

Chapter 5. Transportation

The transportation system encompasses several modes of transport, including automobile, bicycle, pedestrian, transit, goods movement by rail or truck and aviation. It both links and, in some cases, separates land uses within the community. This plan explores the relationship between transportation and land use, and examines ways in which that relationship could be improved and enhanced. This chapter addresses roadways; transit; bicycle and pedestrian facilities; goods movement; travel demand management; and aviation.

This chapter of the *Comprehensive Plan*:

- Summarizes **regional trends and travel behavior**.
- Describes the **existing transportation system**.
- Identifies existing and **future transportation needs** through the year 2030.
- Establishes **goals, policies and recommended actions** to address those transportation needs.

Regional Trends and Travel Behavior

In 2000, the Metropolitan Council, Minnesota Department of Transportation, Regional Transit Board and Transportation Advisory Board conducted a study to determine travel behaviors within the Twin Cities metropolitan area. This information has been used in decision making for future transportation improvements at the regional level. This information is also beneficial to the City since the regional trends impact local road and traffic conditions.

Growth in vehicle trips moderated slightly during the period 1990 to 2000, however, daily vehicle miles traveled in the region increased. That indicates that trip length is increasing. The demographic forces, which caused this increase, includes the change in age composition; population and household growth; the dispersal of household and jobs outward in the region; and lifestyle changes. The movement of the population to the suburbs and outer rings resulted in job growth shifting from the central cities to the suburbs. Because of these changes, people are making more trips and longer trips and continue to rely on the automobile. While trips grew at a slower rate between 1990 and 2000 than they did in the preceding decades, the number of trips per household continues to increase. In 2000, the household person trip rate of 10.3 per day, up from 10.12 in 1990. Because of the combination of growth in the number of households, the number of trips per household, and increased trip length, more vehicles are using the metro area road system.

One reason for the increased trip rates is that most people drive alone. The percentage of drive alone trips increased between 1990 and 2000 to just over half of all trips. More households rely on two incomes; therefore, working couples make more trips traveling to work or doing personal errands. In addition, the aging of the baby boom generation has increased the percentage of the population of driving age. The senior citizen population travels more than their parents did since

they were raised in the automobile era. Households also own more cars than in previous years and have more licensed drivers. Driving alone allows travelers to have control and not be dependent on others. The rate of increase in daily trips slowed between 1990 and 2000 generally because the forces driving the increase during the 1970s and '80s moderated somewhat by 2000. By 2000, the percentage of two-income households, of women in the workforce, of car owners and of licensed drivers reached very high levels with less potential for growth.

For all trips taken in the region, transit use maintained a share of 2.5% of total trips. Person trips in car pools increased by more than 25%, accounting for about 45% of trips. Trips using other modes (school buses, motorcycles, taxi and other) decreased, comprising only 1.6% of all trips in 2000.

Travel time for all trip purposes continued to increase. The commute trip lengthened from an average of 21 minutes in 1990 to an average of 24 minutes in 2000. Morning and afternoon peak travel periods are broadening and becoming more intense. Both the morning and afternoon peak periods are becoming longer in duration and entail more trips than in 1990. Both the morning and afternoon peak periods are each an hour longer in duration and peak later than in 1990. Midday travel is becoming more pronounced with the number of trips starting during the noon hour exceeding those starting during the 1990 morning peak

The 2005 Resident Survey included questions about roads, traffic and commuting behavior. Traffic was identified as the most serious issue faced by the City with 14% of the respondents, ranking among the most important problems identified in the Survey. This and street repair were identified as problems that needed to be addressed. However, over 80% of the responses rated street repair and maintenance as good or excellent.

