

## CHAPTER 2: EXISTING TRANSIT SERVICE

### Transit Market Areas

Transit service demand varies across the region. The Transit Market Index measures the potential demand for transit service within a specific area and determines the types and level of transit service that are appropriate for each market area. There are five Transit Market Areas in the seven-county region. These are defined using a combination of measures, including population and employment density, urban form and automobile availability. The West End and Route 9 Transit Study area includes Market Areas I, II and III, shown in **Figure 2**.

Transit Market Area I contain the highest density of population and employment and has the fewest vehicles compared to people over the legal driving age of 16 years. This area typically has a grid pattern street network that promotes walking. Market Area I have the potential transit ridership necessary to support the most intensive fixed-route transit service, typically providing higher frequencies, longer hours and more transit options outside of peak periods. A small portion of the study area includes Transit Market Area I.

Most the study area is located within Transit Market Areas II and III. Transit Market Area II contains moderately high population and employment densities and typically has a traditional street grid. Most of Market Area II can support many of the same types of fixed-route transit service as Market Area I, although usually at wider route spacing, lower frequencies and shorter service spans. Transit Market Area III has moderate densities but tends to have a less traditional street grid that can limit the effectiveness of transit. Service in this area is primarily commuter express bus with some local service providing basic all-day coverage.

### Demographics and Land Use

There are several factors that can influence a person's likelihood to use transit, including whether an auto is available for a trip, the cost and availability of parking, and the pedestrian connectivity of an area. People living and/or working in areas of the highest population and employment densities tend to ride transit more frequently than those in less-dense areas.

### Population

The total population in the study area is approximately 31,000. As shown in **Figure 3**, the highest residential density within the study area is concentrated along Glenwood Avenue west of I-94 in north Minneapolis. Additional pockets of higher levels of residential density are found near:

- Harrison and Bryn Mawr neighborhoods in Minneapolis
- Near France Avenue and Lake Street in St. Louis Park/Minneapolis
- Near Cedar Lake Road at Nevada Avenue and at Ridge Drive in St. Louis Park
- Near Cedar Lake Road and County Road 73 (Greenbrier Road/Hedberg Drive area) in Minnetonka.

Analysis of trends in demographic data helps Metro Transit adjust service to match areas of growing or declining populations. The study area population is expected to increase by nearly 20 percent between 2010 and 2040.

Specific areas of population growth:

- Harrison neighborhood along Glenwood Avenue in Minneapolis
- Bryn Mawr neighborhood east of Theodore Wirth Park in Minneapolis
- South of Lake Street adjacent to France Avenue in St. Louis Park/Minneapolis
- Cedar Lake Road west of Park Place Boulevard in St. Louis Park
- Greenbrier Road area south of Cedar Lake Road in Minnetonka

The expected increase in population is due in part to residential and mixed-use projects near Glenwood Avenue in Minneapolis and residential at France Avenue and Lake Street in St. Louis Park/Minneapolis that would be

developed in anticipation of the future METRO Green and Blue Line extensions and the build-out of the mixed-use development near Highway 100 and I-394 (West End).

## Employment

There are approximately 28,000 jobs in the study area. As shown in **Figure 4** employment opportunities within the study area are concentrated adjacent to the I-394 corridor, most notably office, retail and service industry jobs along Wayzata Boulevard and at the entertainment/retail complex known as The Shops at West End. This retail center and adjacent development is a large trip generator that serves as a focal point for transit service.

**Figure 5** indicates where lower-wage job concentrations are located. Specifically, the West End area contains approximately 10,000 jobs paying less than \$40,000 a year. This number is equivalent to jobs found near other regional activity centers that pay less than \$40,000 a year, such as Southdale Shopping Center, which has high-frequency service. This measure is important because the employees that have these jobs are more likely to use transit.

## Transit-Reliant Groups

Analysis of transit ridership users show that low-income communities, people of color and people with disabilities are more likely to rely on transit for a larger percentage of their overall travel. It is important that these groups share equitably in the service improvements. The project's Title VI Service Equity Analysis indicates that the changes outlined in the Final Plan will result in a smaller decrease in service for people of color and low-income communities as compared to non-low income and non-minority populations. More information is available in Chapter 4.

### *Low-Income Communities*

**Figure 6** shows the largest percentage of low-income residents are found in the within the Harrison neighborhood along Glenwood Avenue and south of Cedar Lake Road west of Louisiana Avenue. Across the region, 11.3 percent of all residents are considered low-income, defined as households earning less than 185 percent of the poverty line.

