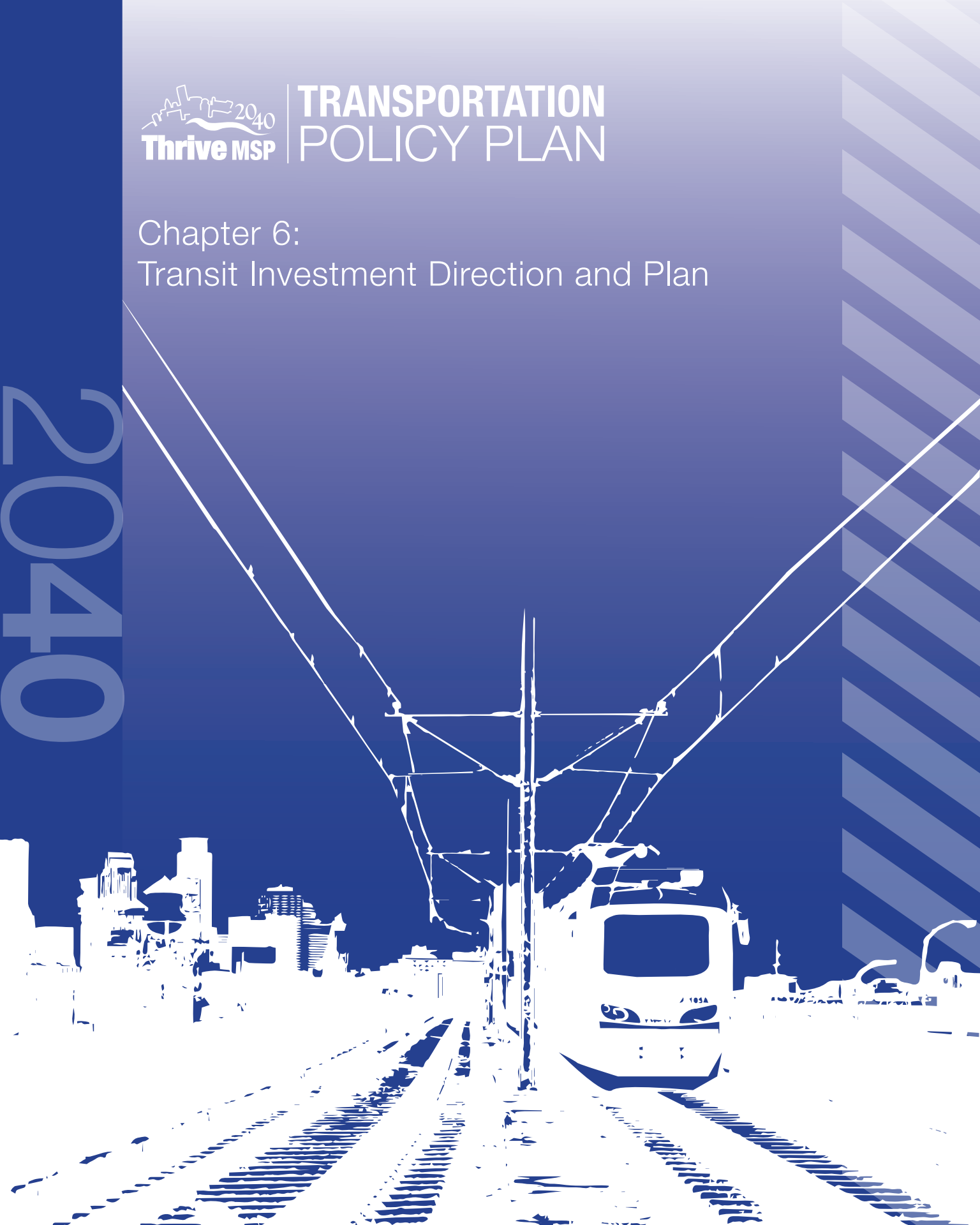
Thrive MSP 2040

TRANSPORTATION POLICY PLAN

Chapter 6:
Transit Investment Direction and Plan

2040



TRANSPORTATION POLICY PLAN

Chapter 6: Transit Investment Direction and Plan

Transit Investment Direction and Plan

Transit Investment Direction

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 Goals and Objectives

Goal	Objectives Guiding Investments	How are these objectives reflected in the plan?
Transportation System Stewardship	A. Efficiently preserve and maintain the regional transportation system in a state of good repair. B. Operate the regional transportation system to efficiently and cost-effectively move people and freight.	This plan fully funds the existing transit system and has tools to ensure that it is managed to be efficient and cost-effective (Investment Summaries). Investments in expansion will also consider cost-effectiveness as an investment factor to get the most out of new projects (Investment Factors).
Safety and Security	A. Reduce crashes and improve safety and security for all modes of passenger travel and freight transport. B. Reduce the transportation system's vulnerability to natural and man-made incidents and threats.	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 (Safety and Security).
Access to Destinations	A. Increase the availability of multimodal travel options, especially in congested highway corridors. B. Increase travel time reliability and predictability for travel on highway and transit systems. D. Increase transit ridership and the share of trips taken using transit, bicycling and walking. 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.	Providing access is a fundamental role of the transit system. This plan has multiple considerations for increasing ridership and the 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 (Investment Factors).

Goal	Objectives Guiding Investments	How are these objectives reflected in the plan?
Competitive Economy	A. Invest in a multimodal transportation system to attract and retain businesses and residents. B. Improve multimodal access to regional job and activity centers identified in *Thrive MSP 2040*.	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 (insert link to investment summaries). Connecting to jobs is an important emphasis on the investment factors.
Healthy Environment	A. Reduce transportation-related air emissions. C. Increase the availability and attractiveness of transit, bicycling and walking to encourage healthy communities and active car-free lifestyles.	This plan includes investment factors that consider the impacts on the environment, particularly pollution related to congestion (insert link to investment factors). Additional impacts could be related to land use planning that encourages car-free lifestyles ("Land Use and Local Planning").
Leveraging Transportation Investments to Guide Land Use	A. Focus regional growth in areas that support the full range of multimodal travel. C. Encourage local land use design that integrates highways, streets, transit, walking and bicycling.	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.

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.

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.

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. 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.

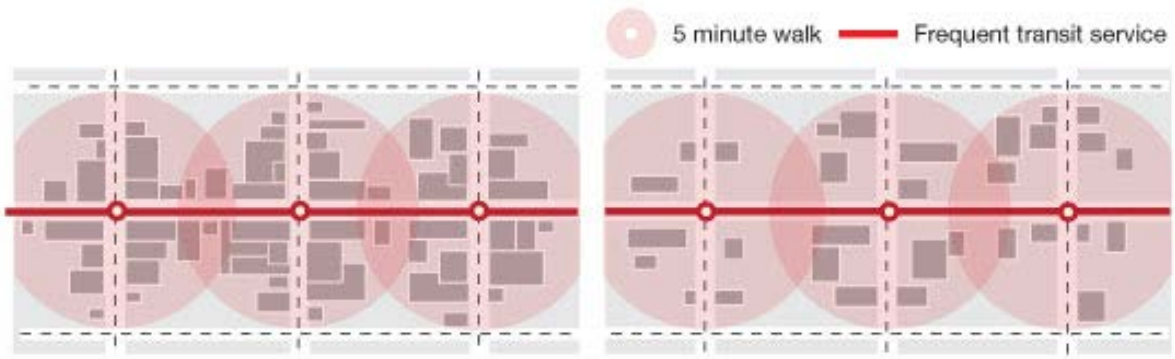
Urban Design Factors

Urban design factors that fall within the control of local governments, such as land use, planning, and infrastructure design, also influence the design 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 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.

Figure 6-1: Urban Design Factors

1. Encourage population and activity density

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.



More Transit Supportive *Less Transit Supportive*

2. Design for a pedestrian-friendly environment

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.

More Transit Supportive

Less Transit Supportive

3. Encourage a mixed-use land use pattern

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.

More Transit Supportive

Less Transit Supportive

4. Develop an interconnected street network that maximizes pedestrian and bicycle access and allows for simple route design

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..

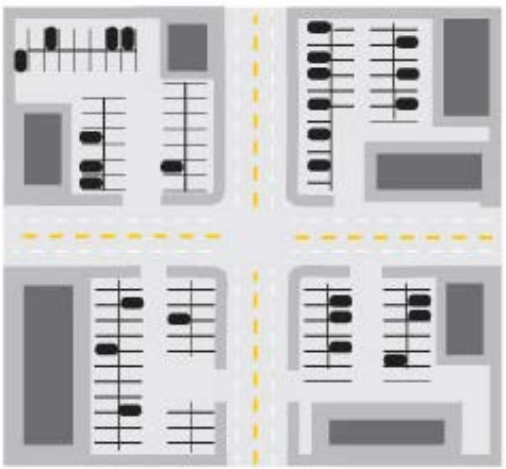
More Transit Supportive

Less Transit Supportive

5. Support travel options that encourage or complement using transit

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.

