li>• Expanded fleet needed to expand service</li> <li>• Enhanced maintenance including snow removal at transit <u>passenger-customer</u> facilities and improvements including better lighting, more customer information, rehabbed aging facilities (<u>e.g. such as</u> Sun Ray Transit Center), more and better shelters, improved multimodal connections, enhanced pedestrian connections to bus stops, and energy-efficient improvements</li> <li>• Expanded or modernized transit support facilities including additional garages for increased system capacity, additional layover capacity in major regional centers, light rail support facility upgrades, bus rapid transit garage capacity, and other improvements</li> </ul>

Like the Current Revenue Scenario, the opportunities for bus operating and capital expansion will be prioritized based on an evaluation through the Regional Service Improvement Plan or other more specific plans that focus on short-term regional transit needs.

## Transitway System Investment Plan

A network of transitways is and will be a significant element of the regional transit system, both in terms of use and investment. Transitway investments are permanent and long-range. They require diligent planning to best serve the existing developed region and help guide future development in the region. This permanence also plays a strong role in the ability of transitways to focus future growth and act as a catalyst for development in the region.

The region will develop a network of transitways that considers a variety of modes including: bus rapid transit in multiple forms, light rail, and commuter rail. The region is currently examining modern streetcar as a regional transitway mode (see discussion near the end of this chapter). Each mode has unique characteristics that are cost-effectively matched to an appropriate purpose and need.

### Transitway Modes

The following are general descriptions of transitway modes in the region.

#### Bus Rapid Transit

Bus rapid transit (BRT) is a transitway mode that uses buses while incorporating many of the premium characteristics of rail. BRT is more flexible than rail in fitting the unique opportunities and limitations of a corridor. BRT has a number of attributes that, as a whole, distinguish it from other bus services in the region.

- Service operations: BRT typically operates at service frequencies of 15 minutes or better for most of the day in both directions, and can be complemented with other services such as local or express routes.
- Running way: BRT can operate in a dedicated busway, bus lanes, MnPASS lanes, dynamic shoulder lanes, dynamic parking lanes, bus-only shoulders, or mixed traffic, depending on the characteristics of the corridor. BRT typically includes various transit advantages such as queue jump lanes [and curb extensions](#) to provide faster travel.
- Technology: BRT can include transit signal priority to allow buses to move more quickly and reliably through traffic signals. Customer information displays and other technology are often provided to improve the customer experience.
- Identity/brand: BRT is often uniquely branded to help distinguish it from other bus services.
- Stations: BRT stations are uniquely branded with more amenities and generally spaced further apart than a standard bus stop to provide faster travel.
- Vehicles: BRT vehicles can range from typical 40-foot transit buses to specialized vehicles with a unique look, low floors and additional doors for quicker boarding, and other customer amenities.

- Fare collection: BRT typically utilizes off-board or other unique fare collection methods that allow for quicker ~~passenger-customer~~ boarding.

BRT facilities are often scalable to demand and can be added or expanded, as needed, over time. For example, an express corridor could add a MnPASS lane or other transit advantage, and then add stations and park-and-rides as demand increases. Because of this, BRT is better suited to adapt to unique corridor conditions than rail. The region is planning for three types of BRT that are matched to the conditions of the corridors: dedicated bus rapid transit, highway bus rapid transit, and arterial bus rapid transit.

### **Dedicated Bus Rapid Transit**

Dedicated BRT is often considered the most similar to light rail in the characteristics of how it operates and level of investment. Dedicated BRT uses special roadways or lanes of roadways dedicated to the exclusive use of buses. Projects are generally similar to light rail in project length, with stations also spaced about a mile apart. Dedicated BRT has more flexibility than light rail because the dedicated guideway and stations can be shared with other services, such as express or local bus. Buses are also more flexible than light rail to operate on existing facilities through small areas where space is limited to build a dedicated guideway. Dedicated BRT has requirements for right-of-way and infrastructure similar to light rail, except for the train and associated propulsion and track systems. A local example of dedicated BRT infrastructure is the University of Minnesota busway, which connects the University's campuses with frequent bus service. The ~~Gateway corridor locally preferred alternative~~ future METRO Gold Line is the first dedicated BRT transitway to be included in the plan.

### **Highway Bus Rapid Transit**

Highway BRT provides frequent, all-day service to regional centers that are near highways and spaced further apart throughout the region, making them difficult to connect with local bus service. Highway BRT generally operates on limited access roadways where buses can use bus-only shoulders, MnPASS lanes, ramp meter bypasses, and priced dynamic shoulder lanes as transit advantages. Stations are spaced about one to two miles apart. Highway BRT service is often complemented with express bus service that uses the same facilities and is coordinated with local bus connections. Other highway BRT characteristics would be similar to dedicated BRT and light rail, such as service frequencies, fare collection, technology, and customer information. The METRO Red Line is the only existing highway BRT line operating in the system, ~~although some capital components of~~ the second line, the METRO Orange Line on I-35W South, have been completed, such as the I-35W and 46<sup>th</sup> Street Station is also included in the plan.

### **Arterial Bus Rapid Transit**

Arterial BRT is an all-day, frequent service that is faster and provides a better customer experience in corridors with strong existing local bus service. These corridors are all in highly developed areas of the region where available right-of-way limits the ability to implement services like facilities for light rail or dedicated BRT. Arterial BRT can attract a high number of new transit riders and improve the experience for a high number of existing riders. Arterial BRT generally operates in mixed-traffic on local streets with stations spaced about ½ mile apart, depending on corridor specifics, and incorporates transit advantages such as transit signal priority or queue jump lanes. Arterial BRT can be complemented with local bus service that stops more frequently. Typical amenities include improved stations and customer information, unique vehicles and branding, and fare collection that allows for faster boarding. The first arterial BRT line in the region, the A Line, opened along Snelling Avenue in 2016. Construction is expected on a second line, the C Line, on Penn Avenue in 2018.

Since BRT is intended to be flexible, corridors may be implemented in a way that is a combination of BRT types. Dedicated BRT projects are typically more substantial investments and will likely fit into the New Starts category of federal funding. Highway BRT and arterial BRT projects will typically fit into the Small Starts category of federal funding and may be explored in a phased approach. In many cases, elements of these projects can be implemented prior to the complete bus rapid transit investment (for example, limited stop bus service or enhanced bus shelters). Dedicated BRT and highway BRT lines will be considered part of the METRO system with color designations as long as the service and facilities meet certain minimum characteristics.

### **Light Rail Transit**

Light rail transit is an all-day, frequent service that connects dense employment and population centers with each other. It operates on tracks primarily in an exclusive running way. Vehicles are typically powered by overhead electrical wires. Stations are typically spaced about ½ to one mile apart. Typical light rail lines in this region can extend 10 to 15 miles out from the urban core and primarily serve the most densely developed areas of the region. Longer lines would generally be cost-prohibitive and better served by connecting local or express service. Light rail service operates in both directions at a high frequency. All light rail lines will be considered part of the METRO system and given color designations for customer information purposes. The initial segments of the METRO Blue Line and Green Line are operating, with extensions in development.

### **Modern Streetcars**

Modern streetcar is an all-day, frequent service that operates in urban areas with high transit demand. ~~Modern streetcars are under consideration in a number of corridors.~~ Modern streetcars typically operate in mixed traffic, similar to a local bus route. They typically stop every few blocks and operate at shorter distances than light rail, with an emphasis on high-frequency service with high accessibility. Typical modern streetcar lines are less than four miles



long ~~and while light rail lines are typically around ten miles long. They~~ travel more slowly than light rail ~~transit because light rail operates primarily in its own dedicated right-of-way and stops approximately every mile, while streetcars usually operate in mixed traffic and stop more frequently.~~ However, ~~M~~modern streetcars may attract new transit riders similar to light rail and may offer some travel time advantages over local buses, such as faster boarding, faster fare collection, and intersection signal priority – similar to the transportation benefits BRT can offer. Modern streetcar service is particularly suitable for high-density, mixed-use areas with short average passenger trip lengths, areas where improved transit will benefit a high number of existing riders, and as an attraction for new or infrequent transit users like shoppers or visitors. Modern streetcars also have demonstrated promise for supporting high-density, mixed-use, walkable development in urban cores where people can live without a car and become regular and frequent transit users. Despite their differences, there are many similarities between modern streetcar and light rail and the two modes may share characteristics of each other, depending on the purpose of the project and implementation decisions made by lead agencies.

