

Chapter Title: Transportation

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Transportation Goals and Policies

Summary of Regional Transportation Goals

Guidance for the development of the Transportation Plan is provided by the Metropolitan Council’s 2040 Transportation Policy Plan (TPP). The Metropolitan Council’s TPP includes six major themes that address regional transportation:

Transportation System Stewardship. Provide sustainable investments in the transportation system which are protected by strategically preserving, maintaining, and operating system assets.

Safety and Security. Ensure the regional transportation system is safe and secure for all users.

Access to Destinations. Allow people and businesses to prosper by using a reliable, affordable, and efficient multimodal transportation system that connects them to destinations throughout the region and beyond.

Competitive Economy. Ensure the regional transportation system supports the economic competitiveness, vitality, and prosperity of the region and state.

Healthy Environments. Confirm the regional transportation system advances equity and contributes to communities’ livability and sustainability while protecting the natural, cultural, and developed environments.

Levering Transportation Investments to Guide Land Use. Leverage the region’s transportation investments to guide land use and development patterns that advance the regional vision of stewardship, prosperity, livability, equity, and sustainability.

Minnetonka Goals and Policies

To respond to the above themes as well as to serve economic activities and improve the quality of life within Minnetonka, the city has adopted transportation goals and policies. These were developed in concert with the overall comprehensive plan goals and policies and include:

Goal 1. Provide a safe, convenient, effective, and integrated transportation system.

- Policy 1.1 Treat all modes of transportation and related facilities as one integrated system to be coordinated and developed with other partners and stakeholders.



- Policy 1.2 Provide and improve facilities for all users, encouraging safe design and mitigating accidents, especially with pedestrians and bicyclists, who are the most vulnerable users of the transportation system.
- Policy 1.3 Consider traffic control improvements where appropriate to accommodate roadway capacity and reduce delay.
- Policy 1.4 Collaborate with other agencies for local and regional transportation improvements and programs to lessen the impacts of congestion and provide the most effective transportation system for the city.
- Policy 1.5 Prioritize investments in A-minor arterials that build, manage, or improve the system's ability to supplement the capacity of the principal arterial system.

Goal 2. Encourage appropriate “traffic calming” techniques within and near residential neighborhoods that are impacted by congestion and excessive traffic volumes and/or speeds.

- Policy 2.1 Consider traffic-calming measures to discourage through traffic on local streets.
- Policy 2.2 Encourage design of all local residential streets to prevent penetration by through traffic, and properly direct traffic to collector or arterial streets.
- Policy 2.3 Support regional roadway improvements to reduce local roadway traffic levels, which otherwise belong on the regional system.
- Policy 2.4 Manage the impact of new development upon the local transportation system and encourage the use of Transportation Demand Management (TDM) and other traffic management techniques.

Goal 3. Encourage, with other government agencies, the expansion of multimodal and transit services in the city to support resident and business transportation needs.

- Policy 3.1 Promote public transit that serves all residents and provides special transit services for commuters and diverse populations.
- Policy 3.2 Support regional transit initiatives such as Bus Rapid Transit (BRT), Light Rail Transit (LRT) and Commuter Rail.
- Policy 3.3 Create ways to improve connections within Minnetonka by providing an interconnected transit system and ways for those without a car to move around Minnetonka freely and easily.
- Policy 3.4 Promote telecommuting and flex scheduling to reduce traffic.
- Policy 3.5 Identify or develop additional park-and-ride lots throughout the city to encourage transit ridership.

Policy 3.6 Utilize sound land use planning to promote multimodal travel alternatives to single-occupant vehicles, with a focus on strategic job, activity and industrial and manufacturing concentrations location on congested highway corridors served by the regional transit service.

Goal 4. Plan for trails and pedestrian ways as a transportation mode and provide a network of trails and pathway connections to schools, commercial areas, parks, activity centers, and access to transit services.

Policy 4.2 Maintain safe road crossings in high traffic areas and promote safe pathways for pedestrians and bicyclists in parking lots and internal traffic circulation areas.

Policy 4.3 Identify pedestrian/bike trails to connect with adjacent surrounding communities.

Policy 4.4 Focus bicycle and trail connections on activity centers within the community and in neighboring communities.

Goal 5. Recognize the interrelationship of land use and transportation, and anticipate impacts of the location and intensity of planned land uses on the transportation system.

Policy 5.1 Plan transportation facilities to function in a manner compatible with adjacent land uses.

Policy 5.2 Require pedestrian connections between complementary land uses.

Policy 5.3 Encourage compact and pedestrian-friendly mixed use developments that offer the type of retail and convenience services that will minimize peak hour traffic demand.

Policy 5.4 Implement land use policies that support future growth around transit stations and high-frequency service areas, and commit to development strategies that support successful transit in these areas.

Goal 6. Provide a transportation system that supports the economic vitality and prosperity of the city and the region.

Policy 6.1 Provide and protect efficient connections from major freight facilities to the regional highway system.

Policy 6.2 Identify and improve suitable truck routes while minimizing impacts; such as, noise and traffic to sensitive land uses.

Goal 7. Ensure the Minnetonka transportation system is resilient and built to accommodate changes in transportation infrastructure, safeguarding investments for many years to come.

- Policy 7.1 Consider opportunities to improve the city's intelligent transportation system (ITS) infrastructure to be prepared to potentially support autonomous vehicles (AVs) and connected vehicles (CVs) in the future.
- Policy 7.2 Mitigate impacts to the natural environment and cultural resources when planning, constructing and operating transportation systems.
- Policy 7.3 Minimize the effect of air quality impacts on the natural environments with proposed transportation improvements.
- Policy 7.4 Promote rideshare opportunities, such as Uber and Lyft, within the City of Minnetonka to help individuals achieve first and last-mile connections from transit and other modes of transportation.