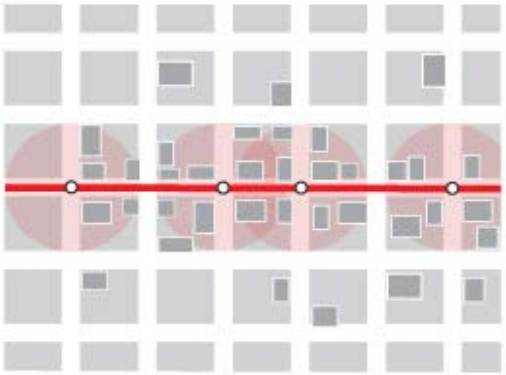
More Transit Supportive



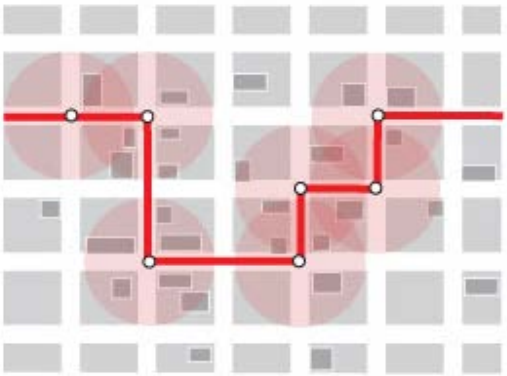
Less Transit Supportive

6. Plan for linear growth in nodes along corridors

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.



More Transit Supportive



Less Transit Supportive

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.

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:

Figure 6-2: Transit Design Factors

1. Serve a variety of trip purposes and destinations

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.

2. Design routes with strong anchors at both ends

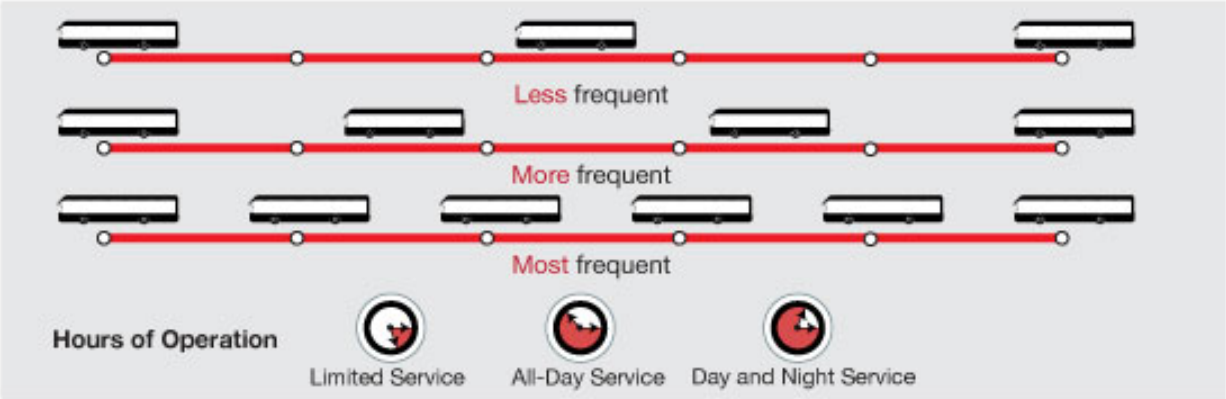
Transit is more efficient with balanced passenger loads in each direction. Important destinations at each end help to distribute demand evenly and limit overcrowding of vehicles and over-supply of service.

Balanced Demand

Unbalanced Demand

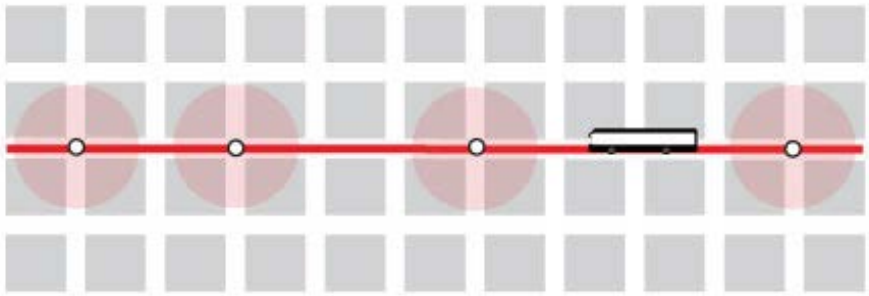
3. Match level of service to demand

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.

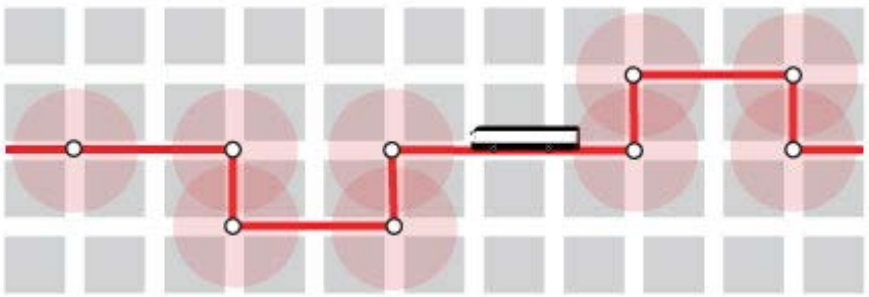


4. Design simple, direct routes

Transit service is more efficient to provide and easier for customers to understand when routes are designed in simple, linear patterns without complicated paths.



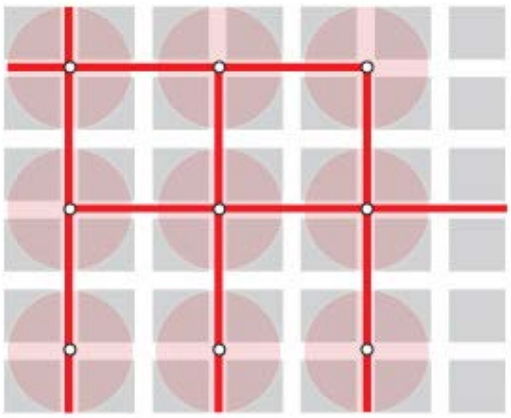
Simple and Direct



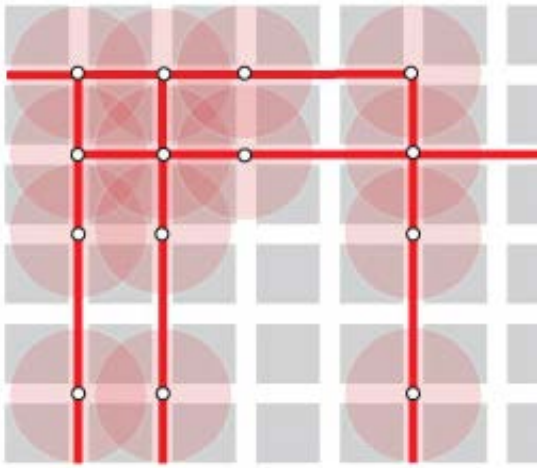
Indirect and More Confusing

5. 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



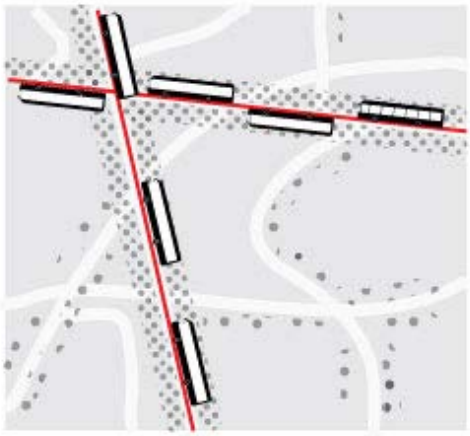
More Duplication

6. Provide useful customer information and comfortable amenities

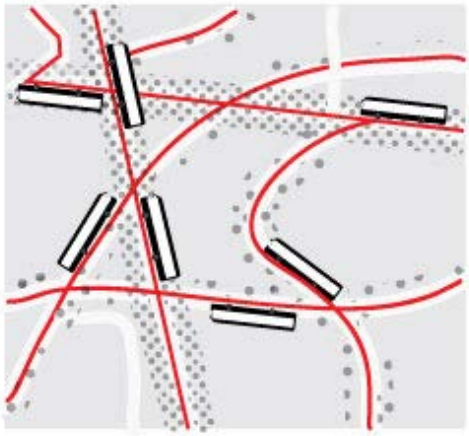
Transit ridership grows and the user experience is better when customers can easily understand the system and are comfortable while waiting at or leaving a stop and riding on a bus or train.

7. 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.