A number of recent and ongoing studies are considering modern streetcars for further planning or implementation but no existing modern streetcars exist in the region and no specific projects are assumed in the Current Revenue Scenario of this plan. As project recommendations come forward that would introduce this mode to the region, they will be considered on an as needed basis. ~~The most advanced of these studies is the Nicollet-Central modern streetcar locally preferred alternative recommendation to the Council that was approved by the City of Minneapolis. Modern streetcar is also under consideration in studies of the Robert Street corridor, Midtown corridor, and West Broadway Corridor. The cities of Minneapolis and Saint Paul also completed city-wide feasibility studies with resulting long-term streetcar networks proposed for each city. More detail is discussed under Corridor Planning Status Updates.~~

~~The number of studies considering modern streetcar illustrates the positive support for it as a new transit mode in the region.~~ The Council is continuing to collaborate with local units of government and regional transit planning partners to determine the role of modern streetcars in the regional transit system as the first potential applications of the mode are discussed. ~~This continued effort is described in the “Work Program” [insert link].~~

## Commuter Rail

Commuter rail is an express transit service that primarily connects downtown employment centers to distant population centers. Commuter rail typically operates on existing freight railroad tracks to reduce infrastructure costs. Commuter rail vehicles may use diesel multiple unit vehicles or conventional diesel locomotives pulling passenger coaches. In many cases, commuter rail operates on tracks that also carry intercity passenger rail traffic operated by Amtrak or other passenger rail services, potentially sharing common stations. Lines are typically 20 or more miles in length, with stations spaced much further apart than light rail or BRT, typically about five miles apart. This spacing results in faster travel times that are competitive with auto travel. Station areas are primarily oriented to park-and-ride uses or dense housing

and mixed-use development. Commuter rail services operate at 20- to 30-minute frequencies during peak periods, with limited or no midday or reverse-direction service. The Northstar Line is the only existing commuter rail line in the transitway system and is not considered part of the METRO system of all-day, frequent transitway service.

### Regional Transitway Guidelines

More detailed descriptions of the characteristics of each mode are available in the *Regional Transitway Guidelines* (2012). The image in Figure ~~Error! Reference source not found.~~ 6-7 is an excerpt from the Regional Transitway Guidelines and it illustrates the basic characteristics of each mode. The only modes not included in this discussion is dedicated BRT and modern streetcars, modes that have not been implemented in this region yet. ~~An update to the~~ Regional Transitway Guidelines is will be updated on an ongoing basis as additional information or insights are available or if the parameters for the Guidelines change. identified as a work program item and will consider addressing dedicated BRT [insert link to "Work Program"].

### Other Modes

Other modes may be explored through further detailed study, but their inclusion in the plan will require an amendment. ~~A discussion of modern streetcars is included at the end of this section and will be addressed through a work program item.~~

Figure 6-56-7: Excerpt of “Minimum Elements” from the Regional Transitway Guidelines



Regional Transitway Guidelines

Table 10-1 – Minimum Elements from Transitway Guidelines<sup>3</sup>

	Arterial BRT	Highway BRT <sup>4</sup>	LRT	Commuter Rail
<b>Service Operations</b>	<p><b>WEEKDAY</b> Combined frequency for Arterial BRT and local service should be 10-min. peak period, 15-min. midday/evening, 30- to 60-min. early/late</p> <p><b>WEEKEND</b> 15-min. day/evening, 30- to 60-min. early/late</p>	<p><b>WEEKDAY</b> Combined frequency for station-to-station and express services should be 10-min. peak period and 15-min. midday</p> <p><b>WEEKEND</b> Frequency based on demand</p>	<p><b>WEEKDAY</b> 10-min. peak period, 15-min. midday/evening, 30- to 60-min. early/late</p> <p><b>WEEKEND</b> 15-min. day/evening, 30- to 60-min. early/late</p>	<p><b>WEEKDAY</b> 30-min. peak period Off-peak frequency as needed</p> <p>At least 5 trips each peak period</p>
<b>Stations</b>	<p>Transitway stations justified by proven, documented demand that:</p> <ul style="list-style-type: none"> <li>• Achieve a functional, cost-effective outcome that balances aesthetics with funding availability</li> <li>• Are attractive and informative environment for passengers at stations that is consistent with local community context, transitway identity, and passenger waiting times</li> <li>• Achieve functional integration with the surrounding land uses, which may include forming a nucleus for transit-oriented development at stations</li> <li>• Balance travel time, access and station demand relative to travel markets at the time of implementation</li> <li>• Promote a safe and secure environment by designing all elements to enhance passive security by maintaining visibility to and within the station and station area</li> <li>• Implement an interdisciplinary approach to station and facility design that incorporates advancements in technology</li> </ul>			
<b>Runningway</b>	Full-sized mixed-traffic lanes (10-12 feet) that provide transit with travel-time advantages under congested roadway conditions	Full-sized (12 feet) managed lanes or bus-shoulder lanes that provide transit with travel-time advantages under congested roadway conditions	Adequate, exclusive trackage for safe and reliable operation	Adequate trackage (or trackage rights) for safe and reliable operation
<b>Vehicles</b>	Sleek, modern, premium-styled buses appropriately sized and configured to service characteristics		Compatible with existing rail and infrastructure systems	
<b>Fare Collection</b>	Modern and proven fare collection systems that integrate well within the regional system and fit the needs of the region and transitway			
<b>Technology</b>	Automatic vehicle location (AVL) on all vehicles and automatic passenger counters (APC) on all LRT, Commuter Rail, and BRT station-to-station vehicles Real-time schedule information at all high-volume stations and real-time parking availability at major park-and-ride facilities			
	Proven communications link compatible and coordinated with regional transit control center		Compatible with existing rail systems technology and control centers	
<b>Identity and Branding</b>	TBD	Color line names for station-to-station services Unique system name Consistent signage and branding using regional transit system color scheme Unique vehicle designs distinguished from local bus	Unique line name that does not conflict with color lines or LRT/Highway BRT system name	

## Transitway Development Process

### Corridor Planning and Development

The development of the transitway system and individual corridors warrants substantial study prior to investment decisions. This process is essential for gathering public input and being good stewards of public money. The following is a typical process for the development of a transitway:

1. **System Planning and Feasibility** – The Metropolitan Council will lead or collaborate on region-wide studies of transitways, in coordination with MnDOT, ~~the Counties Transit Improvement Board~~, local governments (counties and cities) and transit providers, to guide decision-making at the regional level. Corridor feasibility studies led by local governments or transit providers should also coordinate with regional system planning.
2. **Corridor Planning and Alternatives Analysis** – Corridors should undergo an analysis of alternative transitway modes or alignments through early planning work that narrows the list of alternatives down to a local recommendation for the “Preferred Alternative.” The locally preferred alternative is the alternative ultimately included in the Transportation Policy Plan, a requirement for federal, state, or regional funding.
3. **Environmental Review** – Every project will undergo an environmental review, consistent with state and federal law, depending on the size and nature of a project. The environmental review will disclose potential environmental impacts of a project and identify ways to avoid or minimize them.
4. **Design and Engineering** – The design and engineering of a project will build upon preliminary work in previous steps through to full project design and engineering. This step includes work described as “project development” and “engineering” under the federal New Starts program, but also includes pre-project development work that may be required to transition a project after environmental and planning work.
5. **Construction** – The capital elements of a project will be built, tested and readied for operations. This phase also includes the expansion of vehicle fleets and other systems needed to operate the transitway.
6. **Operation** – A project begins operating during the testing phases but “revenue service” begins when it opens to the public to serve ~~passengers~~customers.

For rail projects, these steps generally occur as a complete project where all elements are planned, designed, built, and opened for operation on the same timeline. For BRT projects, these processes can occur in phases with different elements of the project; a park-and-ride for instance, being planned, designed, built, and opened before other elements.

Throughout all of these steps, public and stakeholder participation will be an essential aspect of project work. The Council and its regional partners in transitway development, including local governments, will work together to ensure that each transitway project is developed to

integrate into the transportation system [and the community context](#), and to consider the concerns of affected communities.

County governments have led the way on the early stages of many transitways, often funding and leading corridor studies. Cities and transit providers are also engaging in corridors studies. It is important that the Council, counties, cities, regional transit providers, MnDOT, and other stakeholders work together to develop these major investments in a collaborative way. Many of the details of project implementation and best practices are described in the Regional Transitway Guidelines. However, best practices will continue to evolve and project-specific issues will continue to arise in projects of this scale. Collaboration will be a key component of project development.

Transitways are major regional projects that require the coordination of many potential elements that are not directly addressed in this chapter. Table 6-4 includes references to other areas of the plan and other considerations that will be used in transitway development.