Existing and Anticipated Roadway Capacity

Congestion on the roadway system is judged to exist when the ratio of traffic volume to roadway capacity (v/c ratio) approaches or exceeds 1.0. The ratio of volume to capacity provides a measure of congestion along a stretch of roadway and can help determine where roadway improvements, access management, transit services, or demand management strategies need to be implemented. It does not, however, provide a basis for determining the need for specific intersection improvements.

Table 1 provides a method to evaluate roadway capacity. For each facility type, the typical planning-level annual average daily traffic (AADT) capacity ranges and maximum AADT volume ranges are listed. These volume ranges are based upon guidance from the Highway Capacity Manual, discussions with the Metropolitan Council and professional engineering judgment. A range is used since the maximum capacity of any roadway design (v/c = 1) is a theoretical measure that can be affected by its functional classification, traffic peaking characteristics, access spacing, speed, and other roadway characteristics. Further, to define a facility's "daily capacity," it is recommended that the top of each facility type's volume range be used. This allows for capacity improvements that can be achieved by roadway performance enhancements.

Table 1: Planning Level Roadway Capacities by Facility Type

Facility Type	Planning Level Daily Capacity Ranges (AADT)	Under Capacity			Approaching Capacity		Over Capacity	
		LOS	A	B	C	D	E	F
		0.2	0.4	0.6	0.85	1.0	>1.0	
Two-lane undivided urban	8,000 – 10,000	2,000	4,000	6,000	8,500	10,000	> 10,000	
Two-lane undivided rural	14,000 – 15,000	3,000	6,000	9,000	12,750	15,000	> 15,000	
Two-lane divided urban (Three-lane)	14,000 – 17,000	3,400	6,800	10,200	14,450	17,000	> 17,000	
Four-lane undivided urban	18,000 – 22,000	4,400	8,800	13,200	18,700	22,000	> 22,000	
Four-lane undivided rural	24,000 – 28,000	5,600	11,200	16,800	23,800	28,000	> 28,000	
Four-lane divided urban (Five-lane)	28,000 – 32,000	6,400	12,800	19,200	27,200	32,000	> 32,000	
Four-lane divided rural	35,000 – 38,000	7,600	15,200	22,800	32,300	38,000	> 38,000	

Four-lane expressway rural	45,000	9,000	18,000	27,000	38,250	45,000	> 45,000
Four-lane freeway	60,000 – 80,000	16,000	32,000	48,000	68,000	80,000	> 80,000
Six-lane freeway	90,000 – 120,000	24,000	48,000	72,000	102,000	120,000	>120,000

Level of Service (LOS)

Level of Service (LOS), as related to highways and local roadways, categorizes the different operating conditions that occur on a lane or roadway when accommodating various traffic volumes. It is a qualitative measure of the effect of traffic flow factors, such as speed and travel time, interruption, freedom to maneuver, driver comfort and convenience, and indirectly, safety and operating costs. It is expressed as levels of service “A” through “F.” Level “A” is a condition of free traffic flow where there is little or no restriction in speed or maneuverability caused by presence of other vehicles. Level “F” is forced-flow operation at low speed with many stoppages, with the highway acting as a storage area. Table 2 describes LOS and further relates the correlation between LOS and planning-level roadway capacities, helping Minnetonka better understand the operations and capacity level on existing roadways.

Table 2: Level of Service Definitions

Level of Service (LOS)	Traffic Flow	Vehicle/ Capacity Ratio	Description
A	Free Flow Below Capacity	0.20	Low volumes and no delays
B	Stable Flow Below Capacity	0.40	Low volumes and speed dictated by travel conditions
C	Stable Flow Below Capacity	0.60	Speeds and maneuverability closely controlled due to higher volumes
D	Restricted Flow Near Capacity	0.85	Higher density traffic restricts maneuverability and volumes approaching capacity
E	Unstable Flow Approaching Capacity	1.0	Low speeds, considerable delays, and volumes at or slightly over capacity
F	Forced Flow Over Capacity	>1.0	Very low speeds, volumes exceed capacity, and long delays with stop-and-go traffic

Transit System Plan

The transportation needs of Minnetonka residents cannot be met by a comprehensive, well maintained roadway system alone. A complete transportation system supports a variety of transportation modes to meet the varied needs of residents, workers, and visitors.

Transit is an important element in the transportation network because it:

- Provides vulnerable populations access to housing, employment, and services in the area, including those who cannot afford a personal vehicle, people who cannot drive, and senior citizens.
- Provides opportunities for people who prefer an alternative to automobile travel.
- Removes a portion of existing and future automobile traffic from the roadway, reducing travel time and congestion for everyone on the roadway.

The City of Minnetonka is committed to supporting and preserving existing transit services and facilities in the city and seeking ways to complement the transit system as new service begins. Although the city does not have direct responsibility for the operation of services or the provision of facilities, the city can advocate for better service by promoting transit supportive land use patterns as sections of the city redevelop and building a complete sidewalk network that facilitates access to transit service areas.

This chapter identifies the existing transit services, facilities, and programs within the City of Minnetonka, suggests improvements, and discusses the city's role in supporting the transit system.

Existing Transit Services and Facilities

The Metropolitan Council 2040 Transportation Policy Plan identified five existing transit market service areas for all communities within the Twin Cities metropolitan area. The market service areas were defined by:

- Population density
- Employment concentration and job density
- Intersection density
- Transit dependent segments of the population

Minnetonka falls completely within the Metropolitan Transit Taxing District and is served by Metro Transit. A small section of the Opus Campus is located within Transit Market area II, portions of the city are located within Transit Market Area III while others are located within Transit Market Area IV. Employers in the Opus Campus, located in the eastern portion of the city, have a comparatively high level of transit service, with frequent local and express service offered 12-20 hours a day, seven days a week. Most of the western half of the city is located within Transit Market Area IV and service is limited to peak-only express and commuter routes and dial-a-ride service. Please refer to Table 3 for detailed information on Transit Market Areas and their corresponding levels of service. Figure X illustrates existing transit services and facilities within the city.