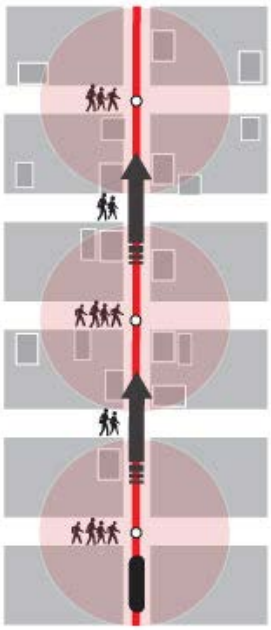
More frequent, less coverage



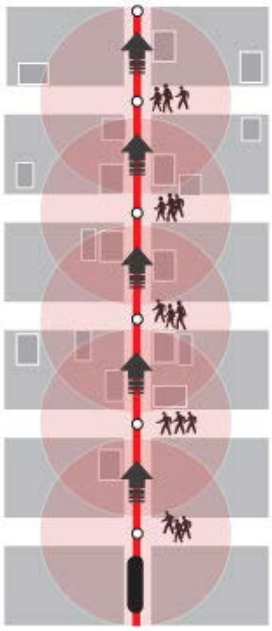
Less frequent, more coverage

8. Balance walking distance and travel speed

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.



Faster service, less access



More access, slower service

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

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 and 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 providing basic coverage.
- 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.

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 extension of existing routes or connections.

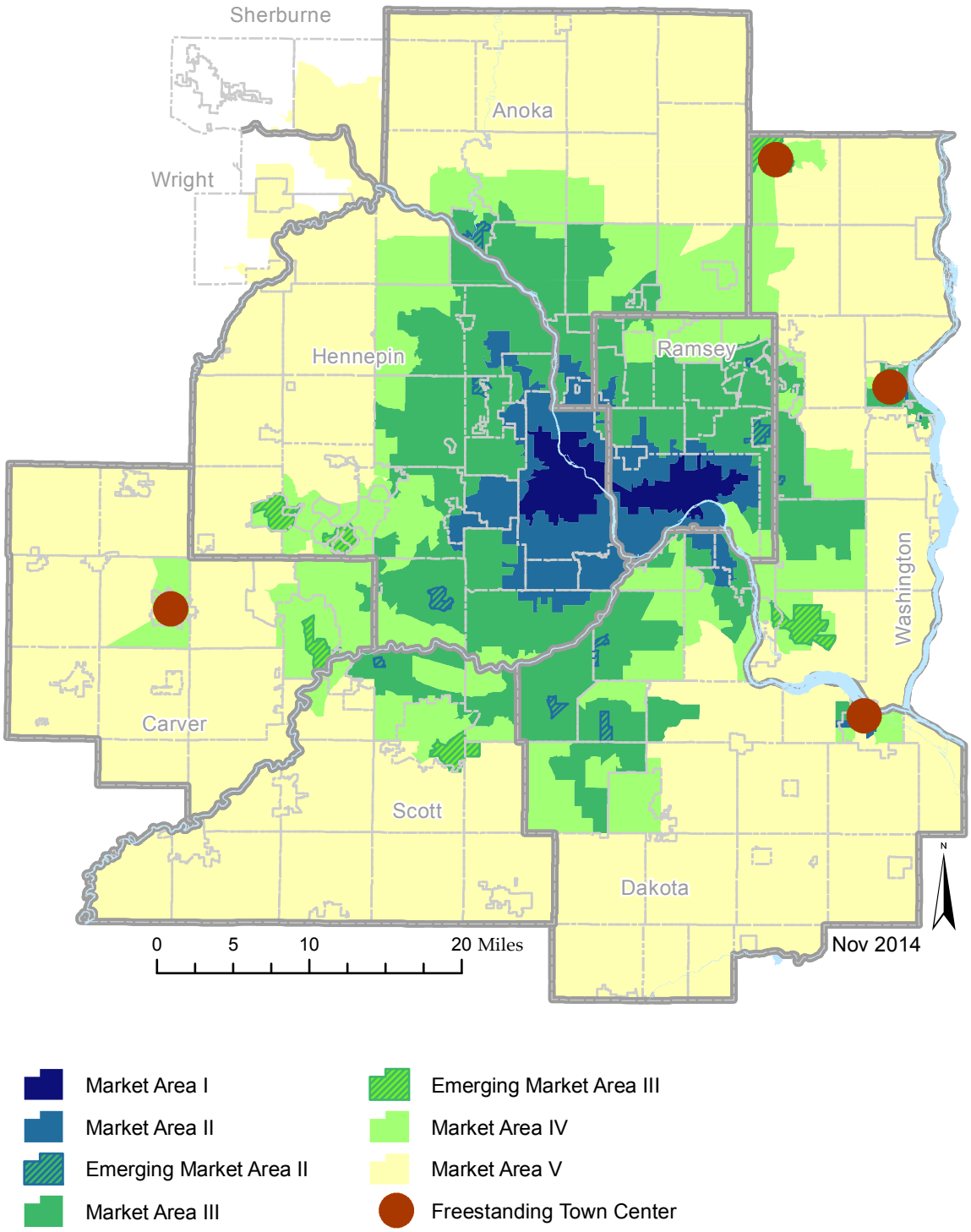
Freestanding Town Centers are unique areas that grew independently of Minneapolis and Saint Paul and act as suburbs but are still separated from the urban and suburban areas by rural land. These areas typically have small downtowns of their own but also export many workers to other regional centers. 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. 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 6-3 and described in more detail in Appendix G: Regional Transit Design Guidelines and Performance Standards. 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.

Figure 6-3: Transit Market Areas

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 cover a number of topics including:

- Transit Market Areas and Service Options – the service types that are appropriate for the different Transit Market Areas
- Network Design and Access
- 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

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. The full detail on these guidelines and standards is available in Appendix G.

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, Federal Requirements.

Transitway Design

For transitways, the region has developed the *Regional Transitway Guidelines*. 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:

- Service Operations
- Station Spacing and Siting
- Station and Support Facility Design
- Runningway
- Vehicles
- Fare-Collection Systems
- Technology and Customer Information
- Identity and Branding
- Project Development, Leadership, and Oversight

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.

The guidelines will be updated through a work program item to address outstanding issues identified in the first version, including dedicated bus rapid transit characteristics, the addition of land use guidelines, and updated best practices, as needed.

Definitions of Modernization and Expansion

This transit investment plan refers to improvement opportunities in two different categories: modernization and expansion. The application of these definitions may evolve with new opportunities and innovation.

Modernization – Modernization is the improvement of existing transit systems to better suit current needs. This could include making the systems more efficient, more effective, more user-friendly, or more environmentally friendly. Modernization is usually a capital investment but can also include increased operating investments. Examples of modernization include energy efficiency improvements at an existing facility, or additions of customer amenities at existing stops or stations.

Expansion – Expansion is the addition of something new or additional capacity in the transit system. Examples of expansion include new transit routes, new facilities that are not replacing existing ones, and 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.

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 and minority populations. The following are general descriptions of how the region will manage the transit system effectively by coordinating the efforts of multiple providers.

Route Performance Analysis

Transit providers should review their transit service annually using the performance standards outlined in Appendix G: Regional Transit Design Guidelines and Performance Standards 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.

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.

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 uses a variety of bus types to match the appropriate vehicle to the service it is providing. The existing bus fleet is over 1,700 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 regional *Fleet Management Procedure* outlines standards and is available on the Council's website.

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 regionally 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 through the Council or directly from transit providers.

Table 6-2: Transit Provider Operating Policies

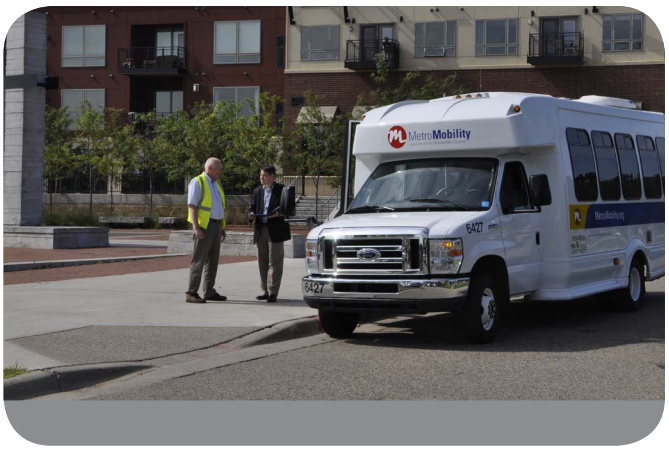
Policy	Description
Regional Route Performance Analysis	All regional transit providers will submit route performance information to the Council every year for review and inclusion in the Regional Route Performance Analysis.
Transit Fare Structure	All regional transit providers will adhere to the regional fare structure and prices established by the Council unless otherwise exceptions are specifically justified and granted.
Fleet Management Procedures	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.
Facilities Ownership Procedures	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.
Procurement Procedures	All regional transit providers will follow procurement procedures that are consistent with state and federal laws and guidance, when appropriate.
Regional Service Improvement Plan	All regional transit providers must submit proposals for service improvement to the Council in order to be considered for expansion funding for transit.
Regional Operating Revenue Allocation Procedures	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.
Title VI Policy	Title VI of the Civil Rights Act of 1964 requires consideration of potential 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. Each new ride requires a subsidy (at nearly $22 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 people 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.

