7 SERVICE CONCEPTS AND ALTERNATIVES

This chapter presents service alternatives that are designed to address opportunities for transit improvement in Minnetonka. The goal of the Minnetonka Transit Study is to evaluate transit service needs and market potential for local transit service in Minnetonka based on the review of the Existing Conditions and the Peer Review. The service concepts and alternatives presented in this chapter were developed to address opportunities, as guided by available funding, for transit improvements in Minnetonka. The recommendations are developed for near-term implementation (within the next two years) as well as potential long-term implementation with the opening of the Southwest LRT. The long-term recommendations included here are not intended to be an all-inclusive list of proposed bus connections with LRT and will need to be fully vetted during the review process of the Southwest LRT bus network. They are not presented to circumvent that process, but simply to provide potential improvements to be considered.

Through the evaluation of performance data and demographics, community surveys, and a public open house on May 23, 2012, the following local transit needs were identified:

- **Local, midday service to the 7 Hi and Minnetonka Heights area.** Providing service to this entire area, and in particular Minnetonka Heights, has been an important focus of both the 2010 Minnetonka Transit Study and this study. While most of Minnetonka is low density and not generally supportive of local transit service, the 7-Hi shopping area and Minnetonka Heights both have sufficient density that would support a reasonable level of midday, local bus service. Minnetonka Heights in particular has one of the highest concentrations of transit dependent residents in the city. While these areas alone might be able to support transit service, the challenge is that they are located in the southwest corner of the city and not easy to serve with existing local routes (e.g., Route 9, 12 or 615). In addition, these areas are relatively isolated rather than contiguous with other transit-supportive land uses.
- **Service for seniors and senior housing complexes.** Based on feedback at the open house meeting, as well as a review of demographics for the Existing Conditions Report, there are several pockets of seniors in Minnetonka. Although just one person at the open house meeting noted that maintaining seniors' freedom to travel freely throughout the city (and region) is a critical issue, this could be reflective of a greater need in the community. This person also noted that many people in Minnetonka are choosing to age in place, which means that the senior population in Minnetonka will continue to grow[1]. Finally, Minnetonka is a destination for aging seniors as there are multiple large senior housing complexes throughout the city. Seniors have historically been a user group that exhibits a higher demand for transit as their ability to drive and/or walk becomes limited with age. This is changing, however, especially in suburban communities that attract higher-income senior households. There are several reasons for this. First, many

[1] According to Excensus data, in 2010 nearly 50% of the city's households are ages 55 and older.

suburban senior complexes (such as those in Minnetonka) offer shuttle services for shopping, recreation and medical appointments. In addition, many of the seniors who live in the higher income complexes can still drive. Finally, seniors 65 and younger were raised at a time when transit was in decline around the country. Thus, they are much less familiar with using transit than the previous generation of seniors and may be more cautious about using it later in life.

- **Longer service hours, especially on Routes 9 and 615.** Currently, service on Route 615 ends between 5:00 and 6:00 pm, while Route 9 provides very limited evening service (only one trip is provided at 8:45 pm and the previous trip occurs around 2:45 pm). Several people who attended the open house suggested that service on these routes need to operate well into the evening. This is especially important for workers.
- **Consistent headways on weekdays and weekends.** Several people who attended the open house meeting noted that headways on Route 9 are irregular on weekdays but more regular on weekends. While Routes 643 (Limited Stop) and 663 (Express) provides service to the Greenbrier Road area (the terminal loop of Route 9), the comment from members of the public was more about providing consistent headways on weekdays and weekends.
- **Service for youth and middle/high school students.** While youth population density is not concentrated in any one area of Minnetonka, it was clear from the open house that transportation for school-related and after-school programs is an issue in Minnetonka. Service gaps to/from Hopkins High School were identified at the open house. And while middle schools do not usually generate high levels of transit usage, several people at the open house also mentioned the need to provide better service to middle schools.

Meeting Regional Service Standards

While transit service can be provided to address community needs, all service comes with a cost and must be balanced with other regional transit service priorities. Thus, a critical goal for this study is to ensure that transit resources are being allocated appropriately – both in Minnetonka and throughout the region.

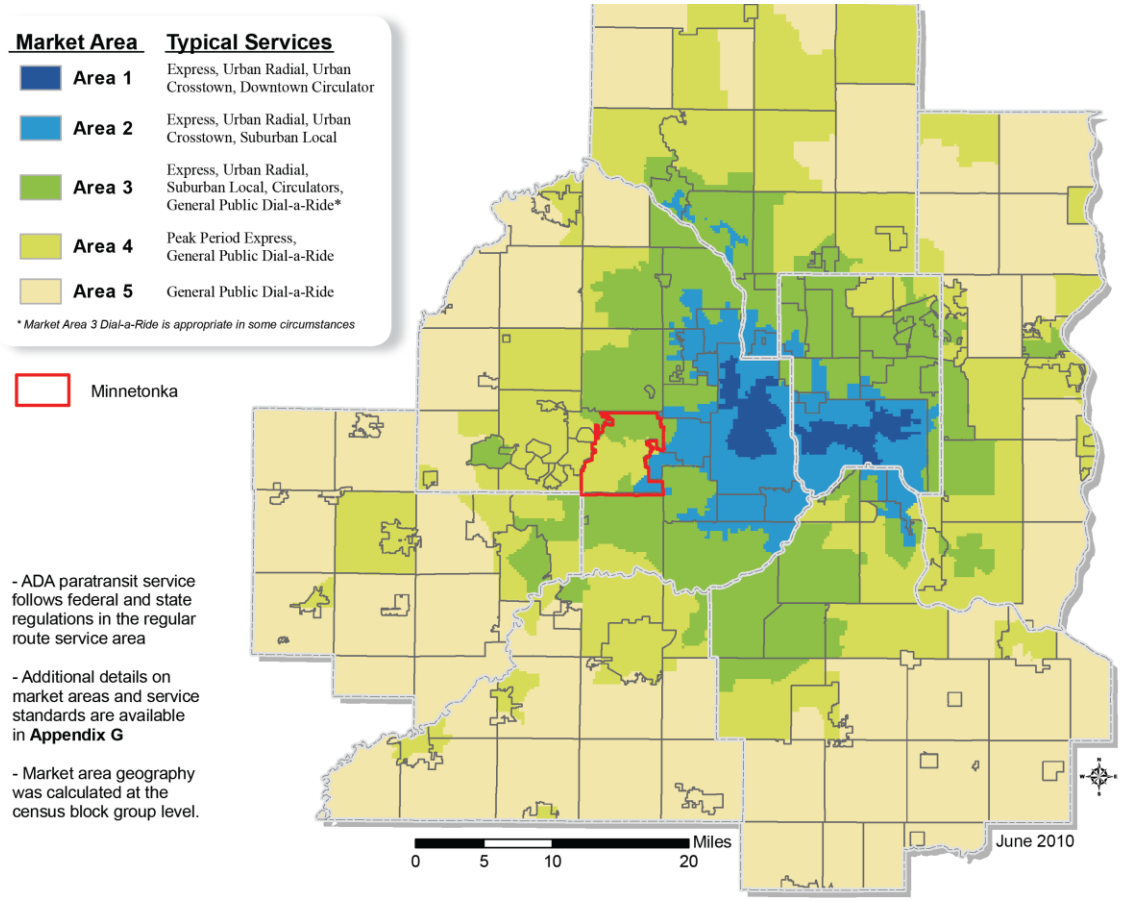
In the Twin Cities, the Metropolitan Council's 2030 Transportation Policy Plan (TPP) offers guidance in this regard. The TPP identifies appropriate transit services that correspond to different "transit market areas." Market areas are classified using a formula based on population, employment and vehicle availability throughout the region (see Appendix G of the TPP). The TPP also provides minimum performance standards (passengers per in-service hour and subsidy per passenger) for the different types of transit service.

Minnetonka primarily falls into two transit market areas. The eastern edge of the city is in Transit Market Area III, while most of the middle and southwestern corner of the city is classified as Transit Market Area IV. The only area in Minnetonka that is in Transit Market Area II (which justifies a higher level of transit service) is the far southeast corner of the city (around the Opus development). Figure 7-1 summarizes characteristics of each market area and describes the appropriate transit services by market area. Figure 7-2 shows the Transit Market Areas throughout the Twin Cities with Minnetonka outlined in red.

Figure 7-1 Summary of Transit Market Area Characteristics and Service Types

Transit Market Area	Transit Market Index	Market Characteristics	Service Types
II	10-20	High to moderately high population and employment densities yielding a market area that is conducive to fixed route transit operations, but not as intensive as in Market Area I.	Primary emphasis on regular route service. Crosstown routes and limited stop services are appropriate to link major destinations.
III	5-10	Moderate density and can support a variety of transit services, but at lower intensity than areas I and II. In some cases, general public dial-a-ride services may be appropriate in Market Area III.	A mix of regular route and community circulator service complemented by dial-a-ride service in specific cases. Community circulators should tie into regular route regional service at a transfer point.
IV	1-5	Lower concentrations of population and employment. Some areas may have sufficient density for Market Area III, but may not have sufficient aggregate commuter demand to justify extension or improvement of express service. General public dial-a-ride services are appropriate in Market Area IV.	Peak period express service, if potential demand for service is sufficient to support at least three peak-period trips. General public dial-a-ride services are appropriate.

Figure 7-2 Transit Market Areas



Service Standards for Different Service Types

Figure 7-3 below provides guidelines for average and minimum passengers per in-service hour for the different types of transit/transportation services available[2]. The "small bus non-fixed route" refers to demand responsive services, like a community dial- a-ride.

Figure 7-3 TPP Productivity (Passengers per In-Service Hour) Targets

Type of Service	Average Passengers per In-Service Hour	Minimum Passengers per In-Service Hour
Light Rail Transit	≥70	≥50
Big Bus Fixed Route – All Day	≥20	≥15
Big Bus Fixed Route – Peak Only	≥20	n/a
Small Bus Fixed Route	≥9	≥5
Small Bus Non-Fixed Route	≥3	≥2
Other/Rideshare/Shared Ride Taxi	≥2	n/a

Source: Transportation Policy Plan (Appendix G), Metropolitan Council

The TPP also provides guidance on minimum performance standards for different service types. Figure 7-4 summarizes minimum productivity (measured as boardings and alightings per in-service hour) for branches or extensions of existing service. As noted above, most of Minnetonka is in Market Area IV, where express service tends to perform best.