Existing Transportation System

Roadway Jurisdictional Classification System

Jurisdiction over Shoreview's roadway system is divided among the state, county, and city. The system includes the interstate and trunk highway system, managed by the Minnesota Department of Transportation (Mn/DOT) and the County State Aid Highway (CSAH) and County Road system, managed by Ramsey County, and local roadways owned and managed by the City. In addition the network includes a small number of private streets owned and managed by private associations, such as townhome associations. Roadway jurisdiction is based on several factors, including the following:

- Length of road/length of trip served
- Connections to roads of similar jurisdiction level
- Average daily traffic
- Functional classification
- Special facilities served

In general, the following relationships are observed and are depicted on **Map 5-1**:

- Roadways that serve regional, inter-county or state-wide transportation needs are typically owned and maintained by the State (Mn/DOT).
- Roadways that serve intermediate level functions generally qualify as county state aid highways or county roads and are owned and maintained by Ramsey County.
- Roadways that primarily serve local transportation needs are owned and maintained by the City of Shoreview.

Metropolitan Highway System

The metropolitan highway system within Shoreview includes segments of two interstate highways:

- I-35W, which runs north-south along the City’s northwestern boundary, between County Road I and County Road J; and
- I-694 (also US 10), part of the Twin Cities “beltway,” which crosses the southern part of the City in an east-west direction between Rice Street and Lexington Avenue.

County Highway System

In addition to the metropolitan highway system, most of the City’s main transportation corridors are part of the extensive county highway system. This system includes former State Trunk Highways (96 and 49), County State Aid Highways (CSAH) and County Roads.

- CSAH 96
- CSAH 49 (part of Rice Street/Hodgson Road)
- CSAH 54 (part of Rice Street)
- CSAH 50 (part of Hamline Avenue)
- CSAH 51 (Lexington Avenue)
- CSAH 52 (Victoria Street)
- CSAH 12 (part of County Road F)
- CSAH 15 (part of County Road E)
- CSAH 18 (part of Owasso Boulevard)
- CSAH 3 (County Road I)
- CSAH 1 (County Road J)
- CSAH 4 (Sherwood Road)
- County Road 15/99 (County Road E/Soo Street)
- County Road 136 (part of Soo Street)

Local Street System

The remaining public streets in the City constitute the local city street system. This system includes several roads formerly under jurisdiction of Ramsey County, such as Snail Lake Boulevard, Tanglewood Drive, Gramsie Road, Victoria Street (north and east of County Road F), Turtle Lake Road and Owasso Boulevard North. This system also includes some alleyways that are located in older lakeshore neighborhoods.

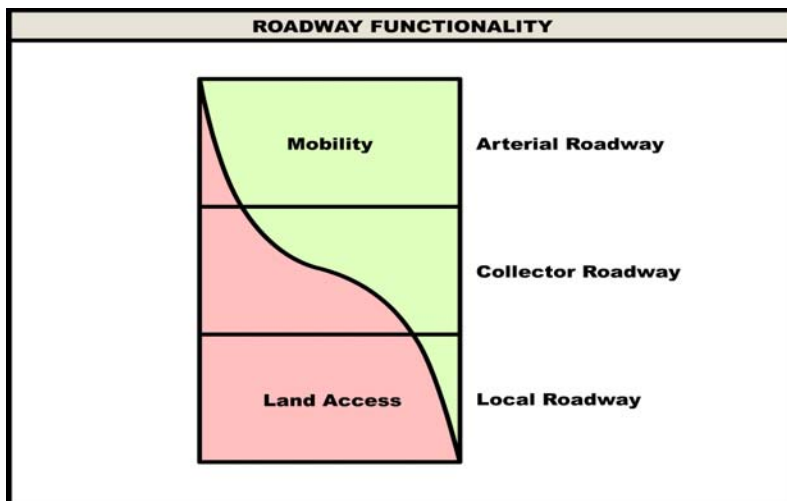
Private Street System

Although the City’s current codes generally do not permit the construction of new private streets to provide access to development, private streets have been permitted in the past within the City. The majority of these streets are located in medium- and high-density residential developments, but some are located in single-family residential neighborhoods. Residents and/or homeowner associations manage and maintain these streets, however some of these associations have asked to transfer jurisdiction of their private streets to the City.

Roadway Functional Classification System

The purpose of a functional classification system is to create a hierarchy of roads that collects and distributes traffic from neighborhoods to the county and state highway systems in as efficient a manner as possible. Roads are placed into functional categories based on the degree to which they provide access to adjacent land or provide mobility to through traffic (**Table 5-1**). Ideally, roads are designed to perform a designated function and are located to best serve the type of travel needed. Transportation issues arise when roadway design is inconsistent with the functional demands imposed on the roadway. The functional classification system used in the City of Shoreview consistent with that of the Metropolitan Council.