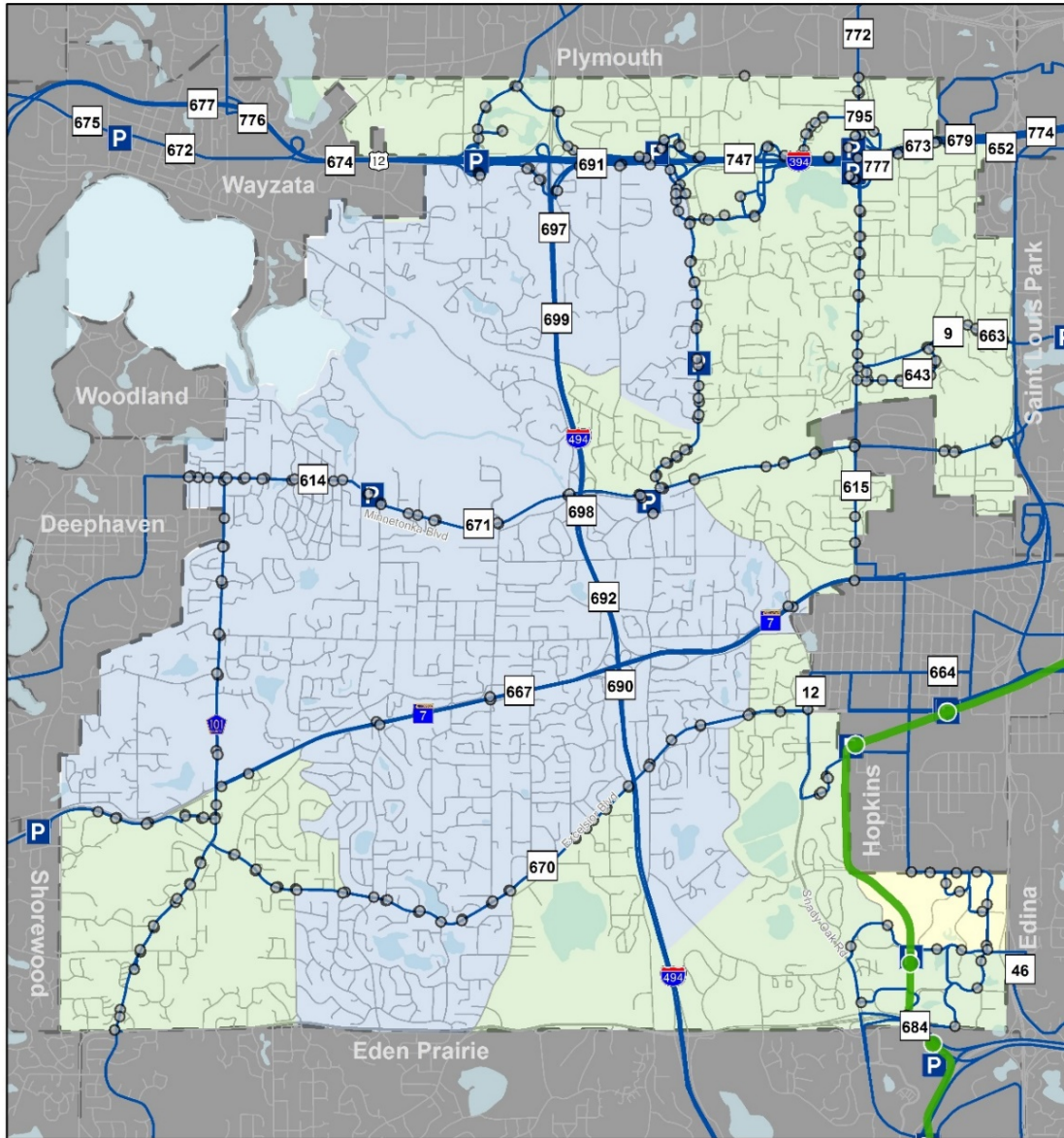
Table 3. Transit Market Areas

Market Area	Propensity to Use Transit	Service Characteristics	Typical Transit Service	Presence in Minnetonka
I	Highest potential for transit ridership	Frequency: 15-30 min most modes	Dense network of local routes with highest levels of service accommodating a wide variety of trip purposes. Limited stop service supplements local routes where appropriate.	None
		Span: early to late, seven days a week		
		Access: ½ mi between routes		
II	Approximately 1/2 ridership potential of Market Area I	Frequency: 15-60 min most modes	Similar network structure to Market Area I with reduced level of service as demand warrants. Limited stop services are appropriate to connect major destinations.	Opus Campus north of Bren Road.
		Span: morning to night, seven days a week		
		Access: one mile between routes		
III	Approximately 1/2 ridership potential of Market Area II	Frequency: 15-60 min most modes	Primary emphasis is on commuter express bus service. Suburban local routes providing basic coverage. General public dial-a-ride complements fixed route in some cases.	Areas north of 394, most of the area east of 494, bordering Hopkins, Glen Lake area, and near Purgatory Park and Minnetonka High School
		Span: peak times, occasional weekends		
		Access: varies on development patterns		
IV	Approximately 1/2 ridership potential of Market Area III	Frequency: three trips per peak express bus	Peak period express service is appropriate as local demand warrants. General public dial-a-ride services are appropriate.	Central and western Minnetonka
		Span: peak times		
		Access: usually at large nodes, if at all		
V	Lowest potential for transit ridership	Frequency: 30 minutes, Commuter Rail	Not well-suited for fixed-route service. Primary emphasis is on general public dial-a-ride services.	None
		Span: n/a		
		Access: n/a		

Emerging Market Overlay	Varies, typically matches surrounding Market Area	Varies	Varies. Typically matches surrounding Market Area.	None
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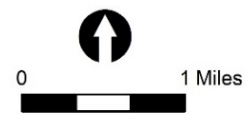
Source: Metropolitan Council Transportation Policy Plan 2015

Figure 1. Transit System Connectivity



Transit System Connectivity

- Transit Stops
- Park-and-Ride Lots
- Transit Routes
- Southwest LRT Stations
- Southwest LRT
- Market Area II
- Market Area III
- Market Area IV



Source: Met Council & SRF Consulting

Minnetonka is served by three different transit services, Metro Transit, Plymouth Metrolink, and Metro Mobility. Metro Transit offers fixed-route service with both local and express routes. With the construction and opening of the Southwest Light Rail Transit (Southwest LRT, METRO Green Line Extension), Metro Transit will also offer a light rail connection south to Eden Prairie and northeast to downtown Minneapolis via Hopkins and St. Louis Park. Metro Transit also offers demand-response services, like TransitLink and VanPool that may serve Minnetonka residents. Plymouth Metrolink offers express service to businesses in Plymouth, but also has a few stops north of I-394 in Minnetonka. Metro Mobility offers demand-response services for people with disabilities.