There is one designated Area of Concentrated Poverty in the northeast portion of the study area, defined by the Met Council as an area where at least 50 percent of the population lives in poverty.

This group is important to note because the costs of owning an automobile are more challenging for persons with lower income.

### *People of Color*

The Federal Transit Administration defines minority persons to include anyone who identifies themselves as American Indian and Alaskan Native, Asian, Black or African American, Hispanic or Latino, or Native Hawaiian or Other Pacific Islander. **Figure 7** shows the persons of color population in the study area using the 2010 Census. In the Twin Cities region, 27.7 percent of the population are people of color.

Areas within the study boundaries that are higher than the regional average:

- Harrison neighborhood along Glenwood Avenue in Minneapolis
- Near Glenwood and Highway 100 in Golden Valley
- South of I-394 between Louisiana and Zarthan
- South of Cedar Lake Trail between Highway 100 and Highway 169
- In the Greenbrier area along Cedar Lake Road between Highway 169 and County Road 73

### *People with Disabilities*

**Figure 8** shows people with disabilities, defined as someone who has vision, hearing, cognitive, ambulatory, self-care or independent living disabilities. People with disabilities are more likely to use transit, particularly if the disability limits or prohibits driving. Region-wide, 9.7 percent of the population has a disability. Areas within the project study area that exceed this threshold:

- Glenwood Avenue in the Harrison neighborhood
- The northwest quadrant of Highway 100 and I-394 in Golden Valley
- The southeast quadrant of France Avenue and Lake Street in St. Louis Park
- Cedar Lake Road west of Louisiana Avenue

It is important to note that some people with disabilities use Metro Mobility paratransit service instead of regular route service, and no reduction in Metro Mobility service levels in these communities will be needed based on the proposed changes outlined in Chapter 3.

### *Number of Vehicles Compared to Population over Age 16*

People are more likely to use transit if an automobile is not always available, regardless if that is by choice or by circumstance. **Figure 9** shows areas where there are more people over the age of 16 years (legal driving age) than vehicles available. Zero-car households are one part of this measure, but anytime that vehicles are being shared it is more likely that transit is being used for some trips. For example, if a block group has 100 residents and 70 vehicles, then 30 people living in this area do not have a vehicle available for all their trips. In **Figure 9** this block group would be shown as 30 percent without regular access to a vehicle. Regionally, there are 22 percent more people 16 and older than total vehicles.

Areas within the project area where many residents do not have reliable access to a vehicle:

- Glenwood Avenue in the Harrison neighborhood
- Between Glenwood and I-394 west of Highway 100 in Golden Valley
- The southwest quadrant of Lake Street and France Avenue
- Along Wayzata Boulevard, Louisiana Avenue and Cedar Lake Road east of Virginia Avenue in St. Louis Park
- Greenbrier Road area south of Cedar Lake Road in Minnetonka

## **Regional Transit Standards**

Design guidelines and service standards are outlined in the 2040 TPP. Route types, along with transit market areas, help determine the appropriate service levels and set minimum ridership and route performance thresholds.

### **Route Types**

The study area is served by three route types: core local, suburban local and commuter/express. Except for Route 604, these routes operate in an east-west pattern near the I-394 corridor and are mostly oriented towards downtown Minneapolis. A map of the routes under review in this study area are shown in **Figure 1**.

#### *Core Local*

Routes 9 and 25 are the only core local routes within the study area.

While within the study area the very eastern section of the Route 9 touches on Market Area I, most of the route serves the less dense and more suburban Market Areas II and III. The study focuses on route changes west of downtown Minneapolis but the entire Route 9 schedule is under review, including the portion of the route south of downtown Minneapolis.

Route 9 provides service between downtown Minneapolis, the Harrison and Bryn Mawr neighborhoods in north Minneapolis, the West End in St. Louis Park and the Greenbrier/Hedberg multi-family housing in Minnetonka. Route 9 has several deviations from the main trunk of the route, which form complex route patterns that can be difficult for customers to understand.

While Route 9 operates within Transit Market Area I east of Penn Avenue, transit demand in this area is not as strong as a typical Market Area I route because this area is also influenced by the presence of Route 19 high-frequency service on Highway 55 (Olson Highway). Route 19 is only a quarter-mile north of Glenwood Avenue, so many customers living between Glenwood Avenue and Highway 55 choose the higher frequency service. Future plans for C Line rapid bus service, as well as the potential METRO Blue and Green Line extensions, will also affect future ridership within this area.