Figure 7-4 Minimum Branch or Extension Productivity (Passengers per In-Service Hour)

Type of Service	Area I	Area II	Area III	Area IV	Area V
Express	25	25	15	9	n/a
Urban Radial	25	20	15	n/a	n/a
Urban Crosstown	25	20	n/a	n/a	n/a
Suburban Local / Circulator	n/a	15	9	n/a	n/a

Source: Transportation Policy Plan (Appendix G), Metropolitan Council

[2] 'Average' refers to overall route productivity while 'minimum' refers to trip level productivity.

LOCAL SERVICE CONCEPTS

Prior to developing service alternatives, six concepts for local, midday service were developed and presented at the public open house on May 23, 2012. The service concepts are based on the 2010 Minnetonka Transit Study that identified a local route traveling between Ridgedale Center and Minnetonka Heights, best practices from the peer review (Chapter 5), as well as the evaluation of existing conditions (Chapters 1 through 4). The service concepts were designed using two basic service models:

- **New, local fixed route.** This model includes a stand-alone route that is not interlined with other routes (i.e., the bus only operates on this route). The primary advantage of a new local route is that it would be shorter and easier to manage operationally (long local routes are more prone to being unreliable). In addition, the vehicle used for the local route could be sized appropriate to the market in Minnetonka. A smaller vehicle would allow for easier route deviation and would be more able to navigate some local destinations (e.g., Minnetonka Heights). The main disadvantage of a new local route is that passengers would be required to transfer to travel to locations outside of Minnetonka. This type of service would likely be classified as a "small bus fixed route" (as shown in Figure 7-3), which would need an average of 9 passengers per in-service hour to meet the regional productivity minimum.
- **Extension of an existing route.** This model would extend an existing local route (either an urban local or suburban local). Possible routes that could be extended in Minnetonka include Route 9, 12 or 615. Extending an existing local route is an advantage to passengers who would not need to transfer to reach other regional destinations. Drawbacks of the model include the longer route length (which can have more unreliable travel times) and the lack of flexibility in vehicle size. Especially on Routes 9 and 12, larger vehicles are required to handle loads on other portions of the route but would likely offer too much capacity in Minnetonka. A larger bus would also make it difficult to do route deviations or to serve specific destinations in the city, like Minnetonka Heights.

It should be noted that there *are* other options for how local midday transit service could be provided in Minnetonka. For example, a new city-focused Dial-A-Ride could be implemented (like the one provided in Plymouth), or existing express routes could provide additional trips during the middle of the day. The Dial-A-Ride option was not pursued further because TransitLink already provides general public dial-a-ride service in Minnetonka (including additional weekday evening and Saturday service beyond the regional base service level). Adding additional express trips during the midday was not pursued further because most express routes are very long, which makes them less efficient to operate unless they can attract high boardings. Because a local express service is unlikely to generate high boardings during the midday, this option was not pursued further[3].

As noted above, the peer review (Chapter 4) largely influenced the design of the conceptual routes. In particular, the following best practices identified through the review of the peer routes were used to develop the various conceptual routes:

- **Routes should have strong anchors (ideally at both ends).** Several of the conceptual routes provide coverage throughout Minnetonka but connect to either Ridgedale Center or downtown Hopkins. Only one conceptual route does not provide a

[3] Metro Transit does operate some express trips during the middle of the day (e.g., Route 675), but these services are generally concentrated in corridors with significantly higher transit demand than the central and southwest areas of Minnetonka (that are a focus of this study.

connection to one of these areas, but does provide a direct connection to downtown Minneapolis.

- **Routes should not be designed exclusively around political boundaries.** Only one of the conceptual routes would operate only within the Minnetonka city limits, but this was not a limiting factor for any of the conceptual routes.
- **Regional routes that connect to a major downtown are most productive.** All conceptual routes either directly or through one transfer offer connectivity to downtown Minneapolis.
- **Transit service is most productive if it serves a rail station.** While rail service does not exist in Minnetonka, several of the conceptual route alignments consider future connections to Southwest LRT stations.

Conceptual Route (M1 Short): Ridgedale Center to 7-Hi Area

This conceptual route (Figure 7-5) would start at the Ridgedale Center and travel south via Plymouth Road, west on Minnetonka Boulevard, south on County Road 101 and then make a terminal loop via County Road 101, Covington and Vine Hill. The terminal loop would serve Minnetonka Heights, the Stratford Wood and Hunters Ridge Apartments, and Minnetonka High School. Other key destinations along the route include the 7-Hi shopping center area (Target, Cub Foods, etc.), the retail cluster at County Road 101 and Minnetonka Boulevard, and Minnetonka City Hall. This route would connect with two all-day routes (615 and 675) at Ridgedale Center as well several other express routes during peak periods. Outside of the I-394 corridor, the route would also connect to four express routes (664, 667, 670 and 671), which also operate only during peak periods.

This route would operate every 90 minutes during weekdays and Saturday. If this route could be shortened, it is possible that it could cycle in one hour instead of in 90 minutes. As an option, this route could operate every 90 minutes during off peak periods and every 45 minutes during peak periods, which would require two in-service vehicles. The average target productivity for this route is at least 9 passengers per in-service hour.

Conceptual Route (M1 Long): Ridgedale Center to Southwest Station

The M1 Long conceptual route (Figure 7-6) would start at the Ridgedale Center and travel south via the same alignment as M1 Short. Rather than make a terminal loop in the southern part of Minnetonka, this route would continue south on County Road 101 and Dell Road (in Eden Prairie) to Valley View Road before terminating at Southwest Station. Connections to other routes in Minnetonka are the same as Conceptual Route M1 Short, but connections to Southwest Transit routes 684, 690, 691, 695 and 698 are also available at Southwest Station. Eventually, connections to Southwest LRT would also be possible at Southwest Station. Only Route 698 currently provides midday service to Southwest Station, while all other routes operate during peak periods only. It is assumed that Southwest LRT would also provide midday service.

Route M1 Long would operate every hour during weekdays with limited service on Saturday. Alternatively, this route could operate every 120 minutes during off peak periods and every 60 minutes during peak periods. Another option would be to serve Southwest Station only during peak periods. The average target productivity for this route is at least 9 passengers per in-service hour.

Conceptual Route (M2): 7-Hi Area to Opus

This conceptual route (Figure 7-7) would provide a similar alignment to Route M1 Short, but instead of terminating at Ridgedale Center, Route M2 would serve downtown Hopkins and terminate in the Opus area (and eventually connect to the Southwest LRT Opus Station). Connections to other routes include only one all-day route (Route 12 in the Opus area), as well as the express routes 664, 667, 670 and 671 during peak periods only.

This route would require a 60 minute round trip cycle time and operate every hour throughout the day. Additional service frequency (i.e., every 30 minutes) could be provided during peak periods, especially when Southwest LRT is operating. The average target productivity for this route is at least 9 passengers per in-service hour.

Route 9 Extension to 7-Hi and Minnetonka Heights

Another option (Figure 7-8) is to extend the existing Route 9 from its current terminus at Hedberg Drive and Greenbrier Road to the 7-Hi area and Minnetonka Heights (via the same alignment as M1 Short west of the Plymouth Road and Cedar Lake Road intersection). Connections to this route extension to other routes would only be with express routes 664, 667, 670 and 671 during peak periods only. This option assumes that all weekday trips that serve Minnetonka (six eastbound and five westbound trips) would also continue to the 7-Hi/Minnetonka Heights area. This also assumes that the extension of Route 9 would also occur on weekends (11 westbound and 11 eastbound trips), but service could be provided less frequently. The average target productivity for this route is at least 20 passengers per in-service hour (for the route as a whole).

Route 12 Extension to 7-Hi and Minnetonka Heights

This option (Figure 7-9) is an extension of Route 12 to the 7-Hi and Minnetonka Heights area via Excelsior Boulevard. Because Route 12 operates a number of branches to Opportunity Partners/Opus area (12B, 12C, etc.), this assumes that the extension to Minnetonka Heights and the 7-Hi area would be another branch. Connections between this route would only be possible between express routes 664, 667, 670 and 671 during peak periods. Service frequencies are assumed to be about every hour during middays with service less frequently on weekends. The average target productivity for this route is at least 20 passengers per in-service hour (for the route as a whole).

Route 615 Extension to 7-Hi and Minnetonka Heights

This option (Figure 7-10) extends Route 615 from its current westbound terminus at Ridgedale Center to the 7-Hi and Minnetonka Heights area. The alignment would be exactly the same as M1 Short, but because it is an extension of Route 615, it would operate every hour on weekdays and every two hours on Saturday. Connections to other routes would be the same as Conceptual Route M1 Short, except passengers could remain on the vehicle when continuing on the existing Route 615 alignment. The average target productivity for this route is at least 9 passengers per in-service hour (for the route as a whole).