Fixed-Route Transit Bus Service

Fixed-route transit service includes both local and express bus services that operate on a regular schedule and follow consistent routes. Fixed-route transit service in Minnetonka is provided by Metro Transit and Plymouth Metrolink. Plymouth Metrolink routes serve locations north of I-394 before entering the City of Plymouth. Table X shows the characteristics of the routes serving Minnetonka, including where in Minnetonka they serve, what time they serve Minnetonka, and how frequently trips of each route serve Minnetonka. Routes 568, 612, 664, 665, 673, and 675 have been eliminated or re-routed so that they no longer serve Minnetonka, or combined with other routes since the last comprehensive plan. They are not included in Table 4.

Table 4. Existing Transit Routes

Route	Type	Cities Served	Locations Served	Minnetonka Service Times	Frequency
9	Local	Minnetonka, St. Louis Park, Golden Valley, Minneapolis	Green Briar Road	Weekdays 5am-Midnight, Weekends 7am-11pm	60 minutes
12	Local	Minnetonka, Hopkins, St. Louis Park, Minneapolis	Opportunity Partners	Weekdays 5am-Midnight, more trips for traditional commutes, peak, bi-directional	20-60 minutes
46	Local	Minnetonka, Edina, Minneapolis, Saint Paul	Opportunity Partners	weekdays, peak, no reverse, 46 D	One trip at peak
614	Local	Minnetonka	Ridgedale Center, Plymouth Road, Minnetonka Blvd, City Hall, Minnetonka Heights	Weekdays 5am to 7pm	60 minutes
615	Local	Minnetonka, Hopkins, Saint Louis Park	Ridgedale, Hopkins High School, Greenbrier	Monday through Saturday 7am to 8pm	60 minutes
643	Express	Minnetonka, Golden Valley, St. Louis Park, Minneapolis	Cedar Lake Road to Greenbrier Road.	Weekdays, peak, no reverse.	5 trips in am, 3 trips in pm
645	Express	Mound, Orono, Wayzata, Minnetonka, Golden Valley, St. Louis Park, Minneapolis	Carlson south of I-494, Ridgedale Center, Plymouth Road Park-and-Ride, County Road 73 Park-and-Ride.	7 days a week	20-30 minutes at peak, midday and weekend 60 minutes
652	Express	Minnetonka, Golden Valley, St Louis Park, University of Minnesota	County Road 73 Park-and-Ride, Plymouth Road Park-and-Ride	Weekdays, peak, no reverse.	2 trips in the am, 2 trips in the pm
663	Express	Minnetonka, St Louis Park, Minneapolis	Cedar Lake Road, Green Briar Road	Weekdays, peak, no reverse	8 trips at each peak period
664	Express	Minnetonka, Hopkins, St Louis Park, Minneapolis	North Opus	Weekdays, peak, no reverse	4 trips each peak period
667	Express	Minnetonka, Hopkins, St Louis Park, Minneapolis	Spans Minnetonka through County Road 101 and Highway 7	Weekdays, peak, no reverse	3 trips each peak period

670	Express	Excelsior, Minnetonka, Hopkins, Minneapolis	Follows Excelsior Blvd through Minnetonka	Weekdays, peak, no reverse	3 trips each peak period
671	Express	Orono, Tonka Bay, Shorewood, Excelsior, Greenwood, Deephaven, Minnetonka, Minneapolis	Follows Minnetonka Blvd through Minnetonka	Weekdays, peak, no reverse	3 trips each peak period
672	Express	Wayzata, Minnetonka, St Louis Park, Minneapolis	Plymouth Road Park-and-Ride, businesses north of I-394	Weekdays, peak, bi-directional	4 to 5 trips each direction during peak periods
673	Express	Minnetonka, Minneapolis	County Road 73 Park-and-Ride	Weekdays, peak, bi-directional	11 trips east in am, 4 trips west in am, 10 trips west in pm
679	Express	Minnetonka, Minneapolis	County Road 73 Park-and-Ride	Weekdays, pm peak, eastbound	5 trips
747	Express	Plymouth, Minnetonka, Minneapolis	Carlson Towers	Weekdays, reverse	11 trips am, 10 trips pm

Metro Mobility

Metro Mobility is the Americans with Disability Act (ADA) public paratransit service for persons with disabilities. Metro Mobility operates service in Minnetonka during the same span of service each day as the fixed route service operates. Metro Mobility is a shared ride system, in which customers make a reservation and routes are developed to the trip origins and destinations. Rider eligibility is based on a person's functional inability to use regular-route services due to disability or health condition. The federal ADA provides parameters and requirements for the service structure that the Metropolitan Council must follow. Metro Mobility service is funded through appropriations from the Minnesota State Legislature, passenger fares and federal funding. The Metro Mobility service in Minnetonka is currently available to eligible customers from 5:00 a.m. to 2:00 a.m., seven days a week.