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: Regional Transit Design Guidelines and Performance Standards.

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

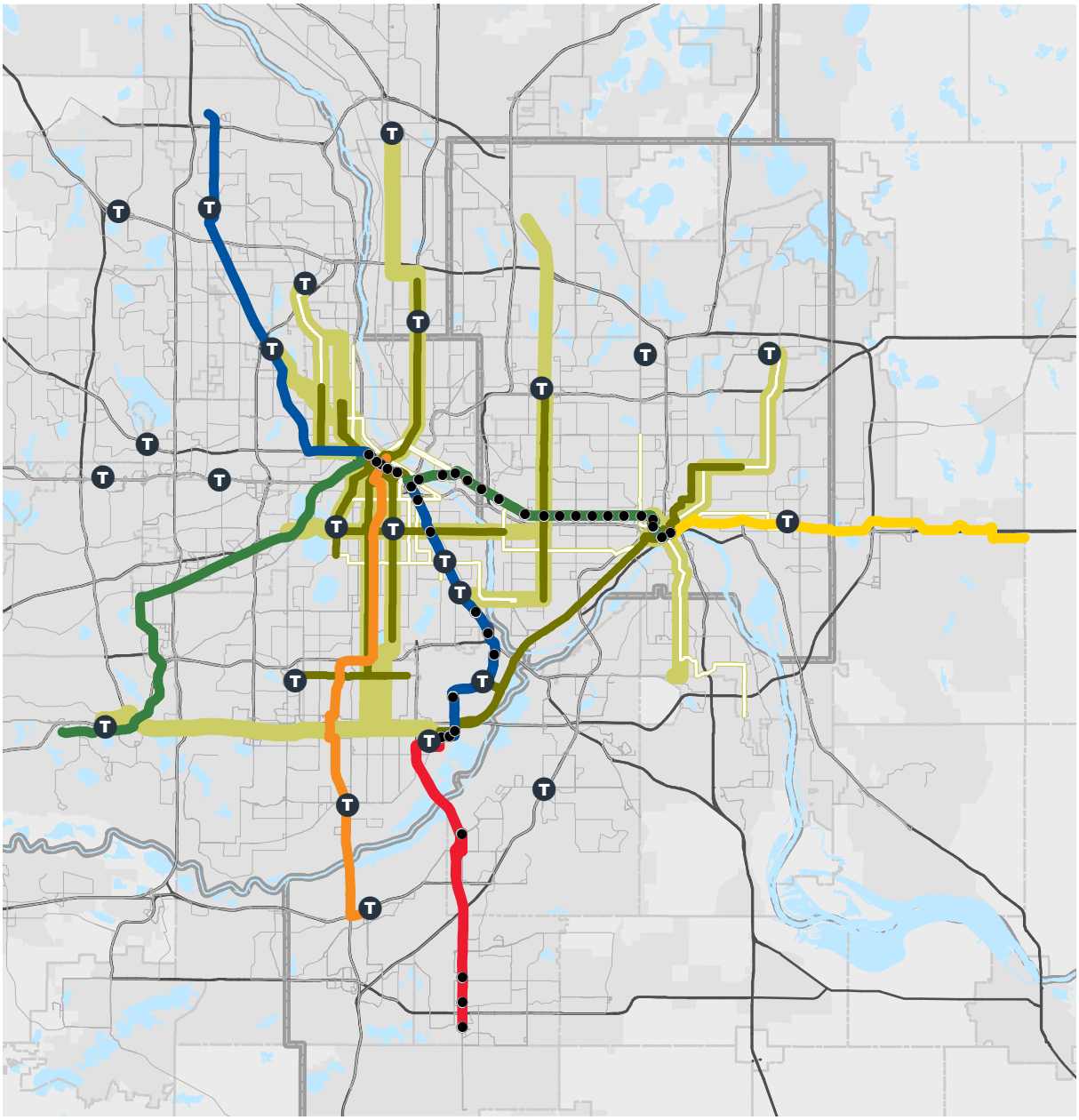
Local routes play a number of different roles and make up the basic structure of the regular-route bus system. These routes operate primarily on city streets in both the urban core and suburban areas and stop frequently, typically every one to two blocks. Local routes provide people with the highest 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 (40% of the region's average weekday riders in 2013, including METRO Blue Line). High-frequency routes receive the highest level of all-day service – at least 15 minute frequency from 6 a.m. – 7 p.m. on weekdays and 9 a.m. – 7 p.m. on Saturdays. These routes often have highly visible passenger facilities at major stops. Existing and proposed high-frequency transit service is shown in Figure 6-4, 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 through the City of Minneapolis' comprehensive plan.

Figure 6-4: Existing and Potential High-Frequency Transit Routes

Existing and Potential High-Frequency Transit Routes



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.

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 give 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. Express bus services can also be coordinated with highway bus rapid transit transitway services and facilities. A map of 2040 express bus service corridors and the 2030 park-and-ride system are shown in Figure 6-5 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 prepare a service improvement plan every two years. 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, to 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.

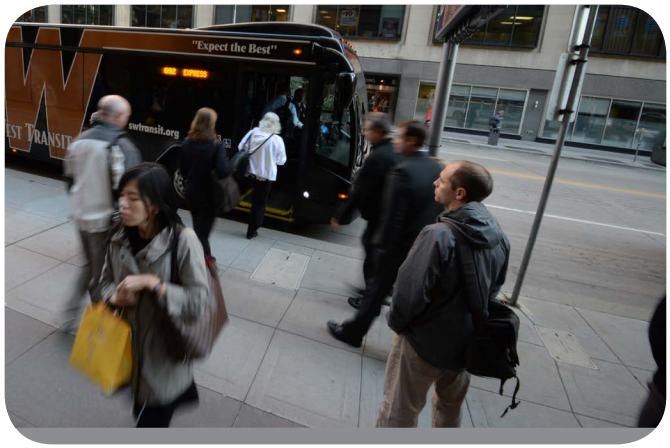


Table 6-3: Regional Service Improvement Plan Technical Investment Factors

Technical Factors	Description and Example Measures
Cost-Effectiveness	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.
Access to Destinations and People Served	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.
Equity	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.
Peak-Period Transportation Benefits	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 to adapt to the changing demands for bus service.

Transit Facilities Expansion and Modernization Opportunities

Transit facilities compose the built environment of the transit system. Passenger facilities range from bus stops to large and complex multimodal transit centers. Support facilities include:

- 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 growing transit system. Improvements to transit facilities will improve the customer experience and maximize the efficiency of transit investments.

Passenger Facility Expansion and Modernization

Passenger facilities – transit stops, transit centers, transit stations, 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 facilities are most successful when they are well-integrated with the surrounding landscape. 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 facilities also serve as an important point of transfer between transit services, including bus-to-rail transfers. Detailed guidelines for passenger facility amenities can be found in Appendix G: Regional Transit Design Guidelines and Performance Standards.

Bus Stops

Bus stops are the basic transit passenger facility. They are essential for providing customers with access to transit service throughout the transit system. Transit providers work with local communities to provide pedestrian connections and signage at each stop. 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 provide comfortable and convenient locations for passengers to connect to other routes and services in the system. 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 transit centers typically have associated park-and-ride facilities that serve express routes and connecting local routes. Transit centers may need to be added or improved as transit services expand throughout the region.

Transit Stations

Transit stations are passenger facilities associated with transitways. They provide the public access to light rail, commuter rail and bus rapid transit services. 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

Regional transit providers offer a range of amenities at bus stops and other passenger facilities to improve the customer experience. Passenger amenities include shelters, shelter lighting or heat, trash receptacles, seating, security cameras, good pedestrian access, bicycle parking and storage, and customer information in both static and real-time formats.

Passenger amenities create a more comfortable, accessible and attractive waiting environment for transit customers, as well as enhance customer safety. Customer information increases customer satisfaction and reassures them that they can depend on transit. Passenger amenities 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 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 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.

Park-and-Ride Facilities

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

The *2030 Park-and-Ride Plan* documents the needs and recommendations for future park-and-ride facilities. The plan includes a methodology for determining facility need and integration with the transit system, analyzing market areas, and considering site selection and facility design. Park-and-rides are optimally located in a congested travel corridor, upstream of major traffic congestion, with service to major regional destinations.