Route 25 between downtown and southwest Minneapolis provides weekday rush-hour service. The route also serves northeast Minneapolis and its adjacent suburbs. On the southwest portion of Route 25 there is no off-peak or weekend service. Neighborhoods served in southwest Minneapolis are Lowry Hill and Kenwood in Market Area I and Cedar-Isles-Dean in Market Area II. The focus of this study is on the very southwest segment of the route along France Avenue in the Cedar-Isles-Dean neighborhood.

### *Suburban Local*

Route 604 is the only suburban local route within the study area and operates entirely within Market Area II. Route 604 operates as a circulator, providing rush hour and midday service between various destinations within St. Louis Park along Louisiana Avenue and Excelsior Boulevard.

### *Commuter/Express*

Routes 649 and 675 are the commuter/express routes under review in this study. These routes serve commuters from Minnetonka, Golden Valley and St. Louis Park to downtown Minneapolis or another major employment center and operate non-stop on I-394 for portions of their routes. Route 649 operates peak-only bi-directional service between St. Louis Park and downtown Minneapolis. Route 675 operates express service in both directions all day between Mound, Lake Minnetonka communities, Ridgedale Shopping Center, Louisiana Avenue Transit Center and downtown Minneapolis. Only the routing east of Louisiana Avenue Transit Center is under review with this study.

## **Service Standards**

Appendix G of the 2040 TPP describes transit service design guidelines and performance standards by route type and market area. Span of service shown in **Table 1** refers to how early in the morning and late at night service runs and frequency shown in **Table 2** describes how often trips operate.

**Table 1. Span of Service**

Route Type	Weekday				Weekend	
	Peak	Midday	Evening	Owl	Saturday	Sunday
Core Local Bus*	●	●	●	○	●	●
Suburban Local Bus	●	●	◐	○	○	○
Commuter Express Bus	●	○	○	○	○	○

Service Provided ●; Service Typically Provided ◐; Service As Demand Warrants ○

Peak: 6-9 a.m. and 3-6:30 p.m.

Midday: 9 a.m.-3 p.m.

Evening: 6:30 p.m.-1:30 a.m.

Owl: 1:30- 5 a.m.

\*Local limited-stop routes will operate primarily in the peak period.

**Table 2. Minimum Frequency**

Route Type	Market Area				
	Area I	Area II	Area III	Area IV	Area V
Core Local Bus	15" Peak 30" Off-peak 30" Weekend	30" Peak 60" Off-peak 60" Weekend	30" Peak 60" Off-peak 60" Weekend	NA	NA
Suburban Local Bus	NA			NA	NA
Commuter Express Bus	30" Peak		3 Trips each peak		NA

Additional service may be added as demand warrants and guidelines apply primarily to the peak direction.

## Existing Service Levels, Performance and Facilities

Route 9 is the primary service in the study area, providing most of the service and serving the most customers. Commuter/express routes 649 and 675 supplement local Route 9 service. Suburban local Route 604 is also part of the local service network. Route 25 serves the very southeast corner of the study area. The frequency and service span in the study area generally meets or exceeds guidelines for routes operating in Transit Market Areas I, II or III. Study area coverage is best during the peak periods and is reduced in the midday and evenings, as well as on weekends.

### Service Descriptions

A description of specific route structures, key destinations served, and the span and frequency of these area routes are outlined below (service frequencies are averages and may apply to only the main portion of the route).

#### *Route 9*

Route 9 (west of downtown Minneapolis) provides local service to the Harrison and Bryn Mawr neighborhoods of north Minneapolis via Glenwood Avenue, Penn Avenue, Laurel Avenue and Upton Avenue. The frequency of various branches west of Glenwood Avenue/Cedar Lake Road, and especially west of Park Place Boulevard, varies by time of day and day of the week. These limited hours of operation and different terminals have led to much confusion for customers.

There are two routings between Glenwood Avenue/Cedar Lake Road and Penn Avenue/Cedar Lake Road. About 40 percent of the trips use Cedar Lake Road and the rest of the trips travel on Glenwood Avenue to Penn Avenue.