Figure 7-5 Conceptual Route (M1 Short): Ridgedale Center to 7-Hi Area

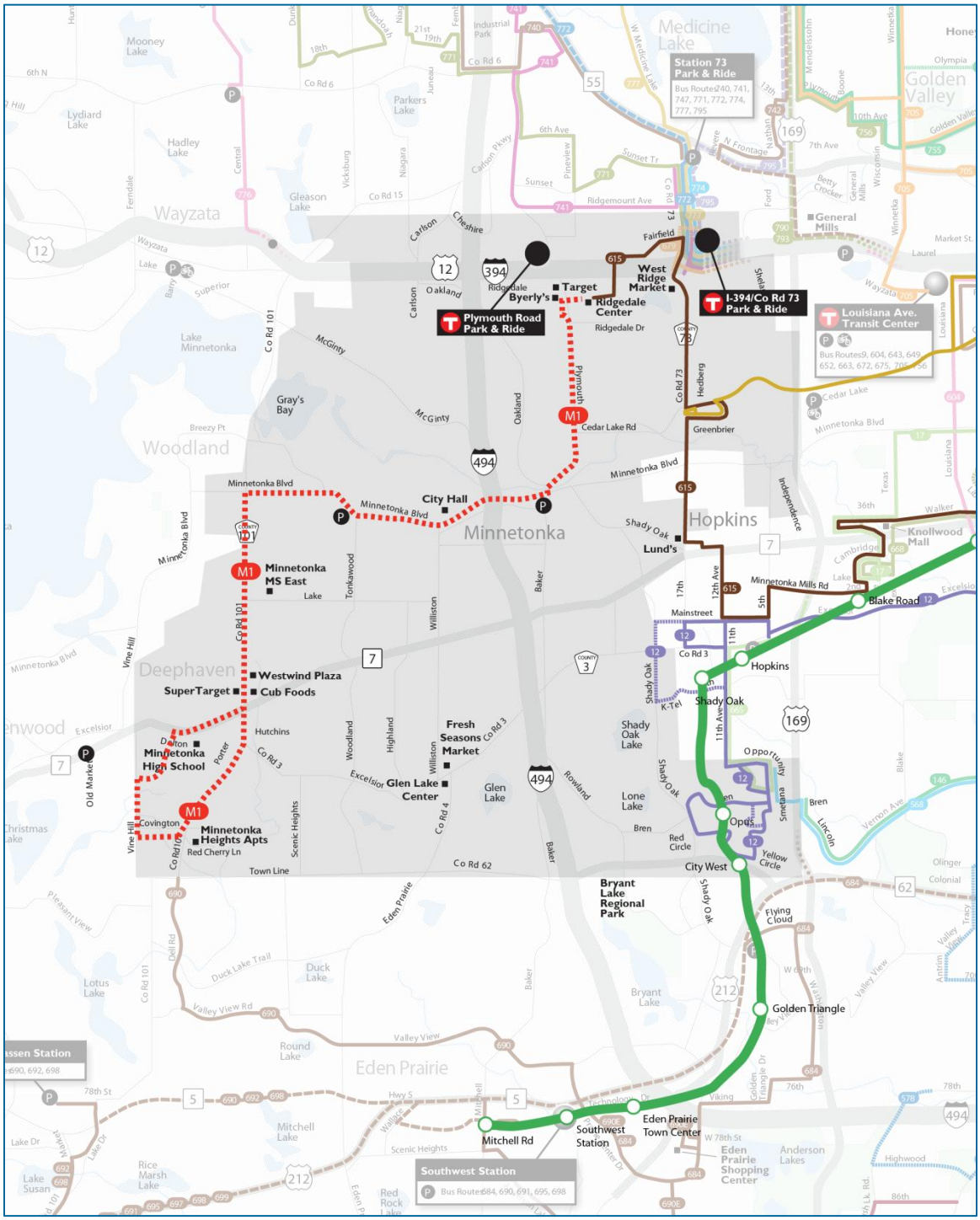


Figure 7-6 Conceptual Route (M1 Long): Ridgedale Center to Southwest Station

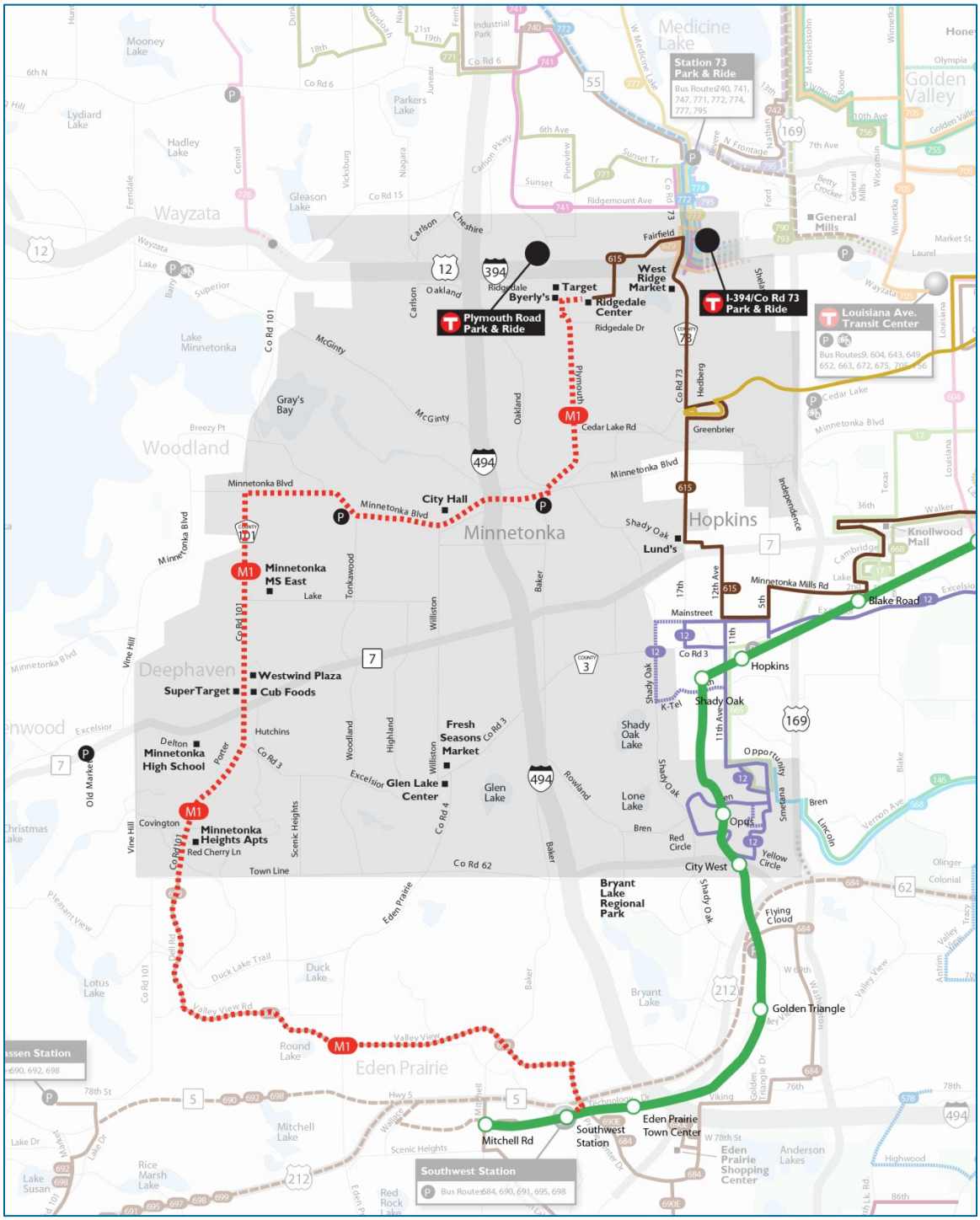


Figure 7-7 Conceptual Route (M2): 7-Hi Area to Opus