Park-And-Rides

Many express and local routes serve park-and-rides. There was a strong demand for park and ride service reported in the Minnetonka 2012 Transit Study. Minnetonka has four park-and-rides:

Park and Ride	Number of Stalls
County Road 73 South and I-394	732 Stalls
Plymouth Road and I-394	111 Stalls
Minnetonka Boulevard and Steele Street	25 Stalls
Minnetonka Boulevard and Baker Road	16 Stalls

There is a park-and-ride that mirrors County Road 73 South & I-394 on the north side of I-394 that opens for special events. It is possible that in the future, this northern parking lot may be formalized and serve riders year-round. County Road 73 South & I-394 Park-and-Ride utilization has held steady between 65 and 75 percent utilization in the past six years. This park-and-ride is served by five routes and has a three-level parking ramp, an indoor waiting area, heated shelters, and real-time arrival information.

Plymouth Road Park-and-Ride is planned to close by 2030. Although utilization was falling for a few years, it has begun to rise again. This park-and-ride is served by four routes and has bike lockers.

Both park-and-rides on Minnetonka Boulevard have low capacity and are served by the same two express routes, 614 and 671. Utilization at these park-and-rides have been low to moderate. Neither Minnetonka Boulevard and Steel Street nor Minnetonka Boulevard and Baker Road park-and-rides have bus shelters and both appear to serve as overflow lots for churches on the weekends.

Park-and-rides are planned at METRO Green Line Extension stations in and near Minnetonka. Opus Station is expected to have 80 stalls for parking.

Transit Advantages

Transit advantages is a term that describes physical features that provide a travel time advantage over automobiles using the same facility. These include bus-only shoulders, MnPASS lanes, and ramp-meter bypasses. Transit advantages improve the attractiveness of

transit by allowing buses to move faster than automobiles making the same trip, effectively reducing the travel time for transit patrons relative to automobile users.

Bus only Shoulders

Bus-Only Shoulders (BOS) allow buses to use the roadway shoulder to bypass automobiles that are in the general flow of traffic. They may only be used when the speed in the general purpose lanes drops to 35 mph or lower. BOS are useful in those areas where there is chronic peak-period congestion and increase the attractiveness of peak-hour express buses by allowing express buses to maintain a minimum speed through congested areas and adhere to schedules.

BOS have been established in the following areas that benefit transit routes in Minnetonka:

- Both directions on Highway 7 between Highway 169 and Shady Oak Road
- On I-494 south of I-394

Ramp Meter Bypasses

Ramp meter bypass lanes allow buses and cars with two or more people to bypass congested on ramps during peak travel times. There are six ramp-meter bypass lanes within the Minnetonka service area:

- I-494 westbound ramp from Minnetonka Boulevard
- I-494 northbound ramp from Highway 62
- I-394 eastbound from County Road 73
- I-394 eastbound from Ridgedale Drive
- Highway 12 eastbound from County Road 101
- Highway 12 eastbound from Highway 101

High Occupancy Vehicle Lanes

There are bidirectional MnPASS lanes along I-394 through Minnetonka. MnPASS lanes provide toll lanes for private drivers and quick access to downtown for express routes. Express routes that do not use MnPASS also benefit from the less traffic on general purpose lanes of I-394. There is also a dedicated bus lane on Plymouth Road, connecting to Plymouth Road Park-and-Ride.

Transit Programs

Transit Strategies

Transit needs and strategies for the metropolitan area as a whole were identified in the Metropolitan Council's 2040 Transportation Policy Plan (TPP), 2015. This document essentially emphasized similar transit development goals. The findings and recommendations from these plans relevant to Minnetonka are summarized below.

- **Safety and Security.** Safety and security are essential elements of the transit system. Their consideration should be integrated with all investments.
- **Access to Destinations.** Providing access is a fundamental role of the transit system. The 2040 TPP 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 opportunities that exist in the region.

- **Competitive Economy.** The 2040 TPP includes transitway system investments (Southwest LRT) 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. Connecting to jobs is an important emphasis on the investment factors.
- **Healthy Environment.** Considering impacts on the environment, particularly pollution related to congestion and also additional impacts could be related to land use planning that encourages a car-free lifestyle.
- **Leveraging Transportation Investment to Guide Land Use.** Helping 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.

Travel Demand Management

Travel Demand Management (TDM) includes strategies and actions for reducing single-occupant vehicle travel, increasing vehicle-occupancy rates, and reducing vehicle miles of travel. Changes in travel behavior for the metropolitan area are constantly being sought to more effectively manage existing transportation facilities. By modifying demand for travel, congestion and the need for facility (roadway) expansion can be lessened.

Minnetonka is a member and active participant in the I-494 Corridor Coalition and their I-494 Commuter Services. This coalition is a Transportation Management Organization (TMO) funded by the Metropolitan Council and ongoing federal Congestion Mitigation and Air Quality (CMAQ) grants.

TDM may include strategies and incentives to reduce trip-making activity, decrease single-occupant vehicle travel, shift travel away from congested locations, increase high-occupancy vehicle travel and decrease peak-hour travel. Most TDM actions are targeted toward the peak-hour work trip in highly congested areas. TDM programs are more effective where there are multiple strategies for changing behavior.

The actions selected depend upon the stated objectives and priorities of the TDM sponsor, funding availability, administrative resources, and participant support. Minnetonka completed a TDM policy study in 2013, which led to the creation of a TDM program. The program that requires developers to provide a sidewalk/trail alignment plan and describe efforts to promote walking, biking, transit and carpools with each development proposal. As part of the city's TDM program, they will also consider reduced zoning ordinance requirements such as a reduction in requirements for auto parking in transit-oriented developments or bike/walk districts. Other TDM strategies applicable to Minnetonka are discussed below:

1. **Ridesharing.** Minnesota Rideshare provides carpool and vanpool matching services, promotes ridesharing, and sponsors demonstration projects in the Twin Cities area. Ridesharing can be especially attractive for longer trips on congested corridors such as work trips from Minnetonka to other metropolitan centers.
2. **Transit/Ridesharing Incentives.** Employers can encourage employees to rideshare or use public transit if available. The benefits to the employer may include a reduction in the need for parking facilities and less traffic congestion around the employment site. Incentives from employers can include subsidized bus passes, on-site sale of bus passes,

distribution of transit schedules and ridesharing information, subsidy of vanpools, and preferential parking for those ridesharing.