On weekdays, there are approximately 90 one-way trips, and service on the main part of the route is available between 5 a.m. and 1 a.m. Most trips use Wayzata Boulevard to travel between Bryn Mawr and the West End area (Park Place Boulevard), but there are two significant route deviations that impact the frequency of service during peak periods:

- 13 trips serve Golden Valley via Xenia Avenue and Glenwood Avenue (B branch). Four of the six eastbound trips operate during the AM peak, with one midday trip and one PM rush-hour trip designed to serve reverse-commute riders. In the westbound direction, there is one morning peak period reverse-commute trip, four afternoon peak trips and two evening trips.
- 11 trips serve St. Louis Park via Cedar Lake Parkway, Ewing/France Avenue, 26th Street, Barry Street and the East Highway 100 Frontage Road (H branch). Four of the five eastbound trips serve the morning peak period, with one midday trip. In the westbound direction, there is one midday trip and five afternoon peak period trips.

There are two routings serving the West End between Park Place and Louisiana Avenue Transit Center. Thirteen off-peak trips continue west of Louisiana Avenue to serve the Greenbrier/Hedberg area of Minnetonka via Cedar Lake Road between Louisiana Avenue and County Road 73 (N branch).

Coverage on weekends is similar to that on weekdays, except the B branch on Glenwood west of Penn Avenue does not operate and there is limited service on the H branch trips via Cedar Lake Parkway and 26th Street (two trips on Saturday and Sunday). Service on the main portion of the route operates between 5:45 a.m. and 1 a.m. on Saturdays and between 6 a.m. and 11:15 p.m. on Sundays. There are 66 one-way Saturday trips and 60 Sunday trips.

### **Route 25**

Route 25 provides service between downtown Minneapolis and the Lowry Hill, Kenwood and Cedar-Isles-Dean neighborhoods of southwest Minneapolis. The route also serve northeast Minneapolis and its suburbs. The only portion of the route within the study area is the very southwest segment in the Cedar-Isles-Dean neighborhood which is in Market Area II. This southwest segment terminates at the intersection of France Avenue and Lake Street.

Serving the Lowry Hill, Kenwood and Cedar-Isles-Dean neighborhoods there are eight peak period one-way weekday trips between 6:30 and 8:30 a.m. and six peak period one-way trips between 4:30 and 6:30 p.m. Six of these 14 peak period trips are reverse-commute trips, four of the six are coming from downtown in the morning to southwest Minneapolis and two of the six are going to downtown in the afternoon/early evening. Ridership on these six reverse-commute trips is extremely low. In addition to above trips there are two trips which operate as school extras providing service for the Minneapolis school district. These two trips do not operate outside of the regular school year.

There is no off-peak or weekend service on Route 25 to the Lowry Hill, Kenwood and Cedar-Isles-Dean neighborhoods.

### **Route 604**

Route 604 connects the I-394 corridor to Excelsior Boulevard in St. Louis Park via Louisiana Avenue. There are 20 one-way trips on weekdays only between 7 a.m. and 5 p.m. along Wayzata Boulevard, Louisiana Avenue and Excelsior Boulevard within St. Louis Park. Destinations along the route include the Excelsior & Grand mixed-use development, Methodist Hospital, Louisiana Avenue Transit Center and the West End area.

It is designed to improve suburb-to-suburb travel with connections to routes serving other suburban activity centers. At Louisiana Avenue Transit Center, Route 604 connects with Route 675 to offer service to Minnetonka, Wayzata and Mound, and with Route 705 for access to Golden Valley and New Hope. On the south end, Route 604 connects with routes 12 and 17 on Excelsior and Minnetonka boulevards.

### **Route 649**

Route 649 provides limited-stop service during rush hours between Cedar Lake Road, the West End and downtown Minneapolis. There are nine reverse-commute trips and 10 peak direction trips, operating between 6:15 and 9 a.m. and between 3:30 and 7 p.m. Destinations along the route include the I-394 & Park Place Park & Ride, Sunset Ridge and Cedar Trails condominiums on Cedar Lake Road and Louisiana Avenue Transit Center.

### **Route 675**

Route 675 provides all-day express service between Mound, communities surrounding Lake Minnetonka, Wayzata, Minnetonka, St. Louis Park, Golden Valley and downtown Minneapolis. However, only the service east of Louisiana Avenue Transit Center is under review with this study, where the route operates non-stop along I-394. More than 80 percent of customers ride the portion of the route between the Ridgedale Shopping Center area and downtown Minneapolis. Route 675 provides all-day service to several park-and-ride lots, most of which have faster express options available during peak periods. Route 675 is the only express route in the region that operates service seven days a week.