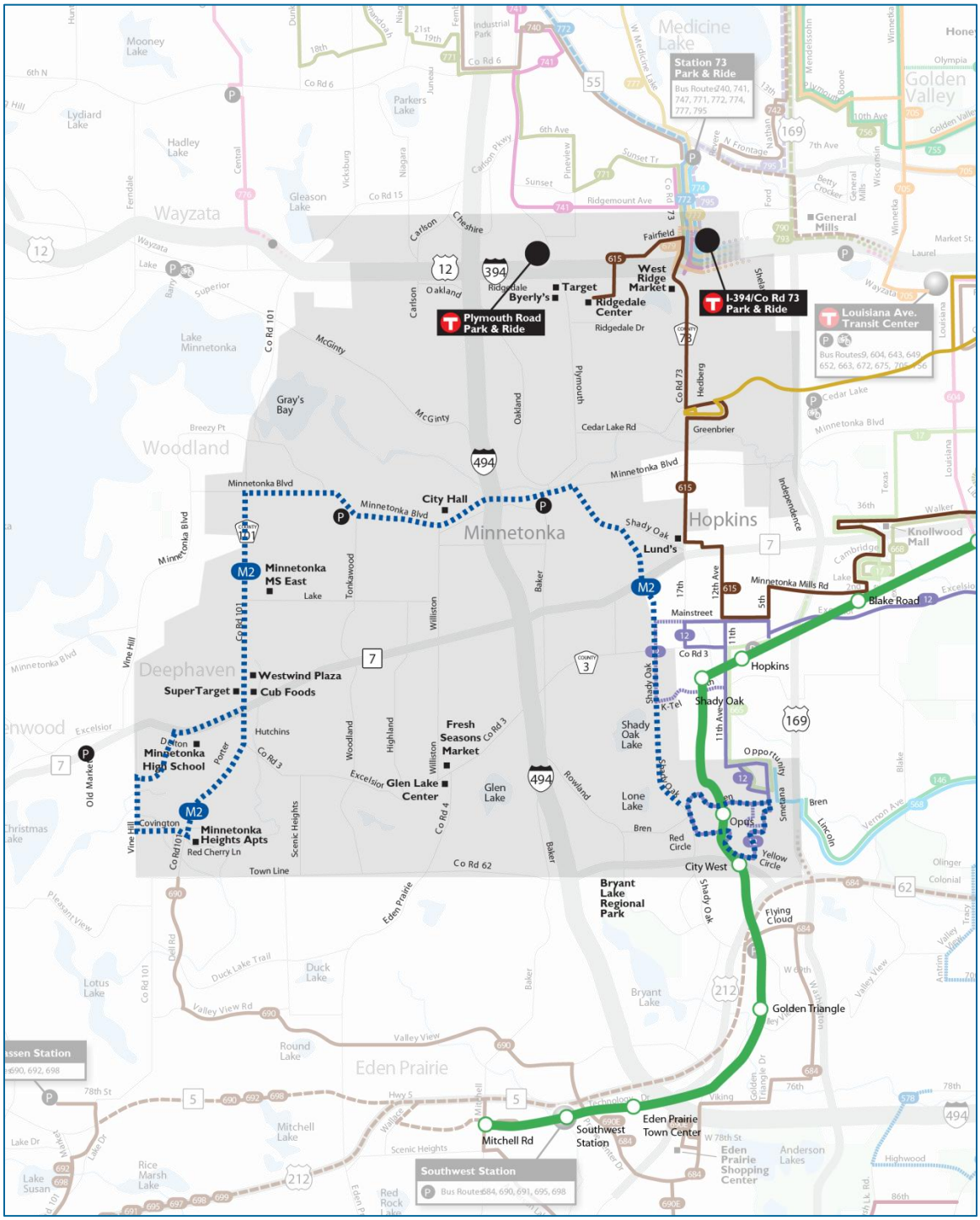


Figure 7-8 Route 9 Extension to 7-Hi and Minnetonka Heights

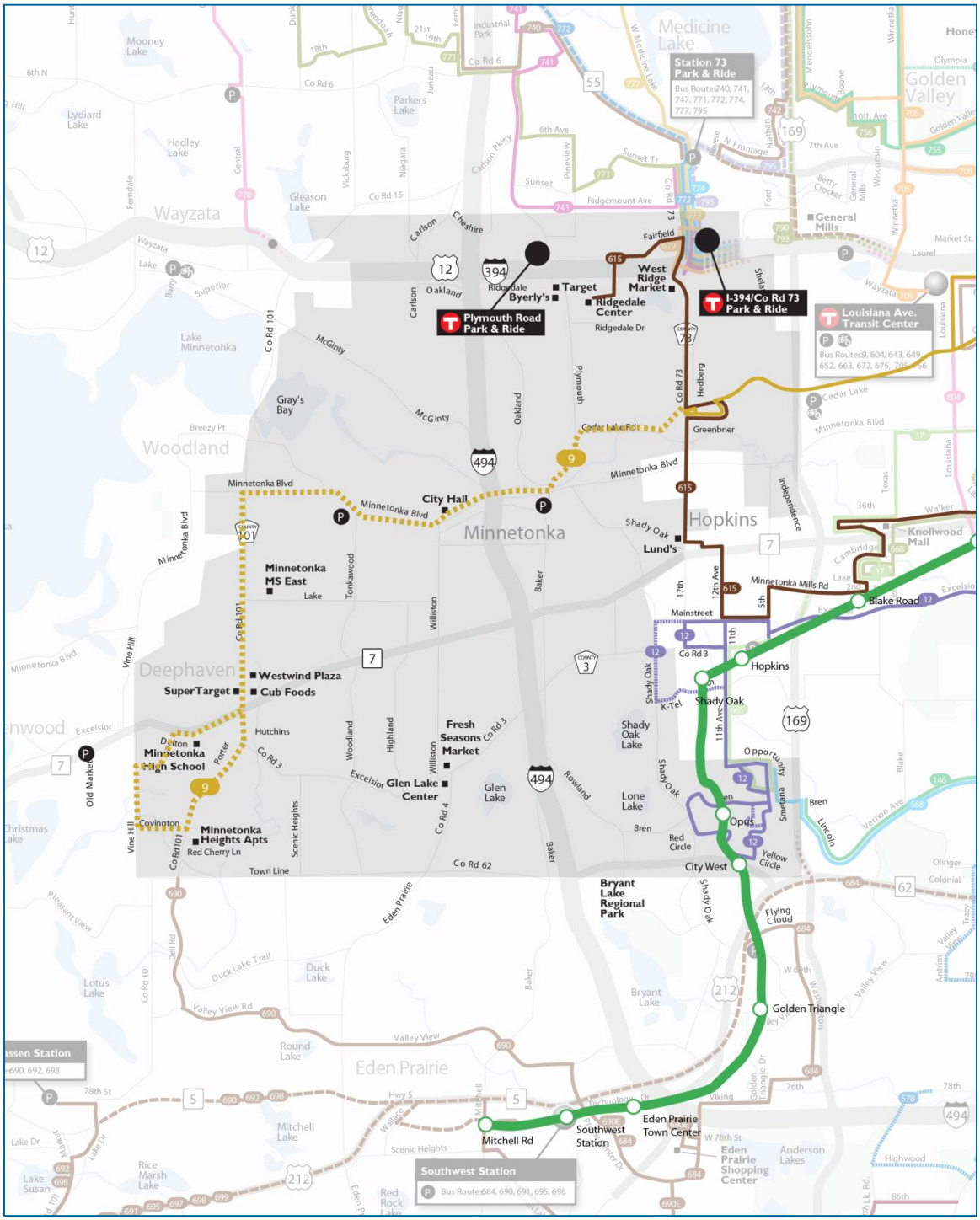


Figure 7-9 Route 12 Extension to 7-Hi and Minnetonka Heights

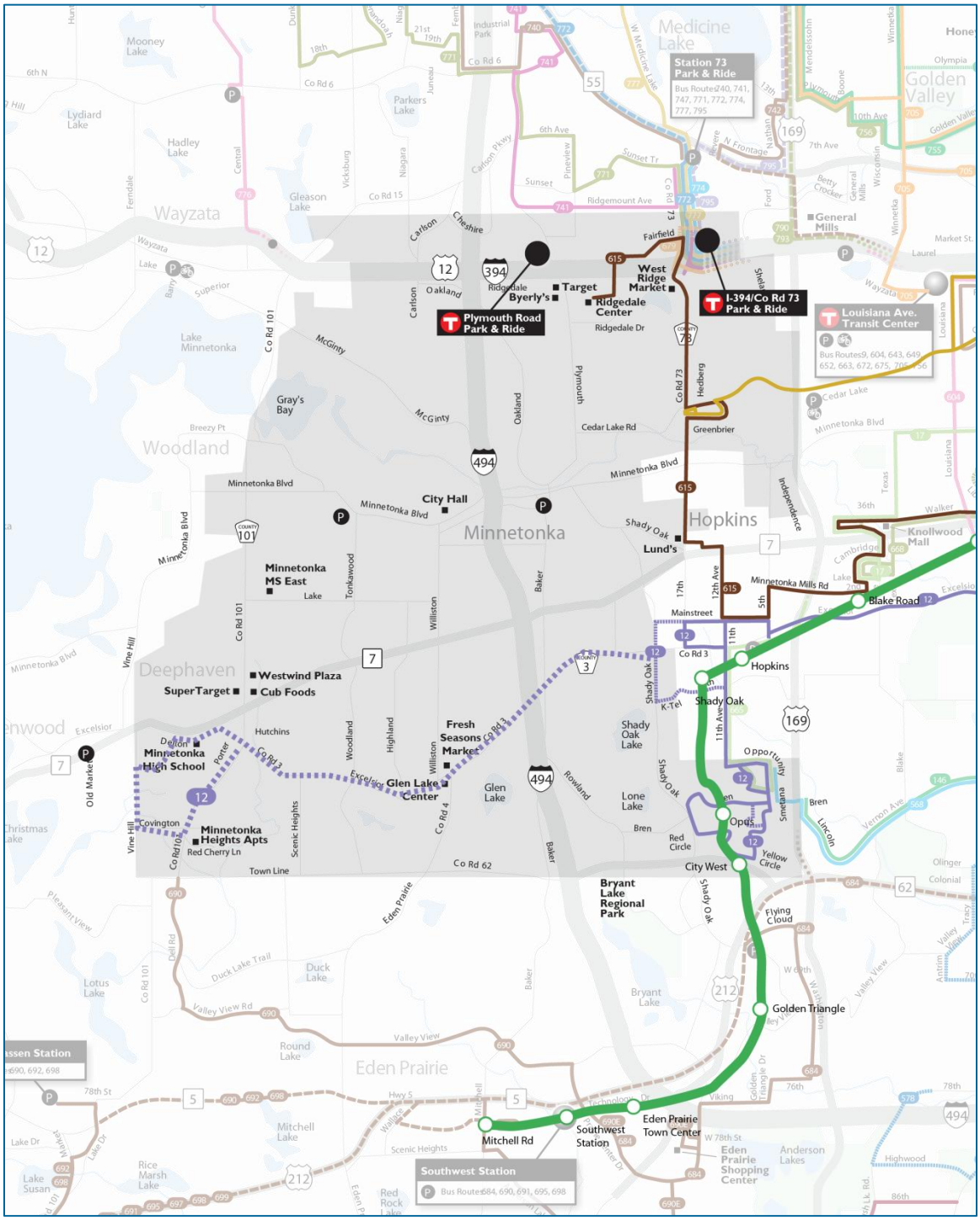
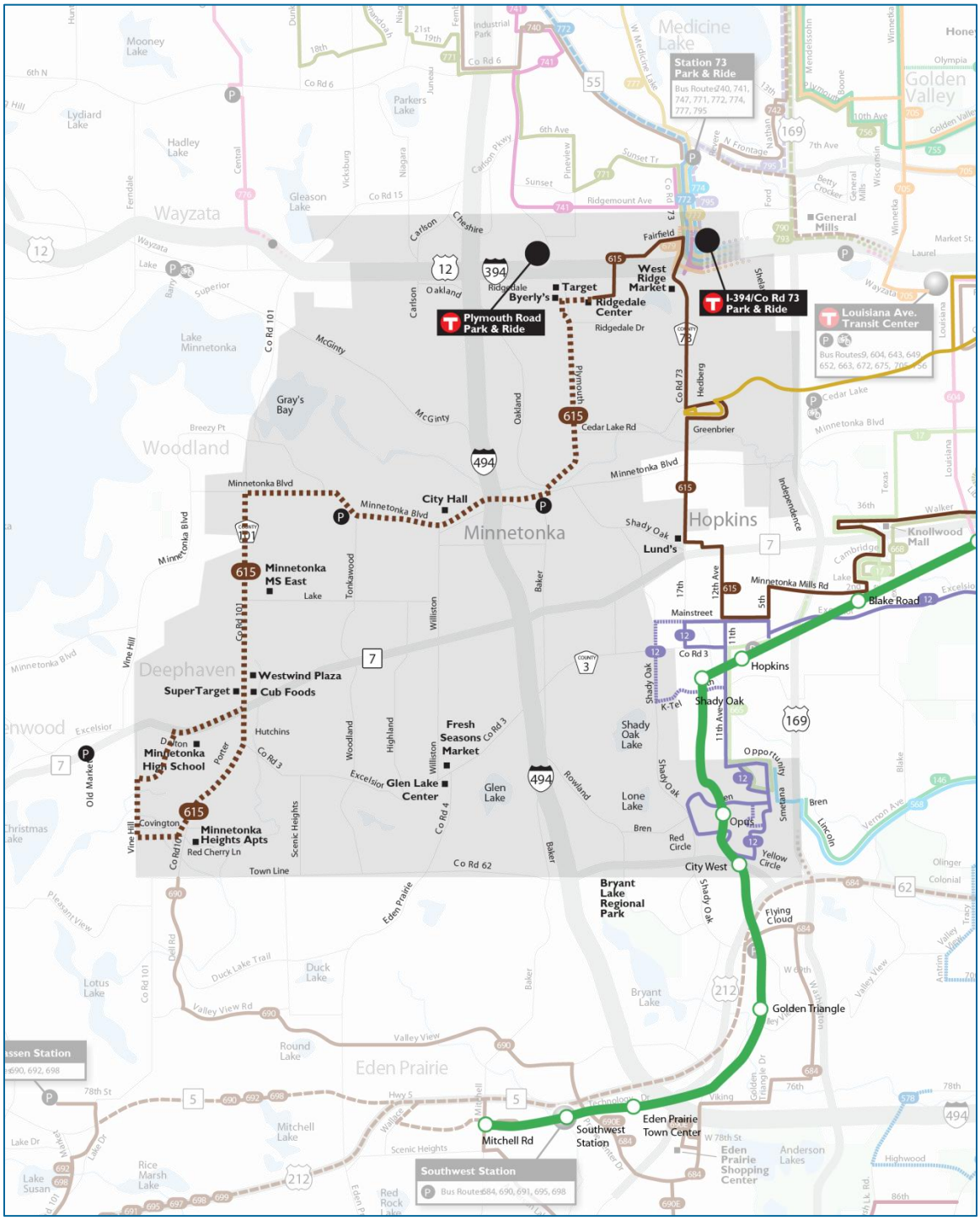