3. **Alternative Work Schedules and Telecommuting.** Variable work hours, flex time and the ability to work remotely can shift from the peak period or eliminate the trip altogether. However, changes in start-time tend to dilute the ability to share rides.
4. **MnPASS Express Lanes.** MnPASS facilities provide incentives for carpooling, vanpooling and transit. As highways become congested, riders can use MnPASS lanes for a toll charged to driver MnPASS Express Lane accounts. On I-394, eastbound between County Road 101 to Highway 100 is charged between 6am and 10am. For westbound traffic on I-394 between Highway 100 and I-494 charge times are between 3pm and 7pm.

Carpool and Vanpool

Minnetonka residents are part of the regional car pool matching database, a service for those wishing to share a ride. Carpool participants: qualify for the regional guaranteed ride home program; may use MnPASS lanes and meter bypass ramps; receive parking discounts in some circumstances; and may participate in occasional promotional benefits. Minnetonka commuters also can participate in the regional Metro Vanpool program. Metro Vanpool is a regional vanpool program sponsored by the Metropolitan Council. Vanpools are made up of 5 to 15 commuters picked up along the vanpool route or at an agreed-upon location. Like buses and carpools, vanpools are eligible to use meter bypass lanes or ramps and MnPASS lanes.

Future Transit System

Local Public Transit Services

Minnetonka has been provided by the Legislature, the right to operate an independent suburban transit authority, with the ability to locally manage and operate transit services for residents and share in a portion of regional operating and capital transit funds. The city obtained this authority in 2002, and currently receives and oversees transit services from the Metropolitan Council via a Memorandum of Understanding. Minnetonka could elect in the future to directly contract for and operate these services if the City Council so chooses for any reason. With or without independent transit operations, city staff may direct and provide input for service redesigns annually under current agreements. Local bus service redesign can benefit residents and provide for changing travel patterns, increase transit access and availability in and around Minnetonka, potential population growth, and business growth where it is deemed appropriate, depending on resource availability and transit usage.

Southwest LRT

Southwest LRT is in the final stages of applying for federal funding and has begun accepting bids for construction. A route has been selected, and includes one station in Minnetonka, and two stations near the southeast borders of the city in Hopkins and Eden Prairie (see Figure X). The Southwest LRT will connect Eden Prairie, Minnetonka, Hopkins, and St. Louis Park with downtown Minneapolis with 15 miles of light rail. The line is scheduled to open in 2020. Stations will be served with transit as frequently as every 10 minutes at peak travel times.

Shady Oak Station is just on the Hopkins side of Minnetonka's city border near Shady Oak Road and Excelsior Boulevard. This station serves nearby light-industrial businesses. It is expected that these light-industrial uses will turn to residential and office gradually. Today, there are nearly 3,000 jobs and more than 800 people living within a half-mile of the station. An operation maintenance facility for the light rail will be located just south of Shady Oak Station in Hopkins. There will be a park-and-ride lot that can handle more than 700 vehicles. This station will feature a public plaza complete with access to the regional trail, bicycle parking, landscaping, and a passenger drop off area.

Opus Station will serve Opus Business Park in southeast Minnetonka. Among the many multifamily residential and office buildings, more than a thousand people reside and more than 5,000 work within a half-mile. Currently, Opus is served by a handful of trips each day on route 12 and route 46, so the new station will bring more frequent service to the area. A park-and-ride lot will be built east of the station with 80 parking spaces. There will be a plaza between the station and the parking area with lighting, seating spaces, bike parking, and landscaping. In further support of LRT in the transit corridor, the city has planned for transit supportive uses and densities within one-half mile of the Opus Station.

City West Station will serve UnitedHealth Group's corporate campus just south of Minnetonka's border at Highway 62 near US Highway 212 in Eden Prairie. The station is within a half-mile of more than 5,500 employment opportunities, but currently reaches less than 800 people living in the same area. Future development is expected to expand residential and commercial options. Connections to the Opus Campus will be much simpler with the METRO Green Line.

Land Use Planning

Land use planning, as well as provision of trails and pedestrian amenities, play a crucial role in the success of transit in a community. Adequate and safe sidewalks, bus stops, shelters, and transfer or waiting facilities all are necessary components of a convenient and successful transit system. Mixed-use developments and other Transit-Oriented Development (TOD) around METRO Green Line station areas are also key for increasing transit use as they lead to more people living and working near transit stations.

The City of Minnetonka plans to guide dense development around the Opus LRT station that will create an engaging environment for transit passengers and Opus residents and visitors. Continued planning on the Opus Campus is paramount to making sure that there is enough transit-oriented development to support needed ridership at the station.

Improved Travel Demand Management

As noted earlier, TDM strategies and travel options, have had some success affecting commuter travel, especially ridesharing, car-pooling, and van-pooling, but has not had a significant impact on congestion or travel flexibility. Strategies such as flex work hours have not been adopted widely in the Twin Cities, nor has telecommuting. These both offer good potential as future measures, especially telecommuting as computer networks continue to grow in capacity and sophistication.

New TDM options will be supported and explored by Minnetonka as they develop. These include systems like automated vehicles, car-sharing, and short-term rental services. Transit promotions, new fare tools and transit incentives including expanded specialty pass programs, and changes to taxi regulation and other commercial services are other TDM activities that may provide benefits to Minnetonka residents and employers.

Freight System Plan

The movement of goods and services is just as important and the movement of people in Minnetonka. To best achieve the successful movement of goods and services, there needs to be a thoughtful process for the interconnectivity between the regional and local roadway networks, how adjacent lands uses cohabitate between one another, and ultimately how best to minimize the impact of freight on the local system.