**Table 6-4: Transitway Development Coordination References**

<p><b>Bus System Service and Facilities</b> <a href="#">(within Chapter 6)</a></p>	<p>Other elements of this plan describe how bus improvements are planned and how facilities support the development of transitways, such as park-and-rides <a href="#">[insert link]</a>.</p>
<p><b>Transit Advantages and Highways</b> <a href="#">(within Chapter 6)</a></p>	<p>The discussion of transit advantages <a href="#">[insert link]</a> can often be coordinated with transitway improvements, particularly with BRT transitways.</p>
<p><b>Pedestrian and Bicycle Plans</b> <a href="#">(within Chapters 3 and 7)</a></p>	<p>The plan has a substantial discussion on the regional bicycle system <a href="#">[insert link]</a>. Elements of a good pedestrian experience are also discussed in “Land Use and Local Planning” <a href="#">[insert link]</a>.</p>
<p><b>Land Use and Local Planning</b> <a href="#">(within Chapter 3)</a></p>	<p>Local governments play a significant role in planning local transportation and land use that connects to transitways. More discussion is available in “Land Use and Local Planning” <a href="#">[insert link]</a> and through local comprehensive plans.</p>
<p><b>Regional Transitway Guidelines</b> <a href="#">(available on Council website)</a></p>	<p>The Regional Transitway Guidelines have a lot of information on best practices and standards for transitway design and integration into the transportation system <a href="#">[insert link]</a>.</p>

## Setting Regional Transitway Priorities

Transitways are some of the largest single transportation investments that the region is planning through 2040. The significance of these projects and the number of corridors under study will require the region to prioritize transitway investments to ensure the efficient development of a successful, regionally balanced system. *Thrive MSP 2040* and the Transportation Policy Plan have established new accountability considerations that are intended to guide the development of the region and investments in infrastructure. *Thrive MSP 2040's* outcomes and the Transportation Policy Plan's goals and objectives are important policy statements that will establish a clearer understanding of the results that transitway investments are intended to achieve.

The ability of the region to compete for federal New Starts and Small Starts funding will also depend on advancing competitive projects. The region will need to be aggressive but strategic about which projects are submitted to compete for federal funding. The region will also need to be strategic about funding projects with higher levels of state or local funding if they may not compete well for federal funding.

Transitway projects already undergo a substantial analysis at the corridor level to determine the appropriate mode and alignment. Counties, cities, and transit providers are leading efforts to determine the right fit for each corridor. The information developed during these analyses by lead agencies to recommend a locally preferred alternative for inclusion in the plan should provide a common understanding for determining how a project advances the region toward its desired results. The region's desired results can also inform each corridor analysis to help determine the best result for the region, while allowing for flexibility to fit with local needs.

Setting regional transitway priorities will be a dynamic process as projects come forward for inclusion in the Transportation Policy Plan. The process will be a collaborative effort of policymakers that includes the Counties Transit Improvement Board (CTIB) and the Metropolitan Council funding and operating agencies, such as counties and transit providers, with involvement from cities and other stakeholders through the region's advisory committees. The process will start with gathering the appropriate technical information and allowing policymakers to be strategic in deciding how a project moves forward and how it is reflected in the Transportation Policy Plan.

### Providing the Technical Information

The basic technical information for a proposed transitway project will provide a common understanding for regional decision-making. Through corridor analyses, this region has substantial experience evaluating transitway alternatives with technical measures to determine the right investment for a corridor. This plan is establishing the identifies technical investment factors that will be considered considered when evaluating corridors for the region to prioritize. A work program item that will build on the extensive experience of the counties and other

~~project leads will help determine specific measures.~~ The technical investment factors ~~and example measures that help provide context~~ are included in **Error! Reference source not found.** Table 6-5. Projects should provide information that addresses the technical investment factors, using example measures as guides.

**Table 6-5: Technical Investment Factors for Setting Regional Transitway Priorities**

Technical Investment Factors	<del>Possible Suggested</del> Measures
<b>Ridership (Current <del>and</del> forecast year)</b>	<ul style="list-style-type: none"> <li>• Average weekday project boardings</li> <li>• New weekday system linked trips on transit</li> </ul>
<b>Access to Jobs and Activity</b>	<ul style="list-style-type: none"> <li>• Increase in job accessibility on the transit system <del>within 45 minutes</del></li> <li>• Number of regional job concentrations <u>or local centers</u> served</li> </ul>
<b>Cost-Effectiveness</b>	<ul style="list-style-type: none"> <li>• <del>Annualized capital and operating cost per annual boarding</del> <u>or</u></li> <li>• <del>Annualized capital and operating cost</del> per new annual system linked trip on transit</li> </ul>
<b>Existing Land Use</b>	<ul style="list-style-type: none"> <li>• Total population, employment, and student enrollment within ½-mile of proposed stations</li> <li>• Intersection density and walkability near stations</li> <li>• Number and relative share of affordable housing units within ½ mile of proposed stations and community housing performance scores</li> </ul>
<b>Future Land use and Development</b>	<ul style="list-style-type: none"> <li>• Land use plans supportive of transitway densities, as described in “Land Use and Local Planning”</li> <li>• <del>Official land use controls supporting affordable housing construction</del></li> <li>• <u>Qualitative assessment of</u> regulatory, infrastructure, and financing tools supportive of <u>transit-oriented</u> development <del>including shared parking, parking requirement reductions</del></li> <li>• Strength of development market</li> <li>• Plans, <del>and</del> policies <u>and land use controls</u> to create and preserve a mix of housing affordability (see Housing Policy Plan)</li> </ul>
<b>Equity</b>	<ul style="list-style-type: none"> <li>• Average weekday project boardings by transit-dependent households</li> <li>• Income and affordable housing <u>access</u></li> <li>• Opportunity access for low-income population and people of color</li> </ul>

<b>Environment</b>	<ul style="list-style-type: none"> <li>• Water supply – <del>suitability and</del> local policies supporting <u>groundwater recharge</u> <u>sustainable water management</u></li> <li>• Air quality – emissions reduction</li> </ul>
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This list of technical factors was developed to strongly align with the federal New Starts and Small Starts Capital Investment Grants program evaluations and with factors that measure the region’s desired results stated in *Thrive MSP 2040* and the *2040 Transportation Policy Plan*. ~~The work program item on Further Defining the Process for Setting Transitway Priorities will work through specific measures as well as methodologies and potential benchmarks [insert link to “Work Program”].~~ The technical information will inform decision-making by policymakers that will consider the technical information and policy factors. The technical details on projects included in this Plan are included in tables following the current revenue scenario and increased revenue scenario transitway discussions.

**Considering Policy Factors**

With the technical information available, policymakers will then need to consider other factors that are more qualitative and less technical. This will require a strong collaboration that includes the CTIB funding partners and the Council, with involvement from cities and other stakeholders through the region’s advisory committees. All seven counties in the region administer a sales tax for transportation with identified investment priorities, some including substantial funding for transit. These priorities will be a significant input into the policy discussion about transitway priorities. CTIB has a Transit Investment Framework that sets forth the Board’s policies and procedures governing the award of grants from the sales tax proceeds and describes the Board’s vision for a network of transitways. The county-administered sales tax ~~es~~ is ~~are~~ currently the most substantial regional non-federal funding source for transitways. The policy investment factors and important considerations for this analysis are included in Table 6-6.

**Table 6-6: Policy Investment Factors for Setting Regional Transitway Priorities**

Policy Investment Factors	Possible Considerations
<b>Regional Balance</b>	<ul style="list-style-type: none"> <li>• Investment levels across the region (geographic and per capita considerations)</li> <li>• Investment levels that promote prosperity at the community’s stage and level of development</li> </ul>
<b>Funding Viability</b>	<ul style="list-style-type: none"> <li>• Viability for revenues being considered</li> <li>• Timing of spending expectations and revenues available</li> </ul>
<b>Community Commitment</b>	<ul style="list-style-type: none"> <li>• Local government support (Resolutions of support)</li> <li>• Local land use and development commitments</li> </ul>



	<ul style="list-style-type: none"> <li>• Public support</li> </ul>
<b>Risk Assessment and Technical Readiness</b>	<ul style="list-style-type: none"> <li>• Potential risks through project implementation</li> <li>• Stage of technical readiness, project development</li> </ul>

Transitway corridors should take these technical and policy investment factors into consideration during corridor studies, including feasibility studies and alternative analyses. The technical and policy factors will guide the region in determining how a project fits into the timing and funding options in the Current Revenue Scenario of the plan. ~~The prioritization factors will not be used to determine consistency of CTIB’s transitway grants with this plan. The technical and policy factors are informative for the region’s policymakers and public to provide transparency to the decision-making process.~~

The investment factors highlight the importance of land use and local government development support. Transitway investments are intended to help shape development patterns, but development patterns will also help shape transit investments. In order for transitways to realize their full potential for expected development, local governments will need to provide the vision and planning for land use and local investments. The Council ~~and CTIB and transitway funding partners~~ are committed to expanding the transitway system; local partners will need to show commitment to transit-supportive land use in return. More information on how local governments can do this is available in “Land Use and Local Planning” [*insert link*].