Figure 7-10 Route 615 Extension to 7-Hi and Minnetonka Heights



Evaluation of Local Service Concepts

Because not all of the local service concepts can be implemented, and it is important to understand which of the service concepts will meet regional performance goals, this section evaluates the six concepts to understand how they compare to each other and, ultimately, which are most worthy of consideration for meeting local needs.

Operating Cost Assumptions

The round trip distance of all conceptual routes was measured and an estimated running time was estimated based on an assumed operating speed of 16 to 18 miles/hour[4]. A 15% layover/recovery time was then added to each round-trip running time to arrive at a total minimum cycle time. A headway was applied to the running time estimated for each route, which determined how many buses would be required to operate the route. Based on the peer review, an ideal headway was every 60 minutes for local service. If the running time did not allow the route to cycle every 60 minutes, a 90 minute headway was applied (as was done with Routes M1 and the extension of Route 9). Next, based on the peer review and other local services operating in Minnetonka (Routes 9, 12 and 615), it was assumed that all conceptual routes would operate from about 7:00 am until 6:00 pm on weekdays and from 8:00 am until 4:00 pm on Saturday (with no service on Sunday).

Ridership Estimates

Ridership estimates were developed for each local service concept using productivity (passengers per in-service hour) figures from the national peer review (presented in Chapter 5). For each conceptual local route, a set of comparable national peer local routes were selected (i.e., not all national peer routes were used), and then the productivity estimate for each conceptual route was qualitatively adjusted up or down depending on how similar it is to the national peer route. The detailed tables that present the ridership estimates are provided in Appendix D. The following criteria are based on the best practices identified in the peer review (Chapter 4) and were used to adjust the productivity figures. In addition, the weighting of the various criteria are qualitatively based on the impact these elements have on ridership on the peer routes.

- **Anchors.** Conceptual route productivity figures were adjusted up or down by as much as 15%. If there were stronger anchors on the conceptual local route, then the figure was adjusted up. If the anchors were stronger on the national peer local route, the figures were adjusted down for the conceptual route. Strong anchors include a regional shopping mall, major transit center, park and ride with all day service, etc.
- **Serves a Rail Station.** If one of the anchors on a national peer was a rail station (commuter rail or heavy rail), the figures for the conceptual local route were adjusted down accordingly given the current lack of rail service in the Minnetonka area. Figures were adjusted as much as 40% depending on the type of station (heavy rail, commuter rail, light rail, etc.) and level of service (frequency, service span, etc.).
- **Regional Connectivity.** Productivity on conceptual local routes was adjusted up and down by as much as 10% depending on how comparable the regional connections on the national peer route are to the conceptual local route. Because national peer local routes were selected that most closely resembled the conceptual local route, productivity figures were only adjusted if there were significant differences in regional connectivity.

[4] Based on Route 615, operating speed in Minnetonka is 16 mph. Route 664 between Hutchins/Porter is approximately 21 mph.

- **Frequency.** Productivity on conceptual local routes was adjusted up or down as much as 20% based on the frequency of service. Most national peer local routes are comparable to the conceptual local routes, so only a few adjustments were made
- **Service Span.** Productivity on conceptual local routes was adjusted up or down as much as 10% based on how comparable they were to the proposed service span on the national peer route.
- **Marketing/Branding.** Conceptual local route productivity was adjusted up or down by 5% based on how it's branding and marketing (assuming existing Metro Transit marketing materials) compared to marketing and branding of the comparable national peer route.

Figure 7-11 below presents a summary of the service characteristics and ridership estimates for the conceptual local routes. Based on this table, there are several key items to note:

- Only Route M1 Long meets or exceeds the average productivity for a small bus fixed route (see Figure 7-3). For reference, annual ridership on all of these services is projected to be at or below that of Route 615.
- Routes M1 Short, the extension of Route 615 and the extension of Route 9 are not appropriate route length to work well for hourly service. That is, the round-trip running time on these routes is longer than an hour, which would require an inefficient use of two vehicles to provide hourly service. For comparison purposes, M1 Short and Route 9 were adjusted from every hour to every 90 minutes to make better use of one vehicle. The extension of Route 615 was kept at every hour (with the understanding that this is an inefficient use of resources).
- While the extension of Route 615 assumes two buses in operation, the actual time this vehicle would be in service is much lower (due to inefficient scheduling). Thus, the ridership estimates, which are based on passengers per in-service hour, were adjusted down for this route to account for less in-service time.
- While the exact schedules to extend Route 9 or Route 12 were not prepared, adding additional service to these routes on a consistent headway would be somewhat challenging (based on current schedules). For example, the Hedberg Drive/Greenbrier Road area is served by three routes during the weekday (Routes 9, 643 and 663) with service ranging from every 15 minutes during certain peak-period hours, to every 3 hours during the midday and early evening.

Figure 7-11 Summary of Local Service Concepts

		Weekday			Saturday			Annual			
Conceptual Route	**Estimated Round Trip Cycle Time** (including layover)	**Headway** (Peak / Midday / Eve)	**Vehicle Requirement** (Peak / Midday)	**Weekday In-Service Hours**	**Headway** (All day)	**Vehicle Requirement**	**Saturday In-Service Hours**	**Annual In-Service Hours**	**Estimated Annual In-Service Hours in Minnetonka**	**Estimated Productivity** (Passengers per In-Service Hour)	**Estimated Annual Ridership**
M1 Short	73	90 / 90 / 90	1 / 1	9.4	90	1	6.8	2,740	2,740	6.5 – 8.0	18,300 – 22,300
M1 Long	115	60 / 60 / 60	2 / 2	18.7	120	1	6.8	5,430	3,260	9.1 – 11.1	53,380 – 65,260
M2	112	60 / 60 / 60	2 / 2	18.7	120	1	6.8	5,430	4,300	6.9 – 8.4	40,050 – 48,950
Route 9 Ext.	72	90 / 90 / 90	1/ 1	8.9	90	1	6.8	2,780	2,780	7.2 – 8.8	20,700 – 25,300
Route 12 Ext.	57	60 / 60 / 60	1/1	8.9	60	1	6.8	2,780	2,420	8.2 – 10.0	23,700 – 28,900
Route 615 Ext.	70	60 / 60 / 60	2 / 2	17.9	120	2	9.4	5,310	5,310	8.5 – 10.3	28,560 – 34,920

Notes:

(1) Layover times are assumed to be 15% of base round trip running time

(2) Annual In-Service hours assumes 255 weekdays and 52 Saturdays

(3) Annual In-Service Hours estimated at 85% of annual revenue hours

(4) Remainder of in-service hours by route include:

  a. M1 Long: 2,170 annual in-service hours in Eden Prairie

  b. Route M2: 1,130 annual in-service hours in Hopkins

  c. Route 12 extension: 360 annual in-service hours in Hopkins

(5) Ridership estimates assume Saturday ridership is 50% of weekday ridership (based on Route 615)

(6) Route 615 extension ridership estimate is reduced by 60% because long layover (out of service time).

(7) Route 615 extension in-service hours are twice the cost of M1 due to providing the same frequency as Route 615 (60 minutes), which does not cycle well.

RECOMMENDED LOCAL SERVICE IMPROVEMENTS

Based on the review of the Existing Conditions and the Peer Review, service recommendations were developed to address opportunities, as guided by available funding, for transit improvements in Minnetonka. The recommendations are developed for near-term implementation (within the next two years) as well as potential long-term implementation with the opening of the Southwest LRT, which as noted earlier will likely enhance the productivity of local service. The long-term recommendations included here are not intended to be an all-inclusive list of proposed bus connections with LRT and will need to be fully vetted during the review process of the Southwest LRT bus network. They are not presented to circumvent that process, but simply to provide potential improvements to be considered.