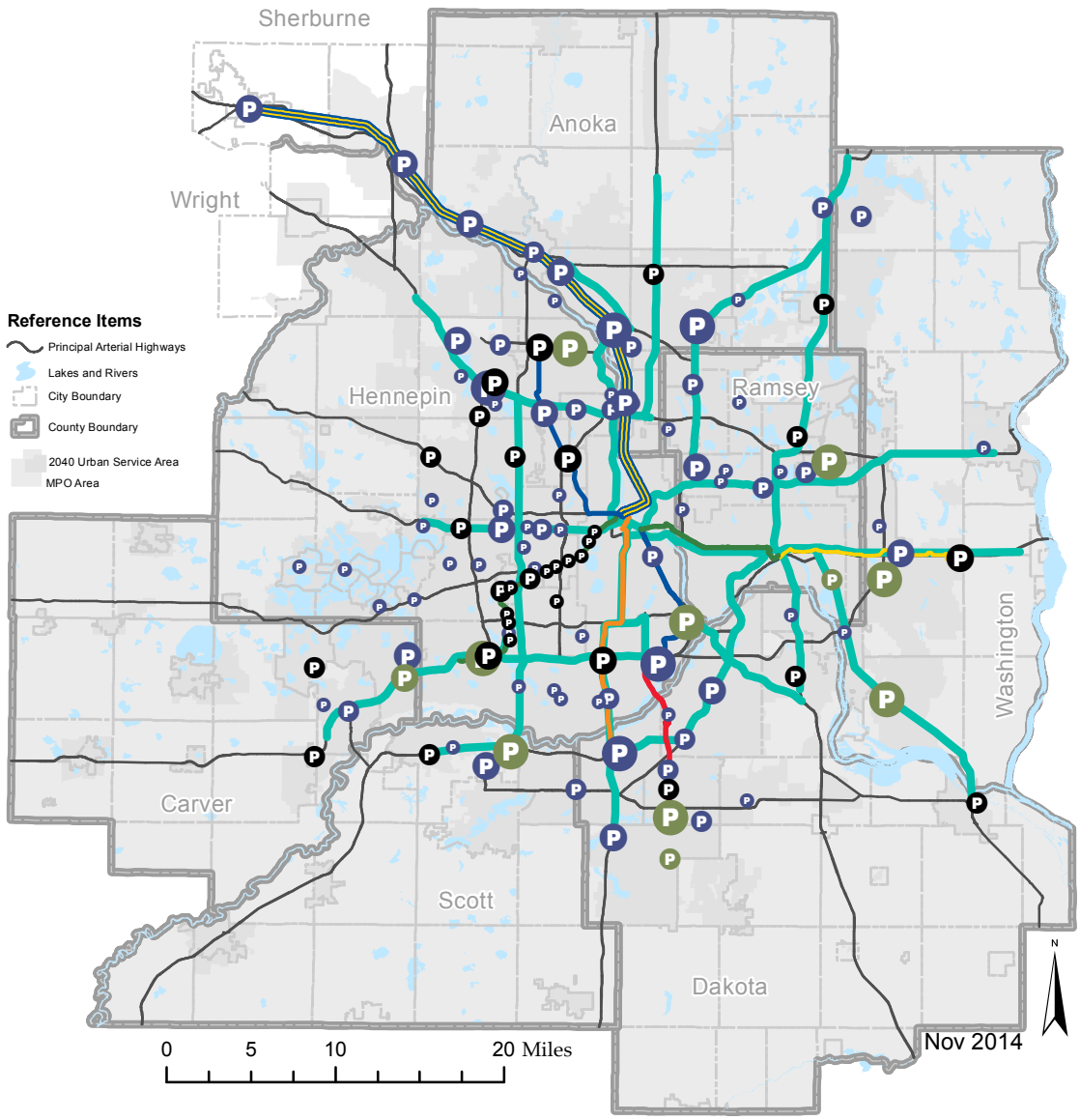
Facility design takes into account the cost of construction and land acquisition; site access for vehicles, pedestrians, and cyclists; site visibility; future expansion potential; community and land use compatibility; environmental constraints; and opportunities for joint-use ventures and transit-oriented development. The region is shifting away from providing small facilities to concentrate on fewer, larger facilities with higher 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 decade with usage growing annually by 6 - 9% 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 6-5.

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 6-5.

Figure 6-5: 2030 Park-and-Ride System and Express Bus Corridors

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

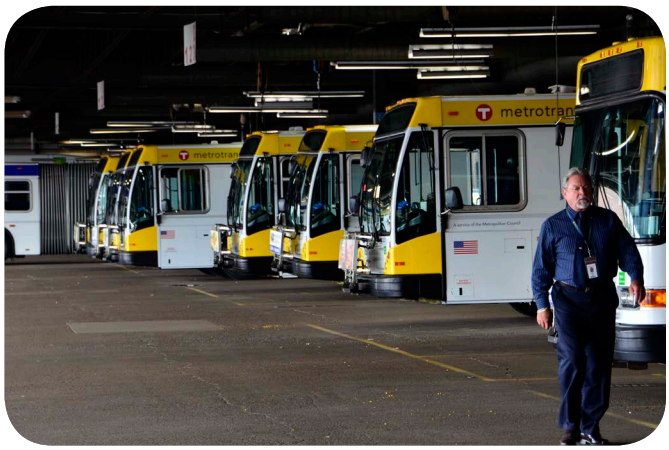
Transitway

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

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 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 facilities, transit police force, employee training, 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 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. 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. 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, 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 waiting environments clean and in good condition. As ridership grows, passenger 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

Growing 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 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 roadways (see Figure 6-6). 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

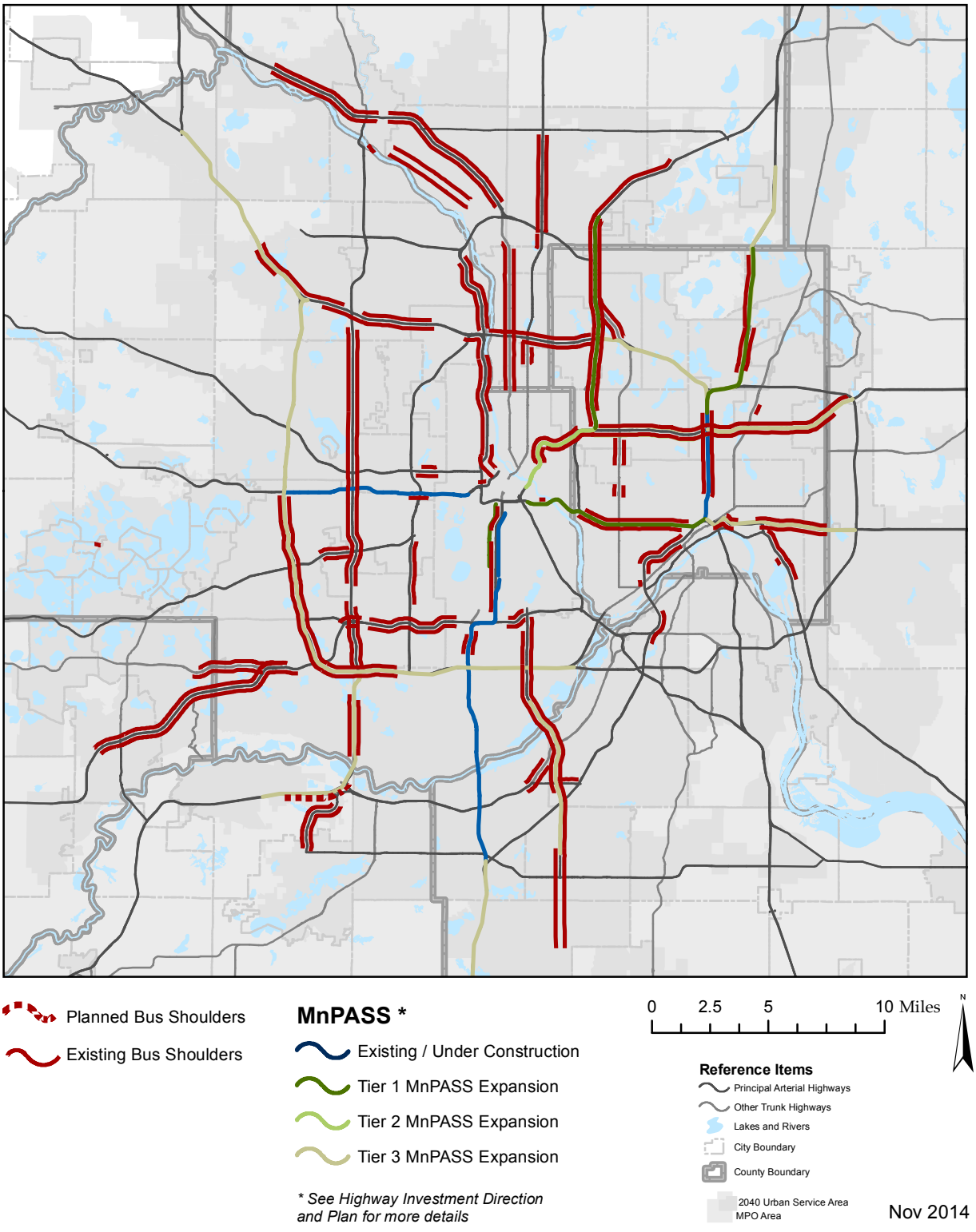
controlled by varying the toll price based on real-time traffic conditions. Prices are set to maintain a consistent flow of traffic. MnPASS lanes, like those in the I-394 and I-35W corridors, provide a significant transit advantage by offering a congestion-free alternative for transit riders. This strategy 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."