Existing Freight System

A major component of the City of Minnetonka's freight system lies in its roadway network (Figure X). Interstate 394 (I-394) and interstate 494 (I-494) run through the city, converging along the city's northern boundary. Key freight corridors within the city include Trunk Highway (TH) 7, segments of US Highway (US) 169 as well as segments of TH 62 along the city's southern boundary.

The City of Minnetonka is located at a key area in the Twin Cities Metropolitan Region, at a critical crossroads within the regional freight system. The major roadways that pass through and along the borders of the city serve as major freight thoroughfares for interregional goods movement as well as the movement of goods from western Minnesota to markets in the Twin Cities.

The freight network is also comprised of rail. The rail network in the City of Minnetonka includes an active line that runs east-west across the northern third of the city operated by Burlington Northern Santa Fe (BNSF). Cutting across the southeastern corner of the city boundary runs a line that is operated by Canadian Pacific (CP) and Twin Cities & Western (TCWR) (Figure 3). These lines intercept with all "Class I" railroads serving the Minneapolis-St. Paul area, providing connections to the entire North American rail network.

There are no barge facilities or intermodal freight terminals within the City of Minnetonka.

Freight Generators

Figure 2 illustrates the location of freight generators in the City of Minnetonka and includes major economic centers. Of these economic centers, the land uses located in proximity to I-494, I-394, US 169, and TH 62 are significant to the city's freight network. These areas contain freight intensive clusters that generate substantial amounts of truck activity. These clusters primarily consist of manufacturing, wholesale trade, transportation and warehousing establishments, office complexes, and large retail and commercial establishments. The length of the I-394 corridor, stretching across the northern boundary of the city, is also a freight intensive cluster. Many major freight generators are located along its length, from US 169 in Golden Valley, west to the border with Wayzata. These businesses represent a variety of industries from food distributors, technology companies, financial firms, car dealerships, commercial retail space among others. Many of these businesses, and their employees, use US 169 as their primary route to transport goods to the area from the Twin Cities and other areas in Greater Minnesota.

Heavy Commercial Vehicle Volumes

Existing (2013) heavy commercial annual average daily traffic (HCAADT) volumes are depicted in Figure 2. High volume corridors include I-494, I-394, TH 7, and TH 62. These roadways are estimated to support up to 1,200 trucks per day on the smaller trunk highways, 2,700 trucks per day along I-394, and up to 7,300 trucks per day on I-494. I-494 heavy commercial vehicles represent 15 percent of the total daily traffic based on 2013 MnDOT traffic volume data.

Safety and Capacity Issues

All industrial areas in the City of Minnetonka are located within adequate access to the metropolitan highway system (Figure X). US 169, TH 7 and TH 62 are part of either the National Truck Network or the Minnesota Twin Trailer Network, and are built to 10-ton axle loading standards, allowing extra capacity and flexibility for commercial trucking. This major highway coverage reduces the impact of truck traffic on local roadways and minimizes the potential for disruption of neighborhoods and areas of lower density.

It is important that commercial vehicle traffic from industrial, warehouse and commercial land uses be adequately considered. Increased traffic can be sufficiently accommodated through various measures including land uses, design standards, and signage (right sidebar).

Truck travel reliability and freight mobility concerns have been identified within the city's freight network. Poor truck travel time reliability generally coincides with routes that contain several intersections and bottlenecks. I-394, I-494, TH 7, and US 169 are the most important freight corridors in Minnetonka.

Improvement Projects

Recent and planned projects of the US and County Roadway system that support the freight network in Minnetonka are identified below. Planned projects include:

- Ridgedale Avenue (MSAS 153): Reconstruction of ramps to provide full access, turn lanes, an underpass, and signaling from Ridgedale Avenue to CSAH 61 (2018-2021 TIP).
- TH 7: Mill and overlay and signaling from I-494 to Louisiana Avenue in St. Louis Park (2018-2021 TIP).
- TH 62: Mill and overlay and curb and gutter work from Beach Road to Tracy Avenue in Edina (2018-2021 TIP).

Movement of Goods.

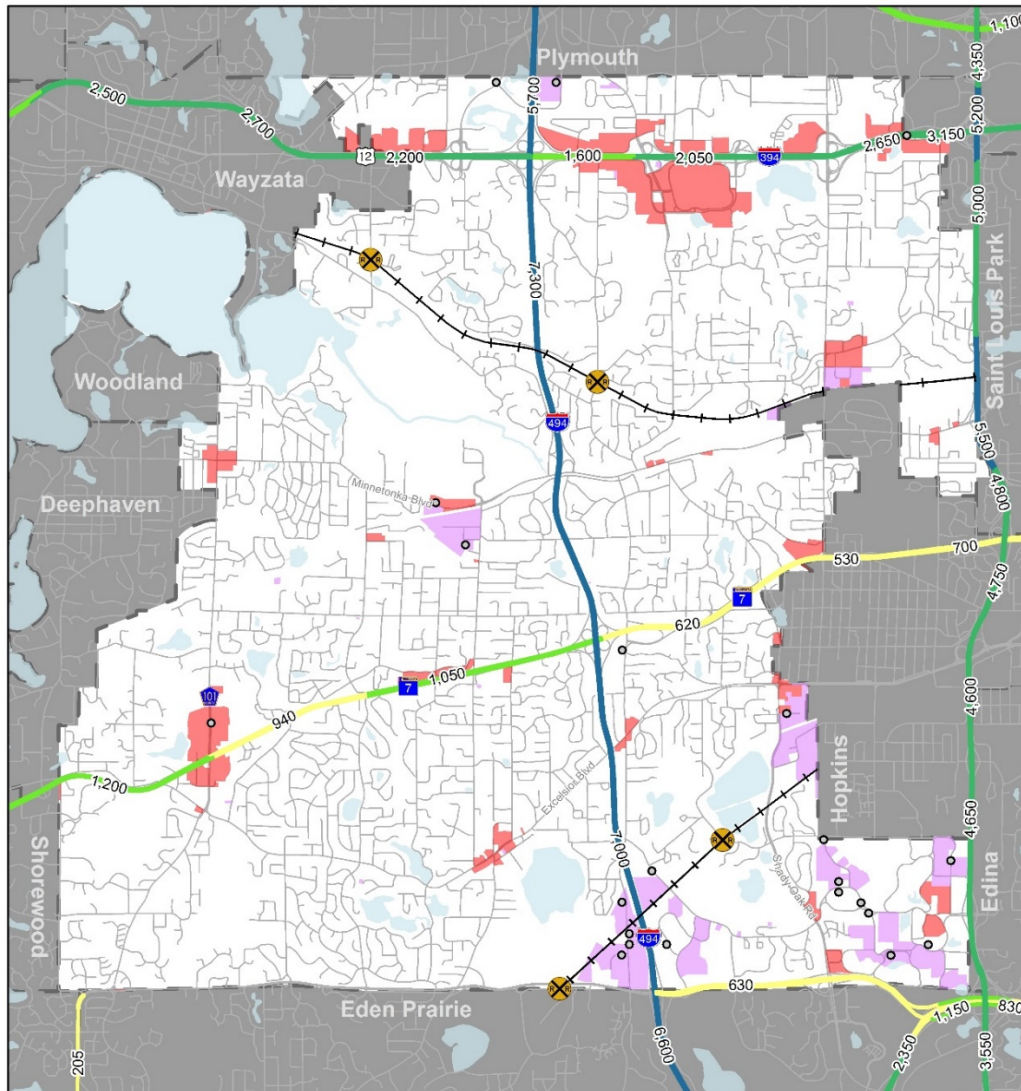
- Locate freight-intensive land uses in areas that are proximal to the metropolitan highway system and with ample access to minor arterials;
- Utilize acceptable design standards on arterials, ensuring adequate turning radius, pavement depth, and space for commercial vehicles;
- Provide adequate signage and markings along roadways to minimize commercial vehicle traffic through residential neighborhoods.