RECOMMENDED NEAR-TERM SERVICE IMPROVEMENTS:

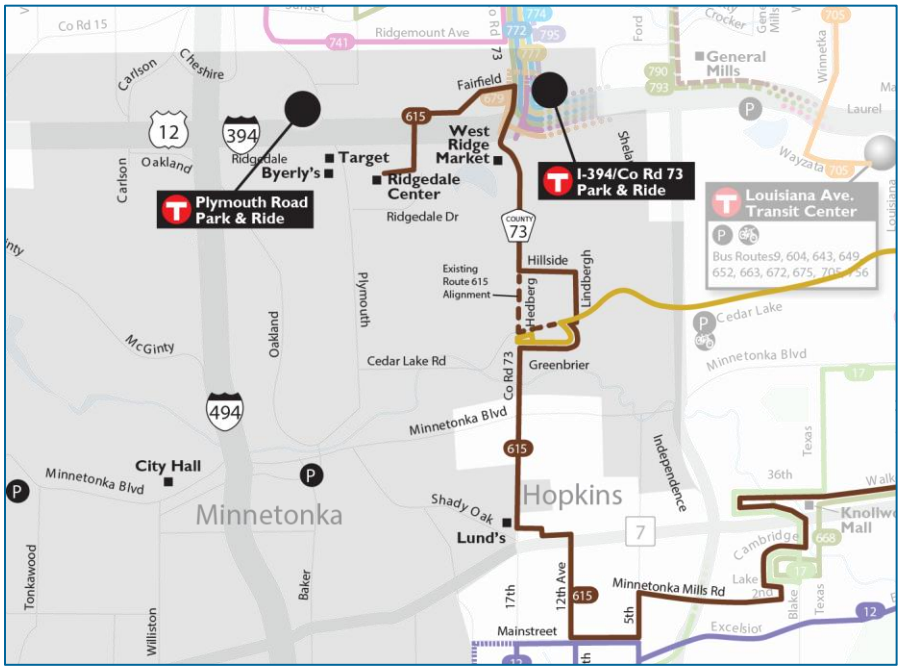
Minor Re-route on Route 615

This route is recommended for a minor re-route in northeast Minnetonka. Currently, the route connects downtown Hopkins and Ridgedale Center mostly via County Road 73 with the exception of a deviation to serve the apartment complexes along Greenbrier Road. Based on feedback from the open house meeting, and a review of ridership data, the following recommendation is made:

- From Greenbrier Drive and Cedar Lake Drive, continue east to Lindbergh Drive, north on Lindbergh Drive, west on Hillside Lane, and north on County Road 73. The route would then continue via the existing alignment to Ridgedale Center.

Weekday ridership data by stop was analyzed to assess the impact to existing riders and little impact was determined. Three northbound and three southbound stops are recommended for this new segment (exact location to be determined). No additional running time is needed with this change, and thus no impact on in-service hours. In fact, the proposed alignment is slightly shorter than the existing alignment, which could result in a slight running time savings.

Figure 7-12 Route 615 Modifications



New Local Route between Minnetonka Heights and Ridgedale Center

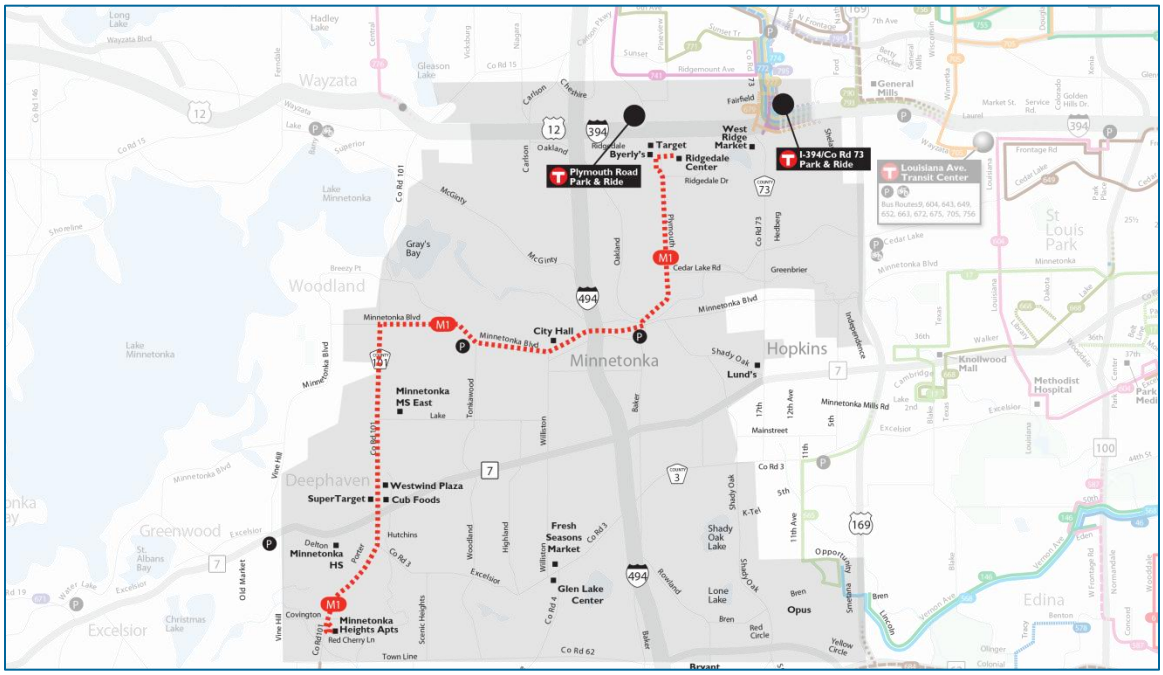
Based on the needs identified in this study, a new local route was designed to connect a major destination in the city (Ridgedale Center) and the I-394 corridor with a number of destinations in the city that do not have midday regular route transit service:

- 7-Hi shopping center area (Super Target, Cub Foods, etc.)
- Minnetonka Heights Apartments
- Minnetonka City Hall

The new route, shown below in Figure 7-13, would operate Monday through Saturday with service frequencies every 60 minutes from 9:00 am until 5:00 pm on weekdays and from 9:30 am until 3:30 pm on Saturday. Based on these operating characteristics, it is estimated that this route would require approximately 6.7 weekday in-service hours and 6.0 Saturday in-service hours, or approximately 2,000 annual in-service hours.

With the new regular route service, there would be less reliance on TransitLink service given that TransitLink does not duplicate regular route service.

Figure 7-13 Proposed Minnetonka Local Route (M1)



It is estimated that productivity (passengers per in-service hour) would be between 7.8 and 9.5, or an estimated annual ridership between 23,400 and 28,550.

Expanded Weekday Service Hours on Route 9

The recommendation to extend hours on Route 9 (and make service hours consistent on the weekdays) takes into account the need expressed by existing riders, the Minnetonka City Council, as well as attendees of the open house. It was also identified in the peer review that longer regional routes operating on a consistent schedule are more productive than routes that operate irregular schedules.

While there are additional routes that serve the Greenbrier/Cedar Lake area on weekdays (Routes 643 and 663), there are significant midday and evening gaps in service during the weekday. It is estimated that providing six additional round trips to this area would require an additional 24 minutes of round-trip running time per trip, or 2.4 in-service hours per day. This assumes service would be extended from Park Place Drive and Gamble Boulevard in St. Louis Park. This additional service would require an estimated 610 additional in-service hours per year (assuming operation 255 days per year).

It is important to note that Route 9 is a very long route that connects Minnetonka to south Minneapolis. As such, scheduling additional running time to certain trips could create scheduling challenges or require additional vehicles to cycle properly resulting in an inefficient use of resources with long layovers.

Summary of Near-Term Service Improvements

Figure 7-14 provides a summary of the improvements for near-term implementation.

Figure 7-14 Summary of Recommendations for Near-Term Implementation

Recommendation	Estimated Daily In-Service Hours	Estimated Annual In-Service Hours
Minor Re-route on Route 615	0	0
Modified Route M1 (with reduced service hours)	6.7 (weekday) 6.0 (Saturday)	2,000
Add six additional weekday round trips to the Greenbrier/Cedar Lake Road area on Route 9	2.4 (weekday)	610
Total		**2,610**

POTENTIAL LONG-TERM SERVICE IMPROVEMENTS:

Extended Route 615 Hours

As with Route 9, several members of the public noted the need for improved evening service on Route 615. Expanding service hours later into the evening was noted as a way to improve options for youth and workers, especially those traveling to and from Ridgedale Center. This recommendation extends service hours on Route 615 until 8:00 pm on weekdays only. Because Route 615 extends beyond Minnetonka (to Hopkins and St. Louis Park), the hours to expand service hours are not exclusive to Minnetonka and would have other regional benefits.

It should be noted that Ridgedale Center is open until 9:00 pm, and therefore it would be preferable to extend hours until 10:00 pm if additional resources become available. In addition, many of the peer local routes operate until 10:00 pm. Because of the cost constraints of this alternative, and other local service needs, extending hours slightly was a first step for testing the market for later service on this route.

It should also be noted that transit ridership drops off significantly after 6:00 pm on most local routes in the Twin Cities (and throughout the nation). As such, it is assumed that ridership on this route would be lower in the evening.