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, 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 6-6: 2040 Transit Advantages

Planned Bus Shoulders

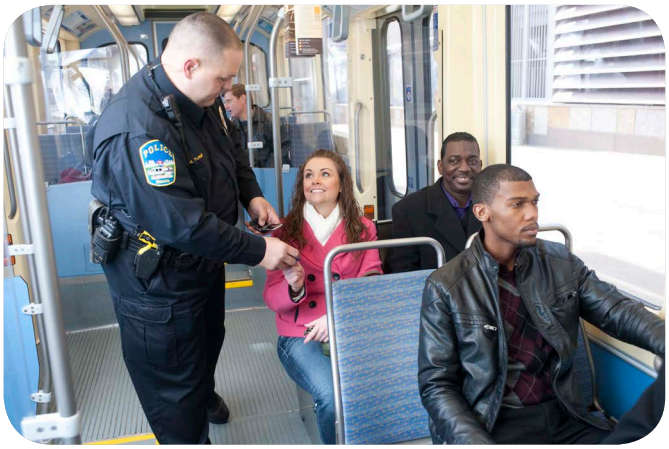


Marketing Transit

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, see the "Travel Demand Management" discussion.

Safety and Security



Working with transit providers and communities, the Council will continue to strive to provide a safe and secure environment for passengers and employees on vehicles and at transit facilities. The Metro 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 fill 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.

Operate and Maintain the Existing Bus and Support System

- Operating and managing the bus network and routes consistent with Regional Transit Design Guidelines and Performance Standards
- 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 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) funds 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 waiting shelters and bike amenities
- Start-up operating funding for limited expansion of transit service for demonstration purposes
- 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, 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 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 facilities such as heat, light, and transit information. These passenger facilities would be in clean, good condition because investments in maintenance support facilities would be commensurate with passenger 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.

Expand and Modernize the Bus and Support System – Increased Revenue Scenario

- 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:
  - 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
  - Expanded coverage of local service with an emphasis on connections between high-density residential neighborhoods, regional job concentrations, and transitways
  - Expanded commuter and express service to new markets and improved service in markets that are overcapacity
- Expanded fleet needed to expand service
- Enhanced maintenance including snow removal at transit passenger facilities and improvements including better lighting, more customer information, rehabbed aging facilities such as Sun Ray Transit Center, more and better shelters, improved multimodal connections, enhanced pedestrian connections to bus stops, and energy-efficient improvements
- 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

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 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 than a standard bus stop and generally spaced further apart to provide faster travel.

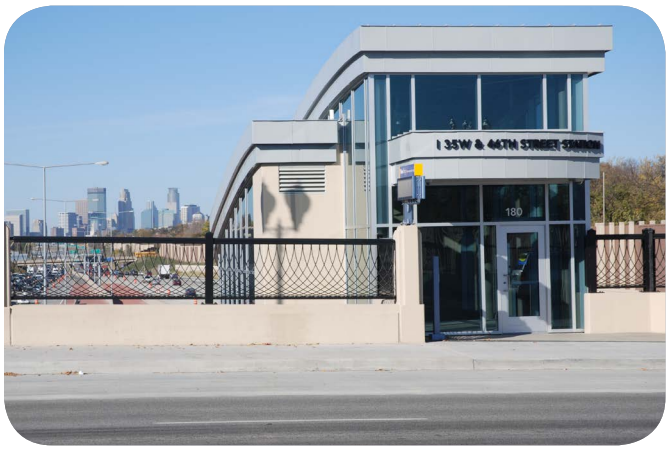
- Vehicles: BRT vehicles can range from typical 40-foot transit buses to specialized vehicles with a unique look, low floors and additional doors for quicker boarding, and other customer amenities.
- Fare collection: BRT typically utilizes off-board or other unique fare collection methods that allow for quicker passenger 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. 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 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 METRO Orange Line on I-35W South have been completed, such as the I-35W and 46th Street Station.

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 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.

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. 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 (LRT) 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.

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 6-7 is an excerpt from the Regional Transitway Guidelines; it illustrates the basic characteristics of each mode. The only mode not included in this discussion is dedicated BRT, a mode that has not been developed for implementation in this region yet. An update to the Regional Transitway Guidelines is identified as a work program item and will consider addressing dedicated BRT (See Chapter 11, "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 6-7: Excerpt of "Minimum Elements" from the Regional Transitway Guidelines

Regional Transitway Guidelines

Table 10-1 – Minimum Elements from Transitway Guidelines[3]

	Arterial BRT	Highway BRT[4]	LRT	Commuter Rail
Service Operations	*WEEKDAY* Combined frequency for Arterial BRT and local service should be 10-min. peak period, 15-min. midday/evening, 30- to 60-min. early/late *WEEKEND* 15-min. day/evening, 30- to 60-min. early/late	*WEEKDAY* Combined frequency for station-to-station and express services should be 10-min. peak period and 15-min. midday *WEEKEND* Frequency based on demand	*WEEKDAY* 10-min. peak period, 15-min. midday/evening, 30- to 60-min. early/late *WEEKEND* 15-min. day/evening, 30- to 60-min. early/late	*WEEKDAY* 30-min. peak period Off-peak frequency as needed At least 5 trips each peak period
Stations	Transitway stations justified by proven, documented demand that: • Achieve a functional, cost-effective outcome that balances aesthetics with funding availability • Are attractive and informative environment for passengers at stations that is consistent with local community context, transitway identity, and passenger waiting times • Achieve functional integration with the surrounding land uses, which may include forming a nucleus for transit-oriented development at stations • Balance travel time, access and station demand relative to travel markets at the time of implementation • 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 • Implement an interdisciplinary approach to station and facility design that incorporates advancements in technology			
Runningway	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
Vehicles	Sleek, modern, premium-styled buses appropriately sized and configured to service characteristics		Compatible with existing rail and infrastructure systems	
Fare Collection	Modern and proven fare collection systems that integrate well within the regional system and fit the needs of the region and transitway			
Technology	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	
Identity and Branding	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

3 Guidelines are not provided for Dedicated Busway, Express Bus with Transit Advantages, or Streetcar. Dedicated Busway and Express Bus with Transit Advantages are transitway modes recognized in the Transportation Policy Plan (TPP). Streetcars are not yet recognized in the TPP because their application in the region requires additional study.

4 For Table 10-1, Highway BRT Station-to-station and Express services should be considered as part of a Highway BRT transitway as a whole but the various elements may apply differently by service type

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 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 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.

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 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

Bus System Service and Facilities	Other elements of this plan describe how bus improvements are planned and how facilities support the development of transitways, such as park-and-rides.
Transit Advantages and Highways	The discussion of transit advantages can often be coordinated with transitway improvements, particularly with BRT transitways.
Pedestrian and Bicycle Plans	The plan has a substantial discussion on the regional bicycle system. Elements of a good pedestrian experience are also discussed in "Land Use and Local Planning."
Land Use and Local Planning	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" and through local comprehensive plans.
Regional Transitway Guidelines	The Regional Transitway Guidelines have a lot of information on best practices and standards for transitway design and integration into the transportation system.

Corridor Planning Status Updates

The following corridors are in various stages of development or study for potential transitway investments. The status of each project will be updated as they advance through major steps or once a locally preferred alternative is adopted into the Transportation Policy Plan.

METRO Red Line (Cedar Avenue 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) has identified future stages that will add stations and service to the line, including an extension to a number of planned stations in Lakeville. Stage 2 is included in the Current Revenue Scenario as an extension of BRT service to the Lakeville-Cedar station at 181st Street. The Implementation Plan is being updated with adoption anticipated in 2015.