Transitways will not be included in the Current Revenue Scenario until a locally preferred alternative is recommended from a local process. If a number of transitways make this recommendation simultaneously, a multi-transitway analysis may need to be conducted to consider several projects at once. This may also be explored through a regional Program of Projects approach to funding multiple projects at once and accelerating some projects. Until specific measures and methodologies can be defined through the work program item, transitway projects that come forward will be evaluated on a case-by-case basis. ~~by CTIB and the Council, with involvement from cities and other stakeholders through the region’s advisory committees.~~ This process is not intended to add steps to the transitway adoption process, but rather to add clarity to the decision-making process moving forward. The process will be integral to decision-making under an Increased Revenue Scenario, where transitway investment has the potential to be accelerated across multiple corridors.

## Current Revenue Scenario Transitway System Investments

The region has many corridors under for transitway investment potential. Transitway investments are limited by reasonably expected current revenues and projects must be prioritized within these constraints. The Current Revenue Scenario includes the list of projects that have a locally preferred alternative with approved local resolutions of support and an

identified [reasonable funding plan](#), ~~but there is flexibility in the plan to add additional projects under the Current Revenue Scenario.~~

### Existing Transitways in Operation

The first priority for investing in the region’s transitway system is continuing to operate and maintain the existing transitways.

Existing Transitways in Operation
<ul style="list-style-type: none"><li>• METRO Blue Line (Hiawatha Light Rail <a href="#">Transit</a>)</li><li>• Northstar Commuter Rail</li><li>• METRO Red Line (Cedar Avenue <del>Transitway</del><a href="#">Highway Bus Rapid Transit</a>)</li><li>• <a href="#">METRO Green Line (Central Corridor Light Rail Transit)</a></li><li>• <a href="#">A Line (Snelling Avenue Arterial Bus Rapid Transit)</a></li></ul>

Beyond ongoing operations and maintenance, these corridors may require modernization or modest expansion improvements that address operational issues, unmet demand, or other unique challenges. [This may include additional stations that will be identified in the project list \(Appendix C\) and Transportation Improvement Program \(TIP\), which is updated annually. Existing transitways are shown on Figure 6-8 - Map of Existing Transitways and Current Revenue Scenario Expansion Transitways.](#)

### Transitway Expansion Assumed to be Funded within the Current Revenue Scenario

The second priority for investing in the region’s transitway system is the expansion of the system in corridors that provide the strongest contributions to meeting *Thrive MSP 2040* outcomes and regional goals and objectives in this plan. The funded projects have a locally preferred alternative (if seeking federal New Starts or Small Starts funding) and an accepted funding plan. These projects are advancing through project development phases, such as final environmental clearances, design [and engineering](#), or construction, with a tentative opening date planned.

The projects assumed to be funded are also furthest along in implementing land use strategies around transitways that further support the region’s desired results. Local governments should be conducting or implementing station-area planning for these corridors as they continue to move through the transitway development process. Land use strategies are discussed in more detail in “Land Use and Local Planning” [\[insert link\]](#).

### Transitway Expansion Assumed to be Funded within the Current Revenue Scenario

The transitway corridors below have a locally preferred alternative and are funded within the current revenue assumptions of the plan. They are shown on Figure ~~6-66-8~~ - [Map of Existing Transitways and Current Revenue Scenario Expansion Transitways](#) [Map of Current Revenue Scenario Transitways and CTIB Phase I Program of Projects](#).

- ~~METRO Red Line Stage 2 (Cedar Avenue Transitway): in project development, planned to open around 2019~~
- METRO Orange Line (I-35W South [Highway](#) Bus Rapid Transit): ~~in project development~~ [under construction](#) with some [elements already construction](#) completed, planned to open around ~~2019~~ [2021](#)
- METRO Green Line Extension (Southwest ~~LRT~~ [Light Rail Transit](#)): ~~in project development~~ [in engineering with heavy construction anticipated to begin in 2018](#), planned to open around ~~2019~~ [2022](#)
- METRO Blue Line Extension (Bottineau ~~LRT~~ [Light Rail Transit](#)): ~~in pre-project development~~ [beginning major construction in 2019](#), planned to open around 2022
- METRO Gold Line (Gateway Dedicated Bus Rapid Transit): in pre-project development, planned to open around ~~2022~~
- ~~Three-C Line (Penn Avenue Arterial Bus Rapid Transit): in engineering, planned to open in 2019~~
- ~~arterial BRT projects with one opening every 2-3 years: Snelling Avenue in design, Penn Ave in pre-project development, and Chicago-Emerson-Fremont in planning~~

~~The region has the financial capacity to fund these projects with current revenue assumptions that include federal funds, sales tax funds administered by CTIB, state funds, and local funds. Sales tax funds administered by CTIB are not assumed for arterial BRT projects. The increased operating costs associated with arterial BRT are not funded because the revenues available are only available for capital. However, arterial BRT capital investment does provide for improved customer experience and operating efficiencies in corridors with existing high levels of service.~~

**METRO Orange Line (I-35W [South Highway](#) BRT)** This project will connect Minneapolis, Richfield, Bloomington, and Burnsville [primarily](#) along I-35W. The locally preferred alternative [of highway BRT on I-35W](#) was refined in 2014 with the adoption of the *Orange Line Project Plan Update*, which incorporates and updates previous planning projects completed in the corridor between 2005 and 2010. [The Orange Line began early construction activities in 2017 and anticipates a federal Small Starts funding agreement in 2018, toward full construction in 2019 and opening in 2021.](#) ~~Several capital components were completed through the recent Urban Partnership Agreement and Crosstown Commons reconstruction. Metro Transit is partnering with a number of agencies to design and implement the remaining guideway improvements, stations, and service elements. The project was approved for entry into the FTA's Small Starts project development phase in late 2014. MnDOT's 2005 I-35W BRT Study and the 2030 Transportation Policy Plan recommended extending METRO Orange Line south to Burnsville~~

~~Shopping Center and the Kenrick Avenue Park and Ride in Lakeville. Future station locations, routing, and implementation timeline will be determined as part of this potential second phase.~~

**METRO Green Line Extension (Southwest ~~LRT~~Light Rail Transit)** This ~~project~~ 14.5 mile extension of the METRO Green Line will connect Eden Prairie, Minnetonka, Hopkins, St. Louis Park, and Minneapolis and the existing Green Line communities. The project's locally preferred alternative was adopted as the Kenilworth-Opus-Golden Triangle (3A) ~~LRT~~-light rail alignment in May 2010 ~~and has progressed through the Draft Environmental Impact Statement (DEIS).~~ During the project development phase, the terminus was revised to SouthWest Station, eliminating the Mitchell Road Station from the project. The project anticipates starting heavy construction and receiving a full funding grant agreement in 2018. ~~The project is currently in the preliminary engineering phase and advancing work on local land use planning around proposed stations. Construction is expected to start in 2016 with an opening year of 2019.~~

**METRO Blue Line Extension (Bottineau ~~LRT~~Light Rail Transit)** This ~~project~~ 13.5 mile extension of the METRO Blue Line will connect Brooklyn Park, Crystal, Robbinsdale, Golden Valley, and north Minneapolis with the existing Blue Line communities. The project's locally preferred alternative was adopted as the West Broadway ~~in Brooklyn Park~~– Burlington Northern Santa Fe Corridor – Olson Memorial Highway (B-C-D1) ~~LRT~~-light rail alignment in May 2013. The project is in engineering and anticipates starting heavy construction and receiving a full funding grant agreement in 2019. ~~It has advanced into the environmental review phase. Advanced station-area land use planning is ongoing and the region has submitted a request for entry into the FTA New Starts project development phase in 2014.~~

**METRO Gold Line (Gateway Dedicated BRT)** This project will connect Saint Paul, Maplewood, Landfall, Oakdale, ~~Lake Elmo~~, and Woodbury. This project's locally preferred alternative was adopted as dedicated BRT generally on the Hudson Road – Hudson Boulevard (~~A-B-C-D3A-B-C-D2-E2~~) alignment that crosses to the south side of I-94 at approximately Bielenberg Drive terminating at Woodbury Theater ~~between approximately Lake Elmo Avenue and Manning Avenue.~~ Advanced station-area land use planning, environmental work, and early engineering is ongoing and the region plans to submit a request for entry into the FTA New Starts project development phase in 2018. ~~The project has advanced into the environmental review state. Advanced station-area land use planning is ongoing and the region plans to submit a request for entry into the FTA New Starts project development phase in 2015. The Gateway corridor has been identified as a funding priority for CTIB in its Phase I Program of Projects.~~

**C Line (Penn Avenue Arterial BRT)** This project will connect Minneapolis and Brooklyn Center. The project is arterial BRT generally along Glenwood and Penn Avenues terminating at Brooklyn Center Transit Center. Temporary stations will serve the line along Olson Memorial Highway starting in 2019 -until the Blue Line extension is complete, after which the line will move to Glenwood Avenue in 2022 concurrent with the Blue Line extension opening.