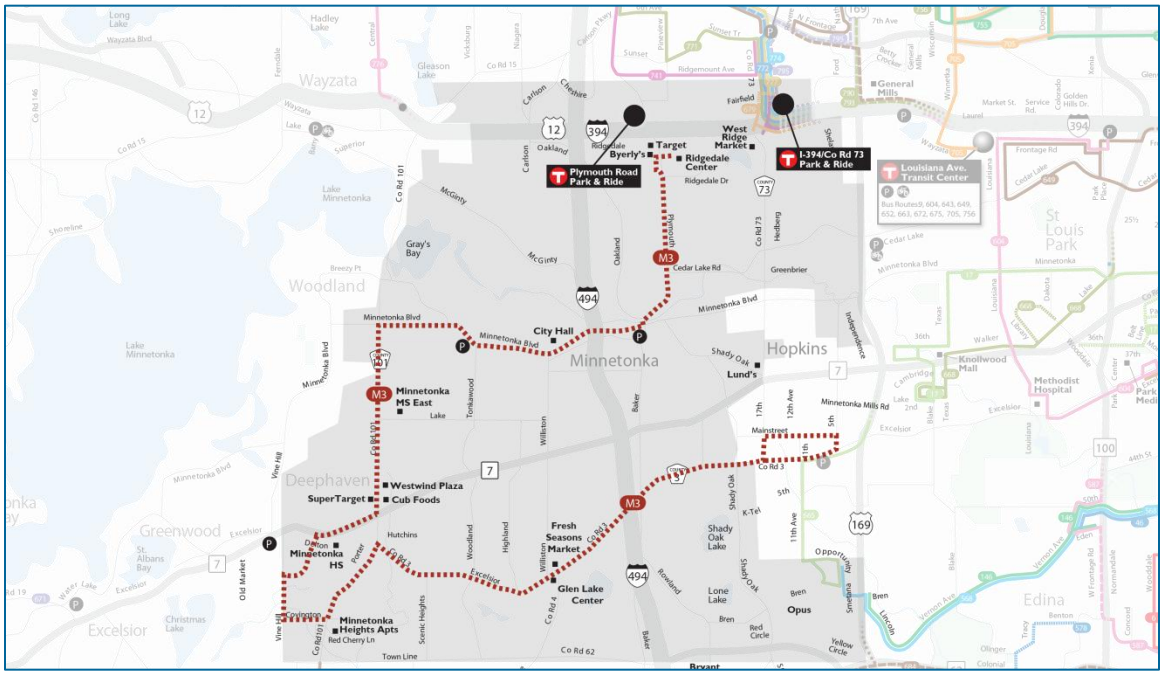
Implement New Suburban Local Route between Ridgedale Center and Hopkins via Minnetonka Heights and 7-Hi Area (Route M3)

This recommended route, labeled as M3, is shown below in Figure 7-15. This route is designed using several of the best practices identified in the peer review, including:

- Provides service to two anchors (Ridgedale Center and downtown Hopkins)
- Would connect to a future rail station
- Is designed around connecting major destinations instead of political boundaries

This route was developed because it provides connections through Minnetonka (along Excelsior Boulevard), has a strong anchor in downtown Hopkins and will serve a future light rail station.

Figure 7-15 New Suburban Local Route (M3)



This new route would operate Monday through Saturday. Weekday headways on this route would be every hour on weekdays and Saturdays. Weekday service would be provided from 7:00 am until 6:00 pm and from 8:00 am until 4:00 pm on Saturday. Based on these operating characteristics, it is assumed that this route would require approximately 18.5 weekday in-service hours and 13.5 Saturday in-service hours, or approximately 5,400 annual in-service hours.

Ridership estimates for this new route are higher than the new local route presented in Alternative 1 because it serves a larger area and connects multiple strong destinations. It is estimated that productivity (passengers per in-service hour) would be 12.4 and 15.1, or an estimated annual ridership between 75,000 and 92,000 when Southwest LRT stations are operational.

Summary of Potential Long-Term Service Improvements

Figure 7-16 provides a summary of the long-term improvements to be implemented with the opening of Southwest LRT. As noted earlier, the recommendations included here are not intended to be an all-inclusive list of proposed bus connections with LRT and will need to be fully vetted during the review process of the Southwest LRT bus network. They are not presented to circumvent that process, but simply to provide potential improvements to be considered.

Figure 7-16 Summary of Potential Improvements Implemented With Opening of Southwest LRT

Recommendation	Estimated Daily In-Service Hours	Estimated Annual In-Service Hours
Expand service hours on Route 615 until 8:00 pm on weekdays only.	3.4 (weekday)	870
Implement new Suburban Local route from Ridgedale Center to downtown Hopkins via Minnetonka Heights (with reduced midday hours) (M3)	18.5 (weekday) 13.5 (Saturday)	5,400
Total	**21.9 (weekday)** **13.5 (Saturday)**	**6,270**

EVALUATION OF MINNETONKA EXPRESS NETWORK

In addition to local routes, Minnetonka is served by a network of express routes that primarily provide weekday peak period service to downtown Minneapolis. While express routes in Minnetonka are generally productive, there are some parts of this service that have been identified as either providing overlapping service or having low ridership. Five peak period express routes are the focus of the proposed changes in the express network (664, 665, 667, 670 and 671).

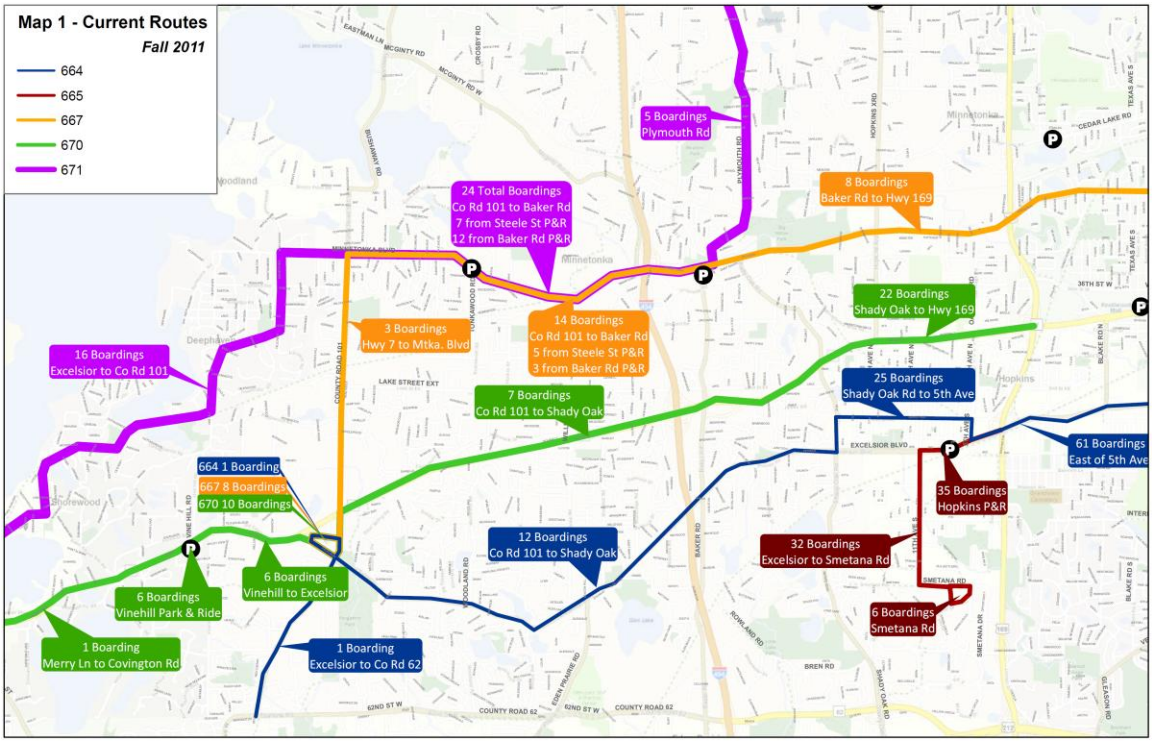
The current service provided by these routes is as follows:

- **Route 664** provides service between southwest corner of Minnetonka to downtown Minneapolis via County Road 101, Excelsior Boulevard, Highway 100 and I-394. In addition to the Glen Lake area of Minnetonka, it serves Mainstreet in Hopkins and Excelsior Boulevard in St. Louis Park. There are four inbound and five outbound trips averaging 25 passengers per trip with the majority of riders boarding east of Highway 169 in St. Louis Park. 88% of the riders are boarding in Hopkins or St. Louis Park.
- **Route 665** provides service between the northeast corner of Opus in Minnetonka to downtown Minneapolis via Smetana Road, 11th Avenue, Excelsior Boulevard, Highway 169 and I-394. In addition to the northeast Opus area of Minnetonka, it serves the concentration of apartment complexes along 11th Avenue in Hopkins and the Hopkins park-ride on Excelsior Boulevard at 8th Avenue. There are three inbound and three outbound trips averaging 25 passengers per trip with approximately 6 boardings in the northeast corner of Opus, 32 boardings along 11th Avenue and 35 boardings at the park-ride.
- **Route 667E** is a long line branch that provides service in Minnetonka along County Road 101 between Highway 7 and Minnetonka Boulevard and along Minnetonka Boulevard between County Road 101 and Highway 169. The route continues along Minnetonka Boulevard providing service to St. Louis Park east of Highway 169 to Highway 100 where it takes Highway 100 to I-394 and downtown Minneapolis. There are five inbound and five outbound trips averaging 30 passengers per trip. However, the majority of the ridership is in St. Louis Park with only 17% of the ridership in Minnetonka. In Minnetonka, there are an average of 3 boardings along County Road 101, 14 boardings along Minnetonka Boulevard between County Road 101 and Plymouth Road and 8 boardings along Minnetonka Boulevard between Plymouth Road and Highway 169.
- **Route 670** provides service to Minneapolis from Orono, Tonka Bay, Shorewood, Excelsior, Minnetonka and Hopkins via County Road 19 and Highway 7 to Highway 169 and I-394. There are three inbound and three outbound trips averaging 20 passengers per trip with 38% of the boarding in Minnetonka. Along Highway 7 between County Road 101 and 5th Avenue, the segment of the route recommended below for elimination, there are 7 boardings in Minnetonka and 23 in Hopkins.
- **Route 671** provides service to Excelsior, Greenwood, Deephaven and Minnetonka via Water Street, Lake Street, Excelsior Boulevard, Minnetonka Boulevard and Plymouth Road to I-394. There are three inbound and three outbound trips averaging 25 boarding per trip. . Along Plymouth Road between Minnetonka Boulevard and the Plymouth Road park-ride, the segment of the route recommended below for elimination, there are 5

boardings. Forty-five percent of the boardings on this route occur at one of the three park-rides along the route (Steele Street, Baker Road and Plymouth Road).