METRO Orange Line (I-35W BRT) This project will connect Minneapolis, Richfield, Bloomington, and Burnsville along I-35W. The locally preferred alternative 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. 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) This project will connect Eden Prairie, Minnetonka, Hopkins, Saint Louis Park, and Minneapolis. The project's locally preferred alternative was adopted as the Kenilworth-Opus-Golden Triangle (3A) LRT alignment in May 2010 and has progressed through the Draft Environmental Impact Statement (DEIS). 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) This project will connect Brooklyn Park, Crystal, Robbinsdale, Golden Valley, and Minneapolis. 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 alignment in May 2013. 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-D2-E2) alignment that crosses to the south side of I-94 between approximately Lake Elmo Avenue and Manning Avenue. 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.

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 vision but included an analysis of BRT potential coordinated with that vision. As highway design work on the corridor continues, BRT implementation will be coordinated with these concepts through planning efforts.

Midtown This corridor links the existing METRO Blue Line Lake Street Station with planned METRO Green Line West Lake Station along the 29th Street Greenway through south Minneapolis. The corridor was studied through an Alternatives Analysis that concluded with a recommended locally preferred alternative of rail in the Midtown Greenway combined with the proposed Arterial BRT on Lake Street. The recommended locally preferred alternative will be considered through a future amendment to the Transportation Policy Plan.

Nicollet-Central 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 5th Street NE along Nicollet Avenue, Nicollet Mall, and Hennepin/1st 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.

Robert Street 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.

Red Rock 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.

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 Saint Paul.

Riverview This corridor connects Saint Paul with the Minneapolis-Saint Paul International Airport and the Mall of America and South Loop district in Bloomington. 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.

West Broadway The West Broadway corridor connects the Minneapolis neighborhoods along West Broadway to downtown Minneapolis and Robbinsdale. 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.

Arterial Transitway Corridor Study Metro Transit completed a system study on arterial BRT in 2012 that concluded with recommendations for arterial BRT in 11 corridors identified in the *2030 Transportation Policy Plan* and another corridor based on work done through the Bottineau LRT project. Initial work has begun on the Snelling Avenue line, the Penn Avenue line, and the Chicago Emerson-Fremont lines as the first three corridors for implementation. The remaining system planning is ongoing. Development of the West 7th Street Line has been put on hold pending the results of the Riverview corridor study.

Highway Transitway Corridor Study This was a regional analysis of potential highway BRT investments in eight 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 corridors. Other corridors in the study continued to confirm the strong demand for express service and potentially some mid-day service. More details on this analysis are available in the final report available from the Council.

Minneapolis Streetcar Feasibility Study The City of Minneapolis completed a *Minneapolis Streetcar Feasibility Study* in 2008 that resulted in a recommendation for a streetcar network as a long-range, 20- to 50-year vision for the city. The study recommended modern streetcar on seven corridors: West Broadway/Washington Ave, Hennepin Ave. S, Midtown Corridor, Nicollet Ave. S, University Ave. SE/4th Street SE, Chicago Ave. S, and Central Ave. NE.

Saint Paul Streetcar Feasibility Study The City of Saint Paul completed a *Saint Paul Streetcar Feasibility Study* in 2014 that identified a long-term vision for a streetcar network. Initial phases of the study have identified seven corridors for the long-term network: East 7th Street, Payne Ave, Rice Street, Selby Ave/Snelling Ave, Grand Ave/Cretin Ave, West 7th Street and Robert Street. The final phase of the feasibility study identified a potential 4.1-mile starter line for future study on East and West 7th Street from Randolph Ave. to Arcade Street, pending the results of the Riverview corridor study.

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, with involvement from cities and other stakeholders through the region's advisory committees. The process will start with gathering the appropriate technical information and allow 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. This plan is establishing the technical investment factors that will be considered. 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 Table 6-5.

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

Technical Investment Factors	Possible Measures
Ridership (Current forecast year)	• Average weekday project boardings • New weekday system linked trips on transit
Access to Jobs and Activity	• Increase in job accessibility on the transit system within 45 minutes • Number of regional job concentrations served
Cost-Effectiveness	• Annualized capital and operating cost per annual boarding • Annualized capital and operating cost per new annual system linked trip on transit
Existing Land Use	• Total population, employment, and student enrollment within ½-mile of proposed stations • Intersection density and walkability near stations • Number and relative share of affordable housing units within ½ mile of proposed stations; community housing performance score
Future Land use and Development	• Land use plans supportive of transitway densities, as described in "Land Use and Local Planning" • Official land use controls supporting affordable housing construction • Regulatory, infrastructure, and financing tools supportive of development including shared parking, parking requirement reductions • Strength of development market • Plans and policies to create and preserve a mix of housing affordability (see Housing Policy Plan)
Equity	• Average weekday project boardings by transit-dependent households • Income and affordable housing • Opportunity access for low-income population and people of color
Environment	• Water supply – suitability and local policies supporting groundwater recharge • Air quality – emissions reduction

This list of technical factors was developed to strongly align with the federal New Starts and Small Starts 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 (Chapter 11: "Work Program"). The technical information will inform decision-making by policymakers that will consider the technical information and policy factors.

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 and the Council, with involvement from cities and other stakeholders through the region's advisory committees. 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 sales tax is currently the most substantial regional 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
Regional Balance	• Investment levels across the region (geographic and per capita considerations) • Investment levels that promote prosperity at the community's stage and level of development
Funding Viability	• Viability for revenues being considered • Timing of spending expectations and revenues available
Community Commitment	• Local government support (Resolutions of support) • Local land use and development commitments • Public support
Risk Assessment and Technical Readiness	• Potential risks through project implementation • Stage of technical readiness, project development

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 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."

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 and identified funding, 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

- METRO Blue Line (Hiawatha Light Rail)
- Northstar Commuter Rail
- METRO Red Line (Cedar Avenue Transitway)
- METRO Green Line (Central Corridor Light Rail)

Beyond ongoing operations and maintenance, these corridors may require modernization or modest expansion improvements that address operational issues, unmet demand, or other unique challenges.

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, 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."

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 6-8 - 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 BRT): in project development with some construction completed, planned to open around 2019
- METRO Green Line Extension (Southwest LRT): in project development, planned to open around 2019
- METRO Blue Line Extension (Bottineau LRT): in pre-project development, planned to open around 2022
- METRO Gold Line (Gateway dedicated BRT): in pre-project development, planned to open around 2022
- Three 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.

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 first10years. 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 6-8: 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.

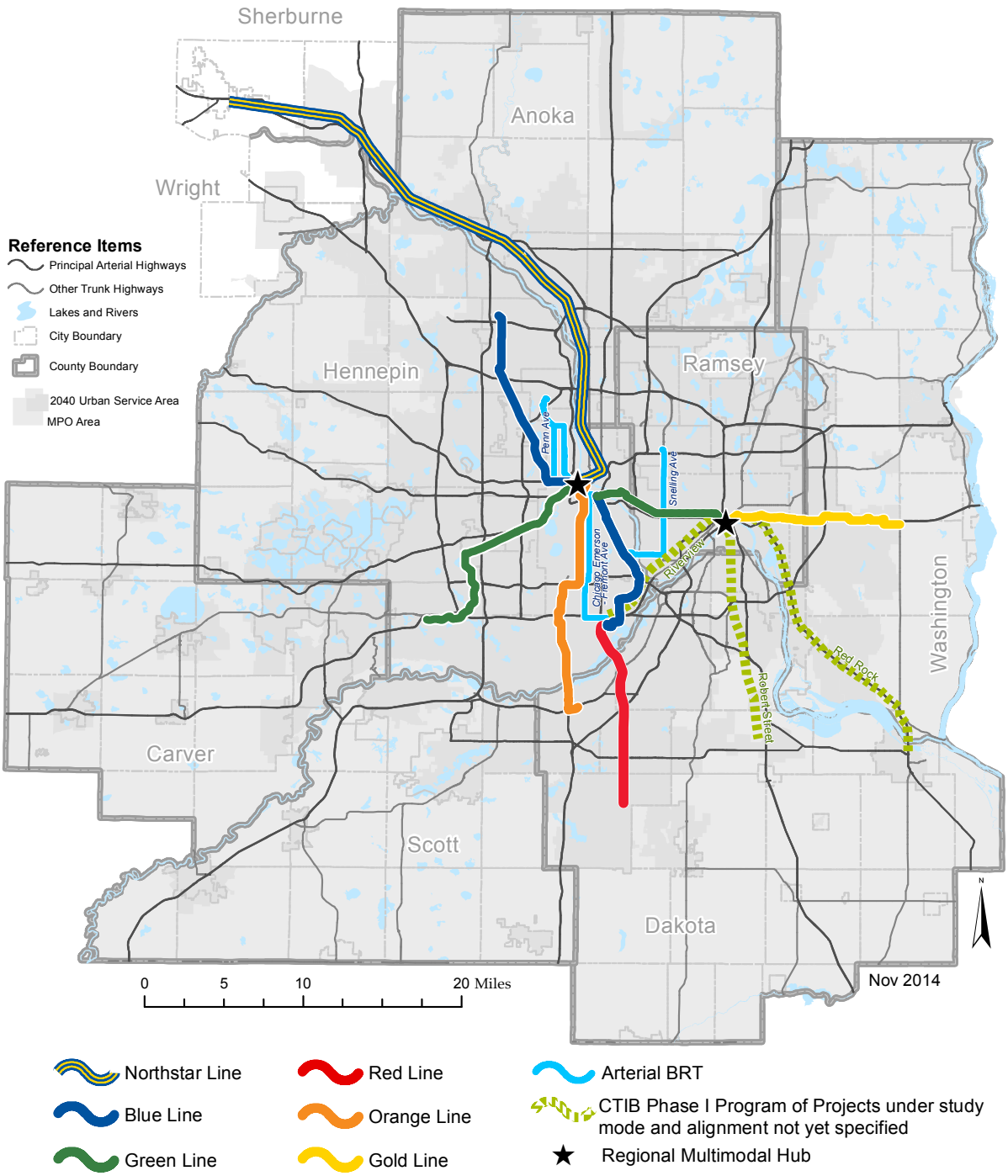
Modern Streetcar Acceleration Opportunities