### Federal Funding Assumptions for Transit Expansion

The Twin Cities region is in the midst of an aggressive build-out of the transitway system that will help shape the future of the region. To date, the region has been successful in advancing projects that have received substantial funding from the federal government's highly competitive Capital Investment Grants program that includes New Starts and Small Starts grants. This Plan's list of projects is no different, assuming between \$200-\$250 million per year in federally competitive capital expansion funds for the next decade, and potentially beyond.

Four of the five funded expansion projects assume 45-50% federal funding for the capital cost of the project. The region will continue to plan for and prepare federally competitive projects and explore opportunities for multi-project commitments from the federal government.

There is risk in these assumptions, as the Plan assumes approximately 10% of the federal budget for Capital Investment Grants (under current budget amounts) for ten years. Should federal funding not materialize for any given project, the region will need to work cooperatively to determine a viable funding path forward that considers the *Thrive MSP 2040* outcomes of Stewardship, Prosperity, Equity, Livability, and Sustainability. The discussion of Setting Regional Transitway Priorities will assist with this potential situation.

### **Federal Expansion Funding in the Current Revenue Scenario**

~~Since 2011, the region has been able to secure approximately \$90 million per year in New Starts funding for capital projects. (From 2001 through 2010, the annual average was approximately \$50 million.) This plan assumes a more aggressive approach to federal New Starts funding of nearly \$180 million annually in the first ten years. Federal funding is assumed for 50% of the capital cost of New Starts eligible projects, an assumption the region has a history of achieving. The federal funding levels can be managed with short-term financing tools, such as grant anticipation notes, to provide higher levels of funding when needed with the federal payback occurring later. Beyond the first 10 years, no federal New Starts funding is included in the plan until specific projects are identified with a locally preferred alternative and a plan for funding the project.~~

~~The Council and CTIB will work aggressively to seek competitive federal funding beyond the historical level of federal funding to accelerate building transitways and delivering the region's vision for a system. The region will continue to plan for and prepare federally competitive projects and explore opportunities for multi-project commitments from the federal government. The region will also explore a program of projects approach in which some projects are locally funded to leverage federal funds for other projects.~~

~~The region also does not yet have experience pursuing Small Starts funding for a project. Small Starts funding may provide another option for the region to secure additional federal funding~~

for smaller transitway investments, increasing the overall revenue for the region. Small Starts projects do not need to have a locally preferred alternative identified in the plan until seeking a full funding grant agreement from the FTA, which provides for more flexibility in the timeline for projects to be amended into the Transportation Policy Plan.

### **Transitway Expansion in CTIB Phase I Program of Projects**

The Counties Transit Improvement Board (CTIB) has adopted a list of priority corridors for implementation within current revenue assumptions. These corridors are expected to be implemented in the first 10 years of the plan once a funding plan and locally preferred alternative are determined. The corridors included below are not yet at the point of having a locally preferred alternative or a funding plan to include in the Current Revenue Scenario. In order to accelerate these transitways into the first 10 years of the plan, financing will likely need to be assumed in coordination with CTIB. A project locally preferred alternative will be considered for amendment into the plan when selected and recommended by the lead agency and local governments along a corridor. It is anticipated that these projects will be funded with a combination of federal funds, sales tax funds administered by CTIB, state funds, and local funds but the project specific sources and shares will vary.

#### **Transitway Expansion in CTIB Phase I Program of Projects**

The transitway corridors below are new transitway project priorities adopted in CTIB's Phase I Program of Projects that are under study for a locally preferred alternative. They are shown on Figure 6-6: Map of Current Revenue Scenario Transitways and CTIB Phase I Program of Projects.

- Robert Street
- Riverview
- Red Rock

In addition to these expansion corridors, CTIB's Phase I Program of Projects identifies transitway improvement opportunities in existing and planned corridors. These improvement projects are not full transitway implementations, but may enhance existing transitways or advance elements of future transitways, such as incremental improvements in BRT corridors. The Red Rock corridor is prioritized for transitway improvements that move the corridor toward a future transitway.

### **Acceleration Opportunities within the Current Revenue Scenario**

#### **Arterial Bus Rapid Transit Acceleration Opportunities**

The Current Revenue Scenario assumes three arterial BRT projects will begin construction in the first 10 years of the plan, funded by a combination of federal CMAQ, state bond, and Council regional transit capital funding. There is financial capacity in the Current Revenue Scenario to fund additional arterial BRT projects beyond the first 10 years should the region establish a

track record of securing CMAQ and state bond allocations for arterial BRT projects. Additional arterial BRT projects are not yet included in the Current Revenue Scenario as the next 10 years will be key to assessing this funding assumption.

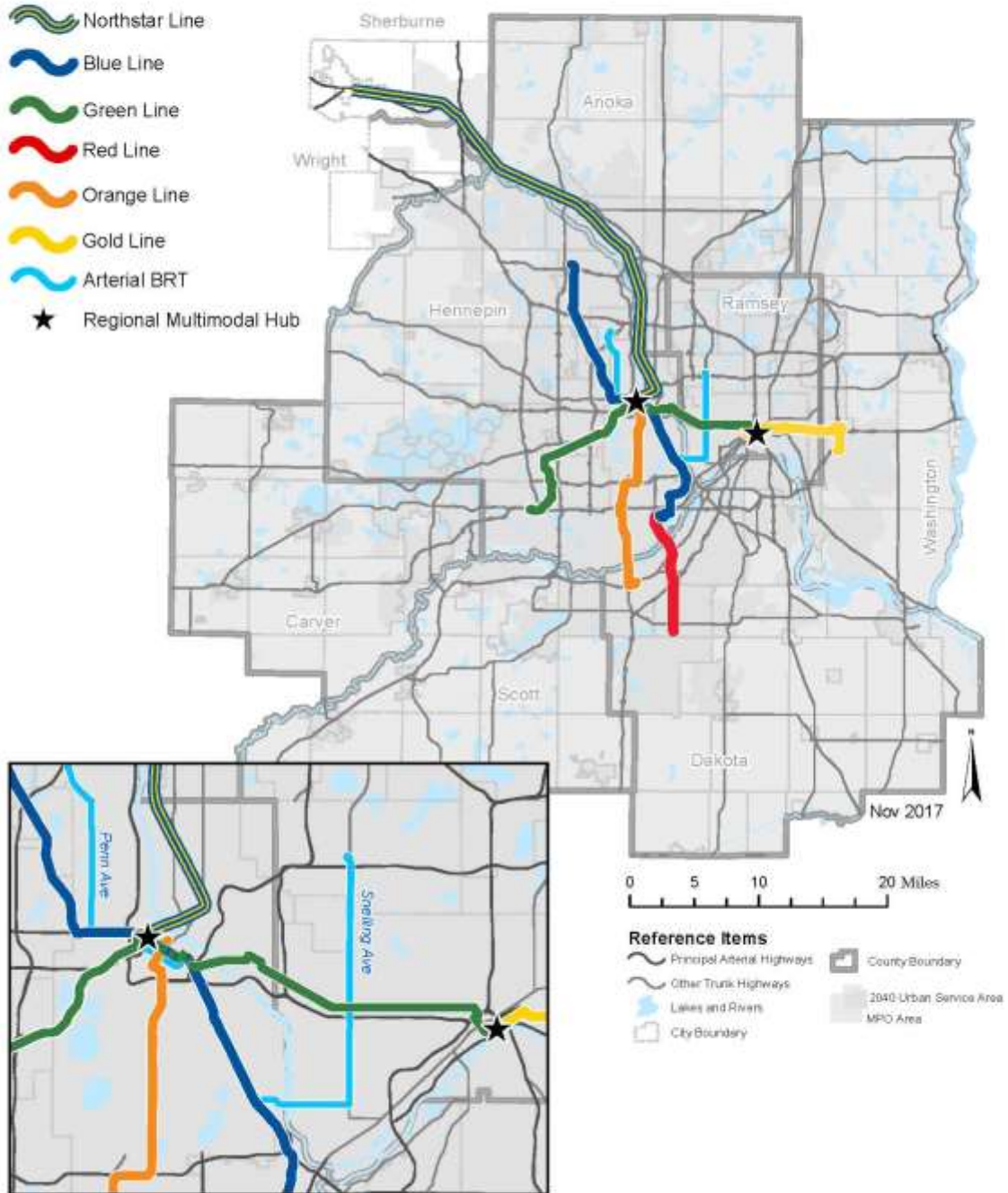
### **Modern Streetcar Acceleration Opportunities**

A number of transitway studies are exploring the modern streetcar alternative as a possible addition to the regional transitway system. While this plan acknowledges that a broader discussion on modern streetcars needs to occur at the regional level, there are opportunities for projects to move forward on a case-by-case basis.