- Weekday: 65 trips operate between downtown Minneapolis and Louisiana Avenue Transit Center between 5:30 a.m. and 11 p.m.
- Saturday: 30 trips operate between downtown Minneapolis and Louisiana Avenue Transit Center between 6 a.m. and 10 p.m. Service does not operate west of Wayzata on Saturdays.
- Sunday: 21 trips operate between downtown Minneapolis and Louisiana Avenue Transit Center between 9 a.m. and 8 p.m. The route does not operate west of Wayzata on Sundays.

## Service Frequencies

Service frequencies for study area routes meet regional standards and are summarized below in **Table 3**.

**Table 3. Service Frequency**

Route	Weekday					Saturday	Sunday	
	AM Peak	Midday	PM Peak	Evening	Owl	All Day	Midday	Evening
9 (west of downtown Minneapolis)	15-20	30	15-20	30	---	30	30	60
9 (west of Louisiana Avenue)	1 trip	4 trips	1 trip	60	---	60	60	60
25 (southwest of downtown Minneapolis)	30	--	30	--	--	--	--	--
604	60	60	60	--	--	--	--	--
649	30	---	30	---	---	---	---	---
675 (east of Louisiana Avenue)	30	30	30	60	---	60	60	60

## Existing Ridership and Service Performance

Ridership at the bus-stop level for each of these routes is shown in **Figures 10-12**. The highest number of boardings are found along Glenwood Avenue east of Penn Avenue, in Bryn Mawr and in the West End.

There are two ways to measure how much service is provided on a route. In-service hours are the hours as shown on the public timetable, when buses are in revenue service. Platform hours covers the entire time from when a bus leaves the garage to travel to the start of a route, all the trips, and when it returns to the garage from the end of the route. Platform hours are a more accurate representation of the cost of providing service, since labor is a significant factor in service costs.

Productivity is a measure of a route's ridership relative to the cost of providing the service. The higher the route productivity, the more effective the service. Service performance and route productivity are measured using Passengers per In-Service Hour (PPISH), which is calculated as the number of passengers divided by the number of hours of in-service service provided on the route.

Existing ridership and performance for routes within the study area are summarized in **Table 4**. The calculated PPISH is based on service levels and ridership during the fall of 2015 for the entire route, not for the route segment within the study area.



**Table 4. Existing Riders and Route Performance**

Weekday				
Route	In-Service Hours	Platform Hours	Ridership	PPISH
9	89	119	3099	34.8
25	45	65	1055	23.4
604	8	11	84	10.5
649	9	12	257	28.6
675	64	87	1746	27.3

Saturday				
Route	In-Service Hours	Platform Hours	Ridership	PPISH
9	70	90	1954	27.9
675	25	30	482	19.3

Sunday				
Route	In-Service Hours	Platform Hours	Ridership	PPISH
9	63	85	1520	24.1
675	17	21	284	16.7

## Facilities

Regional facilities include transit centers, park-and-rides and bus turnarounds/layovers.

### *Louisiana Avenue Transit Center*

This facility is in St. Louis Park in the southwest corner of the Louisiana Avenue and I-394 interchange, north of Wayzata Boulevard. This is the only transit center within the study area and includes a 330-space park-and-ride lot, which is currently at capacity. The Park & Ride primarily serves as a hub for express bus service to downtown Minneapolis but is also a stop for local service to/from St. Louis Park, Minnetonka, Golden Valley, New Hope, Crystal and Brooklyn Park. Routes 9, 604, 649, 652, 663, 672, 675, 705 and 756 serve this facility. Routes 663 and 675 have the most riders, serving nearly 400 of the 660 total boardings at the transit center.

### *I-394 & Park Place Boulevard Park & Ride*

This 55-space facility is in St. Louis Park in the southeast corner of the Park Place Boulevard and I-394 interchange, north of Wayzata Boulevard; and is within walking distance to The Shops at West End. Approximately 35 vehicles use this park-and-ride lot. Routes 9, 604 and 649 serve this facility; most customers use Route 649.

### *Westwood Lutheran Church Park & Ride*

This 40-space facility is in St. Louis Park on Cedar Lake Road at Stanlen Road. Approximately nine vehicles use this park-and-ride lot. Routes 9 and 663 serve this facility.

### *France Avenue and Lake Street Turnaround/Layover*

This facility is in Minneapolis in the southeast quadrant of France and Lake. In addition to providing a turnaround location and layover facilities for Route 25, it is also used by Route 17B trips.