- US 169: Lengthen acceleration and deceleration lanes and installation of traffic management systems at Cedar Lake Road (2018-2021 TIP).
- County State-Aid Highway (CSAH) 101: Reconstruct of CSAH 101 as a multi-lane roadway from TH 62 to TH 3 (2017-2021 CIP).
- Hopkins Crossroad (CSAH 73): Reconstruction of CSAH 73 as a multi-lane roadway from Cedar Lake Rd to I-394 (2017-2021 CIP).

Future Considerations

In recent years, e-commerce and day-of deliveries have become increasingly more important to the national economy. This phenomenon is also reflected at a regional level throughout the greater Twin Cities area. The demands of customers, to receive seemingly any product of their choosing within a moment's notice has, and will continue to increase freight traffic on major and local roadways. Due to its location in the outer suburbs of the Minneapolis-St. Paul metropolitan area, Minnetonka is primarily residential. Minnetonka is already experiencing a rise in e-commerce deliveries in recent years as consumers now demand and expect items to be delivered within one or two days, sometimes within one to two hours. With population expected to increase dramatically by 2040, Minnetonka will see increases in e-commerce related deliveries which will put strains on the roadway and freight network. It is imperative that these trends be planned for to maintain traffic flows and avoid congestion along roadways in the City of Minnetonka.

Figure 2. Freight System Connectivity



Freight System Connectivity

- | | |
|---------------------------------|------------------------------------|
| HCAADT Volumes (2013) | ○ Major Freight Facilities |
| Yellow line: <1,000 | ⊗ Railroad Crossings |
| Light Green line: 1,000 - 2,000 | —+— Railroads |
| Green line: 2,000 - 5,000 | Light Purple: Industrial Land Uses |
| Blue line: 5,000 - 10,000 | Light Red: Commercial Land Uses |
| Dark Blue line: >10,000 | |



Source: Met Council, MnDOT & SRF Consulting

Aviation

There are no airports located within the Minnetonka. The closest airport to the city is the Flying Cloud Airport (FCM) located in the adjacent city of Eden Prairie. The US Federal Aviation Administration (FAA) classifies the FCM as a reliever airport on their National Plan of Integrated Airport Systems (NPIAS). As shown on Figure 9-1 in Chapter 9 of the Metropolitan Council's 2040 Transportation Policy Plan, the southern half of the City of Minnetonka lies within the six-nautical mile radius of the FCM which prohibits the construction of any new landfills or wind towers within this area. A small area in the northeastern portion of the city falls within the six-nautical mile radius of the Crystal Airport (MIC). The airspace over Minnetonka is used by aircrafts operating from the other eight metropolitan area airports as well as airports outside of the metropolitan area.

As noted in the Metropolitan Council's 2040 Transportation Policy Plan, no new general aviation airports are proposed in the future. There is adequate capacity at the airports surrounding the metropolitan area to support future growth.

Height and Safety Zoning

Structures which are 200 feet or higher above ground level may pose hazards to air navigation. Minnetonka has no existing structures of this height; does not permit such structures under its zoning ordinance, and has no plans to permit such structures in the future. Any applicant who proposes to construct such a structure shall notify the city and the Federal Aviation Agency (FAA) as defined under the provisions of Federal Regulation Title 14 Part 77, using the FAA Form 7460-1 "Notice of Proposed Construction or Alteration." These forms must be submitted 30 days before alteration/construction begins or the construction permit is filed, whichever is earlier. MnDOT must also be notified (see MnDOT Rules Chapter 8800). The Minneapolis-St. Paul (MSP) airport/community zoning board's land use safety zoning ordinance should also be considered when reviewing construction in the city that raises potential aviation conflicts.

Heliports

There are no heliports within the City of Minnetonka. Several heliports exist in the neighboring City of Plymouth, but are rarely used and do not affect Minnetonka airspace.

Float/Seaplanes

Wayzata Bay of Lake Minnetonka is designated in Minnesota State Rules Chapter 8800.2800 as authorized for purposes of safe seaplane use. The operation of seaplanes on Wayzata Bay must conform to all applicable marine traffic rules and regulations.