The City of Minneapolis recommended modern streetcar as the locally preferred alternative in the Nicollet-Central corridor. Subsequent to 2013 legislative authority, the City of Minneapolis established a Value Capture District specific to this project to allow the City to issue bonds for up to \$60 million toward project implementation. These potential revenues are not assumed in the Current Revenue Scenario, but present a significant opportunity to pursue federal, state and other local funding to advance the Nicollet-Central modern streetcar. Operating funding for the project has not been identified. A project seeking a Small Starts grant agreement (or “Expedited Grant Agreement”) to begin construction is required to identify operating funds through the federal application process. If the city identifies all the capital funding for the project, the project and its revenues can be added to the preceding list of expansion projects assumed to be funded within the Current Revenue Scenario, pending a policy discussion of the source of operating funding.

Figure 6-66-8: Map of Existing Transitways and Current Revenue Scenario Expansion Transitways and CTIB Phase I Program of Projects

### Existing Transitways and Current Revenue Scenario Expansion Transitways





## Increased Revenue Scenario Transitway System Investments

In order to complete the region's vision of a transitway system and do it on an accelerated timeline, the region will need additional funding for transitways. Increased funding will allow the region to:

- Accelerate the build-out of the transitways included in the Current Revenue Scenario
- ~~Afford the transitways in CTIB's Transit Investment Framework beyond the Phase I Program of Projects~~
- Afford additional transitways ~~not in CTIB's Transit Investment Framework~~ that have recommended locally preferred alternatives, are under study, or needing to be studied for mode and alignment by other partners
- ~~Implement a system of 11 arterial BRT bus rapid transit~~ projects that provide enhanced transit on heavily used existing transit routes

Increased funding will allow the region to invest in a system of transitways that keeps the region competitive in providing an attractive economy and connected, livable communities. The corridors listed in this section will need to go through the technical and policy investment factor prioritization identified previously [insert link to Setting Regional Transitway Priorities]. Because implementation of these corridors is likely not available under current revenues until after 2024, any prioritization efforts will need to consider the long-term implications of prioritization as well as the near-term possibilities should increased revenues become available.

Local governments along these corridors should be working on land use studies and planning that would maximize the potential of transitways while recognizing that they are still in the planning phases. These projects still provide an opportunity to adapt the transportation decisions with the land use visions of local communities.

### Additional Transitways under Increased Revenue Scenario

Under the Increased Revenue Scenario, the transitway corridors listed below ~~—along with accelerating the Current Revenue Scenario transitways and the CTIB Phase I Program of Projects—~~ could reasonably be implemented by 2040. These corridors are in various stages of ~~planning and will need to complete a locally preferred alternative recommendation to be considered~~ development and will need to be ~~for~~ prioritization ~~anded for~~ funding ~~if it becomes available~~. The Council will continue to work with the appropriate partners in the planning of these potential transitway investments and with local governments working on land use planning. The complete transitway vision is shown on Figure ~~6-9-6-7~~: Map of Increased Revenue Scenario Transitways – Building an Accelerated Transitway Vision.

#### Projects with Study Recommendations in Advanced Stages of Development:

- METRO Red Line Future Stages
- Rush Line Dedicated BRT
- Nicollet-Central Modern Streetcar

#### Projects with Study Recommendations:

- Midtown Rail
- Red Rock Bus Rapid Transit
- West Broadway Modern Streetcar
- Highway 169 Bus Rapid Transit

#### Projects under Study or to be Studied:

- Riverview Corridor
- METRO Orange Line Extension
- Highway 36
- I-35W North
- I-394/Highway 55
- Robert Street
- ~~North Central<sup>1</sup>~~
- ~~Rush Line~~

#### Arterial BRT projects<sup>2</sup> projects with partial funding, incremental improvements:

- Chicago/-Emerson-Fremont
- ~~American Boulevard~~
- ~~Central Avenue NE~~
- ~~East 7th Street~~
- ~~Hennepin Avenue~~
- Lake Street/Marshall Avenue
- Hennepin Avenue
- ~~Nicollet Avenue~~
- ~~Robert Street~~
- ~~West Broadway Avenue~~

#### Arterial BRT projects<sup>1</sup> without partial funding:

- American Boulevard
- Central Avenue NE
- East 7th Street
- Nicollet Avenue
- Robert Street
- West Broadway Avenue

<sup>1</sup>CTIB identified corridor, not currently under study for transitway investment.

<sup>2</sup>Several arterial BRT corridors are also under consideration for other modes.

### Projects with Study Recommendations but Incomplete Funding Plan

METRO Red Line Future Stages (Cedar Avenue Highway BRT) The first stage of this project opened in mid-2013 ~~with service to stations in Bloomington, Eagan, and Apple Valley~~. An

*Implementation Plan Update (2010-2015)* has identified future stages that will add stations, park-and-ride capacity, and service to the line, including an extension to a number of planned stations in Lakeville. Future stages would also address bicycle and pedestrian improvements and station area planning. Stage 2 is included in the Current Revenue Scenario as an extension of BRT service to the Lakeville-Cedar station at 181<sup>st</sup> Street. The Implementation Plan is being updated with adoption anticipated in 2015.

**Rush Line** This corridor links Saint Paul with White Bear Lake and communities beyond. An initial Alternatives Analysis was completed in 2009 and a pre-project development study is currently underway to recommend a locally preferred alternative. A commuter bus demonstration service was initiated in 2010 that provides peak-hour express service to downtown St. Paul.

**Rush Line Dedicated BRT** This project will connect Saint Paul, Maplewood, Vadnais Heights, Gem Lake, and White Bear Lake. The project's locally preferred alternative is dedicated BRT generally from Union Depot along Phalen Boulevard, Ramsey County Regional Railroad Authority property (adjacent to Bruce Vento Trail) to I-694, and Highway 61 terminating in downtown White Bear Lake. Work is ongoing on station-area planning, environmental review, and early engineering in preparation for eventual request into the FTA New Starts project development phase.

**Nicollet-Central Modern Streetcar** This project would connect neighborhoods in downtown, northeast, and south Minneapolis. The corridor study was completed in 2013 and the locally preferred alternative recommendation is modern streetcar primarily along Nicollet Avenue, Nicollet Mall and Hennepin/1<sup>st</sup> Avenues. The project is currently in the environmental review phase and the City of Minneapolis is expected to begin engineering in 2018. This corridor in Minneapolis was studied through an Alternatives Analysis that concluded in late 2013 with a recommended locally preferred alternative of modern streetcar. The LPA is under consideration for potential funding commitments in anticipation of being amended into the plan. The modern streetcar would provide circulation through the core of the city from Lake Street to at least 5<sup>th</sup> Street NE along Nicollet Avenue, Nicollet Mall, and Hennepin/1<sup>st</sup> Avenues. It would connect with the METRO Blue and Green lines in downtown. The environmental review phase is currently underway and is expected to be completed in early 2015.

**Midtown Rail** This ~~corridor project would connect~~links the existing METRO Blue Line Lake Street Station ~~with and~~ planned METRO Green Line West Lake Station with neighborhoods in along the 29<sup>th</sup> Street Greenway through south Minneapolis. The transit study was completed in 2012. The corridor was studied through an Alternatives Analysis that concluded with a locally preferred alternative recommendation of rail in the Midtown Greenway combined with ~~the proposed Arterial BRT on Lake Street.~~ Funding has not yet materialized for further development of the rail project, though Metro Transit secured partial funding for bus improvements on Lake Street and will begin bus improvement planning efforts in 2018.The