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

Current Revenue Scenario Transitways and CTIB Phase I Program of Projects



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 are under study or needing to be studied for mode and alignment by other partners
- Implement a system of 11 arterial BRT projects

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 for prioritization and funding. 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: Map of Increased Revenue Scenario Transitways – Building an Accelerated Transitway Vision.

- Highway 169
- Highway 36
- I-35W North
- I-394
- METRO Orange Line Extension
- METRO Red Line Stage 3
- Midtown
- North Central[1]
- Rush Line
- Arterial BRT projects[2]:
  - American Boulevard
  - Central Avenue NE
  - East 7th Street
  - Hennepin Avenue
  - Lake Street
  - Nicollet Avenue
  - Robert Street
  - West Broadway Avenue

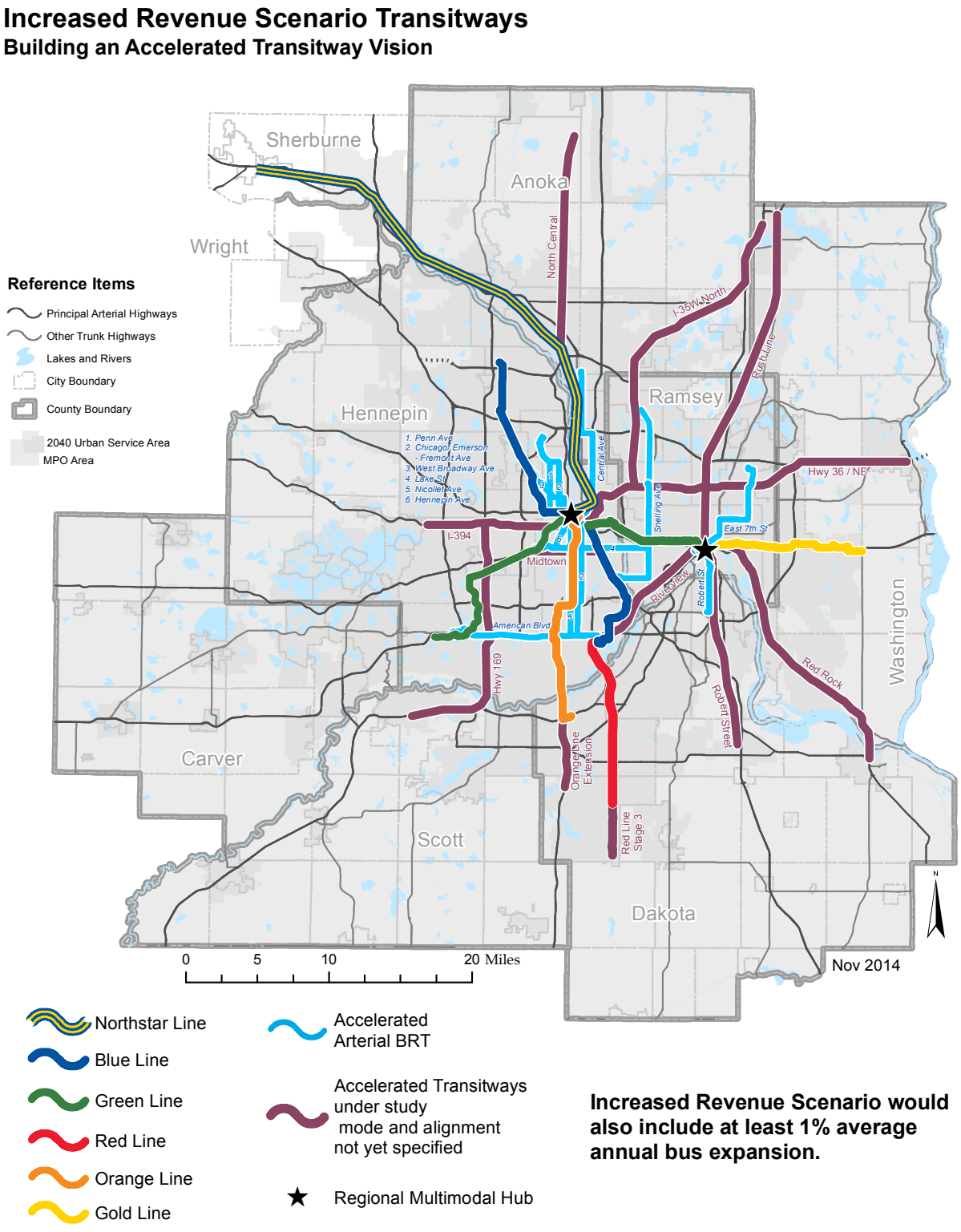
1 CTIB identified corridor, not currently under study for transitway investment.
2 Several arterial BRT corridors are also under consideration for other modes.

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 (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.

Figure 6-9: Map of Increased Revenue Scenario Transitways – Building an Accelerated Transitway Vision



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 LRT with an emphasis on high-frequency service with high accessibility. Typical modern streetcar lines are less than four miles long while light rail lines are typically around10miles 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. Modern streetcars attract new transit riders 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.

A number of recent and ongoing studies are considering modern streetcars for further planning or implementation. 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. This continued effort is described in the “Work Program.”

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 6-7 is a financial summary of the Current Revenue Scenario for both the bus and support system and transitway system investments.

Table 6-7: Current Revenue Scenario Summary of Funded Investments (Year of Expenditure)

	2015-2024 (10 years)	2025-2034 (10 years)	2035-2040 (6 years)	Total 2015-2040 (26 years)
Revenues	$ 11,009 M	$ 11,548 M	$ 8,675 M	$ 31,232 M
Bus and Support System Investments				
Existing				
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
Expansion				
Operating	-	-	-	-
Capital[1]	$ 103 M	$ 117 M	$ 81 M	$ 301 M
Total Bus and Support System	**$ 5,899 M**	**$ 7,602 M**	**$ 5,641 M**	**$19,142 M**
Transitway System Investments				
Existing				
Operating	$ 982 M	$ 1,257 M	$ 917 M	$ 3,156 M
Capital	$ 107 M	$ 195 M	$ 136 M	$ 438 M
Expansion				
Operating	$ 398 M	$ 1,085 M	$ 792 M	$ 2,275 M
Capital Improvements	$ 144 M	-	-	$ 144 M
Transitway Projects				
CCLRT Debt and FTA Cash Flow	$ 192 M	$ 50 M	-	
METRO Red Line Stage 2	$ 74 M	-	-	
METRO Orange Line	$ 150 M	-	-	
METRO Green Line Extension	$ 1,559 M	-	-	
METRO Blue Line Extension	$ 999 M	-	-	
METRO Gold Line	$ 469 M	-	-	
Snelling Ave. ABRT	$ 16 M	-	-	
Penn Ave. ABRT	$ 36 M	-	-	
Chicago-Fremont ABRT	$ 77 M	-	-	
Transitway System Expansion – Undesignated[2]	($ 92 M)[3]	$ 1,360 M	$ 1,188 M	$ 2,456 M
Total Transitway System	**$ 5,111 M**	**$ 3,947 M**	**$ 3,033 M**	**$ 12,091 M**
Total Investments – All Categories	**$ 11,009 M**	**$ 11,548 M**	**$ 8,675 M**	**$ 31,232 M**

1 May include operating funding for initial start up of new services, typically up to three years.
2 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.
3 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 6-8 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 fucnding 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 6-8: Increased Revenue Scenario Summary of Potential Revenues and Investments (Year of Expenditure Dollars)

	2015-2040 (26 years)
Revenues	**$ 7.0 – 9.0 billion**
Bus and Support System	$ 2.0 – 3.0 billion
Transitways	$ 5.0 – 6.0 billion