The existing ridership by segment is shown below in Figure 7-17 for these five express routes.

Figure 7-17 Existing Routes 664, 665, 667, 670 and 671 and Daily Ridership by Segment



The proposed changes are as follows:

- **Route 671** service would be combined with Route 667, service along Minnetonka Boulevard (and be designated Route 671). For existing riders who would be served by the new route, riders east of Plymouth Road would be served as they are today. Riders between County Road 101 and Plymouth Road would receive approximately 50% service as they currently do. However, ridership along this segment is not high, and the current service levels are a function of two routes running through the area, and not due to actual demand in the area. Three current riders along County Road 101 between Highway 7 and Minnetonka Boulevard and 5 current riders along Plymouth Road north of Minnetonka Boulevard would be left without service by the change.
- **Route 670** service west of County Road 101 would be combined with Route 664 service east of County Road 101 (and be designated as Route 670). Route 670 now provides three trips in each direction and Route 664 now provides four AM inbound and five PM outbound trips. The existing Route 664 provides additional trips to accommodate higher demand on Excelsior Boulevard east of Highway 169. However, with the modifications proposed for Route 664 and 665 (see below), demand on Excelsior Boulevard west of Highway 169 does not justify this much service. Thus, three round trips on the modified Route 670 are proposed. Route 670 is re-routed to serve Excelsior Boulevard east of County Road 101 and the section of Highway 7 east of County Road 101 now currently served by Route 670 would be without service. A total of 23 daily riders would be without

service on Highway 7 east of County Road 101, most of whom board in Hopkins east of Shady Oak Road.

- **Route 664** would be shortened to start at Smetana Drive and Smetana Road which is the current Route 665 terminal. Route 665 would be eliminated and the modified Route 664 would serve 11th Avenue south of Excelsior Boulevard, Mainstreet in Hopkins between 11th and 5th Avenues and Excelsior Boulevard between 5th Avenue and Highway 100 (as it currently does). The primary change for Route 665 riders would be a slightly longer express trip (about 4 minutes per direction).

As described above, express ridership is low throughout sections of Minnetonka and very low in some areas. As a result, the consolidation of express service would provide service more cost-effectively and still maintain service for the large majority of existing Minnetonka express riders.

Maintenance of Service along Highway 7

The major impact of the proposed express service reductions would be along Highway 7, both in terms of coverage and the number of passengers impacted (23). The City has expressed a desire to maintain service in this corridor. A relatively cost-effective way to maintain this service would be **to extend** Route 668 (Hopkins – St. Louis Park – Minneapolis Express) westward into Minnetonka. In this case, the cost to provide service along Highway 7 in Minnetonka would be limited to the cost of the extension, rather than the cost of the entire service between Minnetonka and Minneapolis.

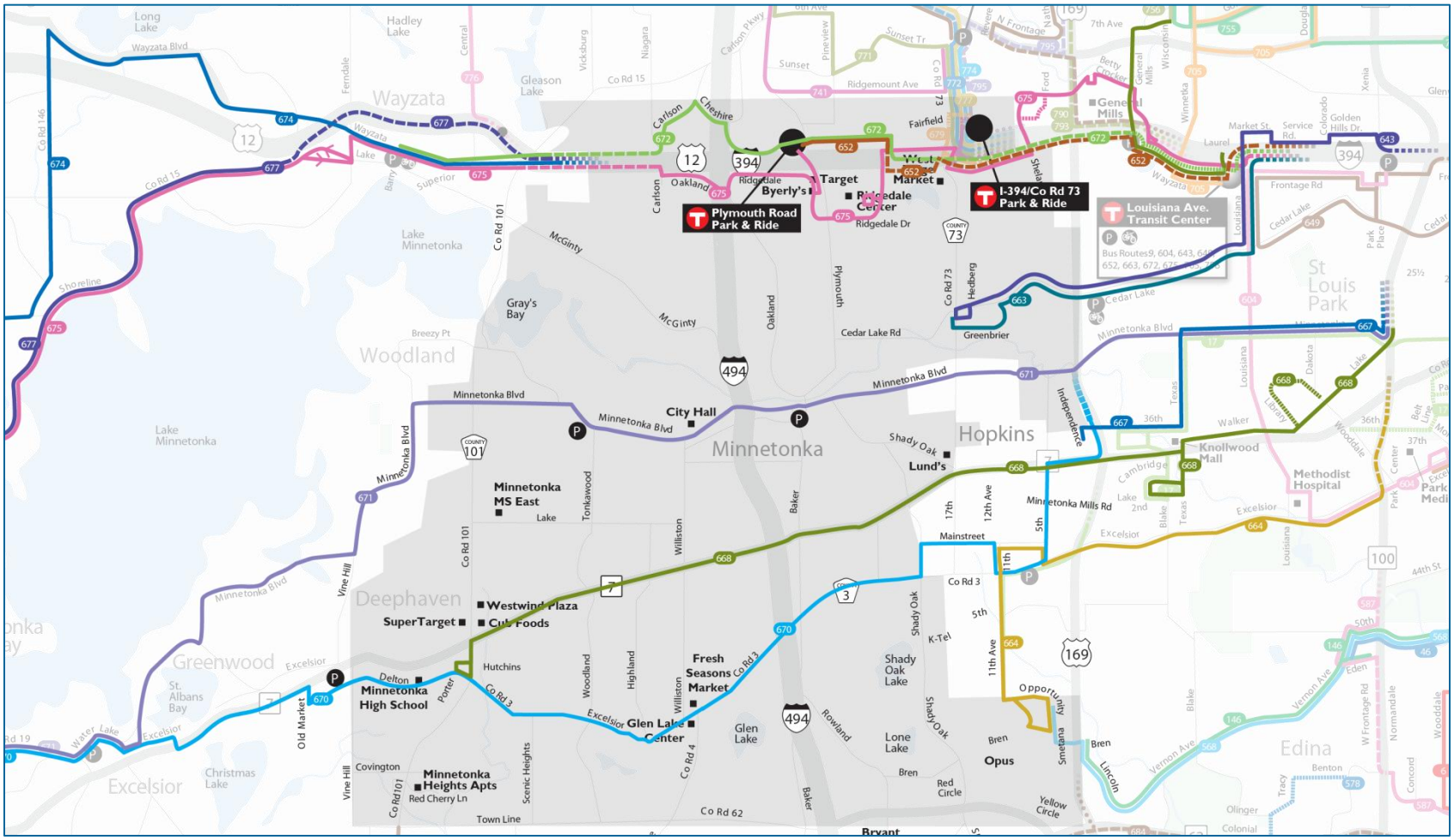
Estimated savings in terms of weekday in-service hours, assuming the extension of Route 668, is provided below in Figure 7-18.

Figure 7-18 Summary of Proposed Express Route Changes (with Optional Highway 7 Service)

Route	Modification	Estimated Change in Weekday In-Service Hours
664	Reduced from four/five weekday trips per direction to three weekday round trips. Route would combine Route 665 and the portion of Route 664 east of downtown Hopkins. Running time would be shortened between 14 and 17 minutes per trip.	- 3.6
665	Route eliminated (replaced by modified Route 664).	- 3.8
667	All trips extending to Minnetonka would be shortlined to St. Louis Park and the Minnetonka Boulevard segment would be replaced by changes to Route 671. All existing trips to Amhurst in St. Louis Park would remain.	- 6.5
668	Extend route 668 to Hutchins/Porter, three weekday round trips.	+ 2.0
670	Add one additional round trip to account for higher demand on Excelsior Boulevard and modified routing via Excelsior instead of Hwy 7.	+ 1.5
671	Route combined with Route 667 and would operate via Minnetonka Boulevard to Highway 169. Assumed to be approximately the same running time as existing alignment.	0
Total		**- 10.4**

A map of the proposed Express changes is provided in Figure 7-19 below.

Figure 7-19 Proposed Express Service Changes



SUMMARY OF RECOMMENDED SERVICE CHANGES

Figure 7-20 below summarizes all of the near-term recommended service changes and long-term service improvement options that were developed in this study.

Figure 7-20 Summary of Recommended Service Changes

Route(s)	Reason for Service Change	Proposed Near-Term Recommendation	Potential Long-Term Improvements
Express Service Changes			
667, 671	Low ridership segments and service duplication	Route 667 service in Minnetonka replaced by Route 671, which would be modified to operate via Minnetonka Boulevard to Highway 100. Route 667 shortened to focus on express trips in St. Louis Park.	
664, 668, 670	Low ridership segments	Route 670 re-routed via Excelsior Boulevard and replaces this segment of Route 664 service. Route 668 extended into Minnetonka to provide service in the Highway 7 corridor.	
664, 665	Low ridership and service duplication	Route 665 is eliminated and replaced with a shortened and modified Route 664.	
Local Service Changes			
M1, M3	Desire to provide midday, local service	New route (M1) connecting Ridgedale Center with Minnetonka City Hall, 7-Hi shopping area, and Minnetonka Heights	Expand route (M3) to serve Minnetonka High School, Excelsior Boulevard, downtown Hopkins and the future Southwest LRT line.
9	Desire for expanded service hours	Add six additional weekday round trips.	
615	Better local service coverage	Minor re-route via Lindbergh Drive and Hillside Lane	Extend service hours from 5:00 PM to 8:00 PM.

NEXT STEPS

Prior to implementation of the service improvements or changes outlined in this chapter, a public process of outreach and review by stakeholders will be necessary. Implementation of any service improvements or changes would be guided by available funding and stakeholder input. The near-term service improvements and changes could occur as early as August 2013. Long-term potential service improvements would be scheduled to be implemented with the opening of the Southwest LRT. As noted earlier, the recommendations included here are not intended to be an all-inclusive list of proposed bus connections with LRT and will need to be fully vetted during the review process of the Southwest LRT bus network. They are not presented to circumvent that process, but simply to provide potential improvements to be considered.