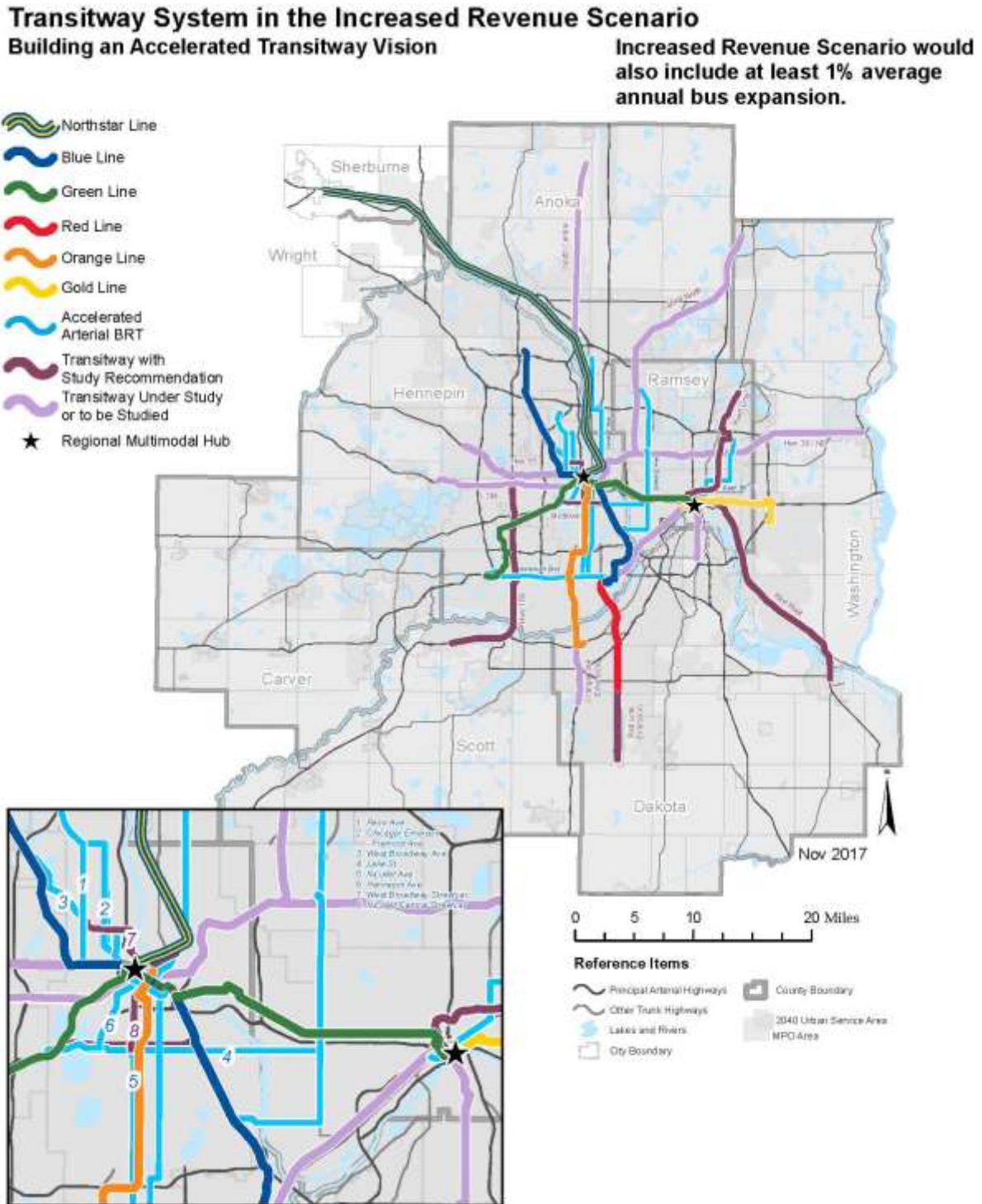
~~recommended locally preferred alternative will be considered through a future amendment to the Transportation Policy Plan.~~

**Red Rock Highway Bus Rapid Transit** ~~This project would connect Saint Paul to Newport, Saint Paul Park, Cottage Grove, and Hastings. An implementation plan was completed in 2016 that refined a long-term vision of highway BRT recommendations in the Highway 61 corridor. Initial stages include improved express bus service and all-day bus service introduction with ongoing monitoring of its performance. This corridor links Hastings to Saint Paul and Minneapolis, and was studied through an Alternatives Analysis update in 2014. The analysis recommended a staged approach to developing highway BRT in the corridor. The next steps will include developing an implementation plan and ongoing strategies for investment. Transitway improvements in the corridor are a priority in CTIB's Phase I Program of Projects.~~

**West Broadway Modern Streetcar** ~~The West Broadway corridor. This project would connect the Minneapolis neighborhoods along West Broadway to downtown Minneapolis and Robbinsdale. The corridor study was completed in 2017 with a recommendation of modern streetcar to North Memorial along with additional improvements to bus service in the corridor. Funding has not yet materialized for further development of the project. The corridor was studied as part of the Bottineau corridor but was not the recommended alignment. Metro Transit, the City of Minneapolis, and Hennepin County are partnering on a detailed corridor study of West Broadway that will begin in 2014. The study will analyze transit options along West Broadway and options to connect to downtown Minneapolis, to the planned Bottineau LRT corridor, and other transit services.~~

**Highway 169 Highway Bus Rapid Transit** ~~The project would connect communities in northern Scott County to cities along Highway 169 in Hennepin County and downtown Minneapolis. A study of bus rapid transit and MnPASS improvements was completed in 2017. The study recommended...UPDATE PENDING STUDY RESULTS LATE 2017.~~

Figure 6-76-9: Map of **Transitway System in an Increased Revenue Scenario**— Building an Accelerated Transitway Vision



## Arterial Bus Rapid Transit

Arterial bus rapid transit is a transitway mode intended to improve the customer experience and attractiveness of some of the most heavily used existing bus routes in the transit system. The first line, the A Line, opened in 2016, and the second line, the C Line, begins construction in 2018. These lines are part of a planned system that was first developed in 2012 through the Arterial Transitway Corridor Study.

Additional investment in the arterial BRT system is happening incrementally until full funding can be secured for each project. Several projects have identified funding for certain elements of the future BRT (see “Additional Transitways under Increased Revenue Scenario” box for a complete list) and these elements will provide improvements to the existing bus service in the corridor, regardless of when funding for the full BRT project is secured. Examples of incremental investments building toward arterial BRT include:

- Enhanced customer waiting facilities and customer information technology
- Faster, limited stop bus service
- More reliable bus service with transit signal priority and transit advantages
- New larger buses for improved circulation and boarding

This plan acknowledges the incremental build out of some of these elements for the corridors in planning. A number of these improvements are funded through the Regional Solicitation (see Project List, Appendix C). As funding is identified for the implementation of the full set of arterial BRT improvements for a corridor, the plan will be amended.

## Additional Projects Under Study or to be Studied

The following projects have been identified as showing potential for transitway investments as a result of transit system studies.

**Arterial Transitway Corridor Study** Metro Transit completed a system study on arterial BRT in 2012 that concluded with recommendations for arterial BRT in 14 corridors (11 in the study plus one added through following the Bottineau light rail project planning) originally identified in the 2030 Transportation Policy Plan ~~and another corridor based on work done through the Bottineau light rail project.~~ Development of the West 7th Street Line has been put on hold pending the results of the Riverview corridor study. The remaining 11 corridors are being advanced by Metro Transit incrementally, capitalizing on the timing of bus replacement schedules, road reconstruction projects, and other opportunities that may allow for coordinated transit investment. Several arterial BRT corridors are also under

**Riverview Corridor** This corridor connects Saint Paul with the Minneapolis-Saint Paul International Airport and the Mall of America and South Loop district in Bloomington. A draft locally preferred alternative has been developed in late 2017 recommending modern streetcar within a dedicated and shared-use guideway generally along West 7<sup>th</sup> Street, the Highway 5 river crossing, and existing light rail tracks starting just north of Fort Snelling Station. The corridor is in the progress of advancing this recommendation through the appropriate local processes. Initial analysis on the corridor was completed in 2000 but transitway implementation did not move forward. A pre-project development study is underway to recommend a locally preferred alternative. The Riverview corridor is a priority in CTIB's Phase I Program of Projects.

**METRO Orange Line Extension** The first stage of the METRO Orange Line is expected to bring BRT service to Burnsville on I-35W. The Metro Orange Line Extension Study (2017) is defining the key components of a potential future extension of Orange Line service south further into Burnsville and to Lakeville. The study is identifying station locations, route alignments, runningway operations and operating technologies needed for an extension. The study is expected to be completed in 2018.

**I-35W North** This corridor links downtown Minneapolis with communities along I-35W north of downtown to Forest Lake. The corridor was studied through a feasibility study led by MnDOT in 2013. The study focused primarily on the highway ~~managed lane MnPASS~~ vision but included an analysis of highway BRT potential coordinated with that vision. As highway MnPASS design work on the corridor continues, BRT implementation will be coordinated with these concepts through planning efforts.

**Robert Street** This corridor completed a transit study in 2015 that narrowed down the potential projects to arterial BRT and streetcar on Robert Street from downtown Saint Paul to West Saint Paul. A recommendation for a locally preferred alternative did not emerge from the study but is expected to be reanalyzed after local governments completed their Comprehensive Plan updates by the end of 2018. This corridor initiated an Alternatives Analysis that is looking at a highway BRT option on Highway 52 and arterial BRT and streetcar options on Robert Street from downtown Saint Paul south into Dakota County. A recommendation for a locally preferred alternative is expected in late 2014. Robert Street is a priority in CTIB's Phase I Program of Projects.

**Highway 36 and I-394/Highway 55 through the Highway Transitway Corridor Study** The Highway Transitway Corridor Study was a regional analysis of potential highway BRT investments in nine corridors throughout the region. These investments have the potential to be coordinated with highway improvements that might include MnPASS, bus-only shoulders, or other transit advantages. The analysis indicated the strongest potential for highway BRT improvements in the Highway 36, Highway 169, I-94, and I-394/Highway 55 corridors. Highway 169 has been studied in more detail and I-94 was dismissed because of a lack of local support.

The remaining corridors were acknowledged as potential projects but have yet to undergo more detailed study.

### **Transitway Investments Technical Information**

Transitway investments represent the major transit projects included in this plan. For projects in the both the Current Revenue Scenario and the Increased Revenue Scenario, an important step in the plan’s decision-making process is Setting Regional Transitway Priorities. Table 6-7 provides a summary of important technical information about transitway projects in both funding scenarios, as available.



Table 6-7 – (NOT YET AVAILABLE)

The most important next step for this tier of transitways is continued study at a corridor level to progress toward a specific locally preferred alternative recommendation (if seeking federal New Starts or Small Starts funding) to the Council. While a recommendation does not guarantee funding in the plan, it does put the region in a position to better understand the needs of each project and consider them for available resources along with other potential projects.

These corridors will need to go through the technical and policy investment factor prioritization identified previously [*insert link to Setting Regional Transitway Priorities*]. The region will conduct an analysis of potential transitway recommendations when they are ready, following the adoption of this plan. Because implementation of these corridors is not available under current revenues until after 2024, any prioritization efforts will need to consider the long-term implications of prioritization as well as the near-term possibilities should increased revenues become available.

Local governments along these corridors should be working on land use studies and planning that would maximize the potential of transitways while recognizing that they are still in the planning phases. These projects still provide an opportunity to adapt the transportation decisions with the land use visions of local communities.

## THE REMAINING SECTIONS WILL BE UPDATED IN DECEMBER 2017

### Transit Investment Plan Financial Summary

The previous sections of this chapter described in detail the expected investments under the current and Increased Revenue Scenarios for both the bus and support system and transitway system investments. This section summarizes the two scenarios by providing a brief, high-level financial summary of all of the planned transit investments.

#### Current Revenue Scenario Financial Summary

Table 6-76-8 is a financial summary of the Current Revenue Scenario for both the bus and support system and transitway system investments.

**Table 6-76-8: Current Revenue Scenario Summary of Funded Investments (Year or Expenditure Dollars)**

	2015-2024 (10 years)	2025-2034 (10 years)	2035-2040 (6 years)	Total 2015-2040 (26 years)
<b>Revenues</b>	<b>\$ 11,009 M</b>	<b>\$ 11,548 M</b>	<b>\$ 8,675 M</b>	<b>\$ 31,232 M</b>
<b>Bus and Support System Investments</b>				

	2015-2024 (10 years)	2025-2034 (10 years)	2035-2040 (6 years)	Total 2015-2040 (26 years)
<b>Existing</b>				
Operating	\$ 4,729 M	\$ 6,261 M	\$ 4,710 M	\$ 15,700 M
Capital	\$ 964 M	\$ 1,107 M	\$ 769 M	\$ 2,840 M
Modernization	\$ 103 M	\$ 117 M	\$ 81 M	\$ 301 M
<b>Expansion</b>				
Operating	-	-	-	-
Capital <sup>1</sup>	\$ 103 M	\$ 117 M	\$ 81 M	\$ 301 M
<b>Total Bus and Support System</b>	<b>\$ 5,899 M</b>	<b>\$ 7,602 M</b>	<b>\$ 5,641 M</b>	<b>\$ 19,142 M</b>
<b>Transitway System Investments</b>				
<b>Existing</b>				
Operating	\$ 982 M	\$ 1,257 M	\$ 917 M	\$ 3,156 M
Capital	\$ 107 M	\$ 195 M	\$ 136 M	\$ 438 M
<b>Expansion</b>				
Operating	\$ 398 M	\$ 1,085 M	\$ 792 M	\$ 2,275 M
Capital Improvements	\$ 144 M	-	-	\$ 144 M
<b>Transitway Projects:</b>				
- CCLRT Debt and FTA Cash Flow Debt	\$ 192 M	\$ 50 M	-	
- METRO Red Line Stage 2	\$ 150 M	-	-	
- METRO Orange Line	\$ 1,559 M	-	-	
- METRO Green Line Extension Ext.	\$ 999 M	-	-	
- METRO Blue Line Extension Ext.	\$ 469 M	-	-	
- METRO Blue Line	\$ 16 M	-	-	
- METRO Gold Line	\$ 36 M	-	-	
- Snelling Ave. ABRT	\$ 77 M	-	-	
- Penn Ave ABRT				
- Chicago Fremont ABRT				
Transitway System Expansion – Undesignated <sup>2</sup>	(\$ 92 M) <sup>3</sup>	\$ 1,360 M	\$ 1,188 M	\$ 2,456 M
<b>Total Transitway System</b>	<b>\$ 5,111 M</b>	<b>\$ 3,947 M</b>	<b>\$ 3,033 M</b>	<b>\$ 12,091 M</b>
<b>Total Investments – All Categories</b>	<b>\$ 11,009 M</b>	<b>\$ 11,548 M</b>	<b>\$ 8,675 M</b>	<b>\$ 31,232 M</b>

	2015-2024 (10 years)	2025-2034 (10 years)	2035-2040 (6 years)	Total 2015-2040 (26 years)
<sup>1</sup> May include operating funding for initial start up of new services, typically up to three years. <sup>2</sup> Undesignated revenue primarily includes sales tax administered by CTIB and CMAQ and state bond funds. CTIB funds are expected to be committed to Phase I Program of Projects priorities that do not yet have an LPA. CMAQ and state bond funds are expected to fund future arterial BRT projects. <sup>3</sup> Will be addressed through financing mechanisms in coordination with CTIB.				

The following are the major financial conclusions of the Current Revenue Scenario.

- The region is able to operate and maintain the existing bus and support system.
- No expansion of bus service is available beyond the rapidly growing demand for Metro Mobility.
- There is limited capital expansion and modernization of the bus and support system facilities through preservation efforts and through competitive federal funds.
- The region is able to operate, maintain, and improve the existing transitways that include METRO Blue Line, METRO Green Line, METRO Red Line, and Northstar.
- In the first 10 years of the plan, funded transitway expansion will include building and operating four additional METRO lines, including the region’s first dedicated BRT, and building three arterial BRT lines.
- The region expects to invest at least an additional \$2.4 billion in building and operating additional transitway expansion for CTIB Phase I Program of Projects and other acceleration opportunities. This is primarily funded with sales tax revenues and assumptions for future arterial BRT projects but may include additional matching funds as project plans are finalized.

### Increased Revenue Scenario Financial Summary

The Increased Revenue Scenario is based on both analyzing the need to build out and expand the bus and support system and transitway system, and considering what might be an attainable level of new revenue for transit in the region. In 2012, the Governor’s Transportation Finance Advisory Committee (TFAC) looked at this issue in detail and concluded that building a competitive regional economy would require approximately \$5 billion to \$5.8 billion in new metropolitan area transit revenue.

The Increased Revenue Scenario in this plan uses the TFAC level of financial need as a starting point, but also includes consideration of inflation (the TFAC recommendation was in constant 2015 dollars) and extending the time period to 2040 (TFAC was a 20-year analysis to 2032). As Table F-8 indicates, the total estimated new revenue need for expanding the transit system is approximately \$7 – 9 billion over the 26-year period of the plan. The \$7 – 9 billion funding level could be attainable based on a half-cent metropolitan area sales tax increase that was explored through TFAC. But this funding level would not allow for changing funding shares of other

transit partners (in other words, lowering the state or federal shares of a project or existing transit system operating costs).

Under the Increased Revenue Scenario, the funding need is estimated to be approximately 25% for bus and support system expansion and 75% for transitway system expansion. This is an average funding level over the 26-year period of the plan with the expectation that spending in any given year will be dependent on the identified expansion needs and costs of proposed projects.

As indicated earlier, expansion of the bus system is only able to occur under the Increased Revenue Scenario – only very limited bus capital expansion is funded in the Current Revenue Scenario. Table 6-8 shows that under a reasonable expansion of the bus and support system approximately \$2 – 3 billion in additional revenue would be required between 2015 and 2040. This estimated level of funding need represents about an average of 1% increase per year in bus service (in this case, measured in net operating dollars or subsidy). This likely represents a conservative estimate of the needs and funding requests for an Increased Revenue Scenario will be updated as bus service needs are updated through the Regional Service Improvement Plan. The capital costs associated with bus service expansion are also included. This level of funding would also provide for opportunities to modernize the existing bus system and provide for an improved overall customer experience.

The \$5 – 6 billion estimate for transitway system expansion would likely allow the list of corridors in the transitway Increased Revenue Scenario to be fully implemented based on rough project estimates as they are known today. There is a level of uncertainty in the funding estimate because many transitway projects are still in planning, and because the need for operating revenue for transitways depends on the timing and type of projects that are implemented.

**Table 6-8988: Increased Revenue Scenario Summary of Potential Revenues and Investments (Year of Expenditure Dollars)**

	2015-2040 (26 years)
<b>Revenues</b>	<b>\$ 7.0 – 9.0 billion</b>
<b>Bus and Support System</b>	<b>\$ 2.0 – 3.0 billion</b>
<b>Transitways</b>	<b>\$ 5.0 – 6.0 billion</b>