Table 5-1. Roadway Functionality

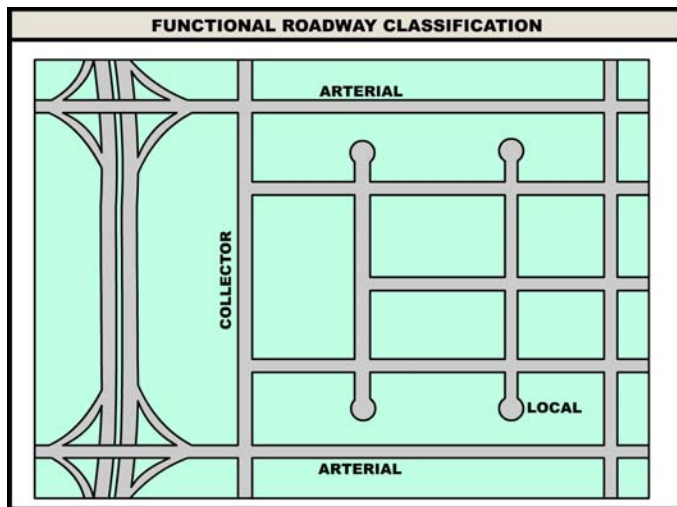


Shoreview’s functional classification system, illustrated on **Map 5-2**, includes the following four primary categories:

- Principal Arterials
- Minor Arterials (A Minor and B Minor)
- Collectors (Major and Minor)
- Local Streets (public and private)

Table 5-2 graphically illustrates the relationship of each of the classifications.

Table 5-2. Functional Roadway Classification



Principal Arterials

Principal arterials are the highest roadway classification and are considered part of the metropolitan highway system. These roads are intended to connect metropolitan centers with one another and connect major business concentrations in the metropolitan area. These roads also connect the Twin Cities with important locations outside the metropolitan area. The City of Shoreview’s principal arterials are the two interstate highways: I-35W and I-694.

Minor Arterials

The A Minor/B Minor Arterial and Major/Minor Collector designations were adopted by the Metropolitan Council as a means for identifying roadways which are oriented toward mobility (through-trips) versus those that are oriented more toward accessibility (land access). Minor arterials are intended to connect cities with adjacent communities and the Metropolitan highway system. Major business concentrations and other important traffic generators are commonly located on minor arterials. The Metropolitan Council has identified minor arterials that are of regional importance because they relieve traffic on the principal arterials or substitute for

principal arterials when necessary. All minor arterials are under the jurisdiction of Ramsey County. These roads have been labeled as “A” or “B” minor arterials with “A” minor arterials categorized into four types: Relievers, Expanders, Connectors, and Augmenters.

- *A Minor – Relievers* are roadways that provide direct relief for traffic on major metropolitan highways (principal arterials).
- *A Minor – Expanders* are routes that provide a way to make connections between developing areas outside the interstate ring. This includes the area north of I-694/US 10.
- *A Minor – Connectors* are roadways that provide good, safe connections among town centers.
- *A Minor – Augmenters* are roadways that augment principal arterials within the interstate ring. This includes the area south of I-694/US 10.

The following roadways within the City are classified as “A” minor arterials:

- Lexington Avenue (County Road J to I-694 – Expander)
- Lexington Avenue (I-694 to County Road D – Augmentor)
- Hodgson Road/Rice Street (County Road J to I-694/US 10 – Expander)
- Rice Street (I-694/US 10 to southern boundary of City – Reliever)
- Highway 96 (Rice Street to Lexington Avenue – Expander)
- County Road J (eastern boundary of City to I-35W – Expander)

B minor arterial roadways within the City form a connected system of north-south and east-west routes through the City, and include:

- Victoria Street (County Road F to County Road D)
- Rice Street (Highway 96 to Gramsie Road)
- County Road I (I-35W to Hodgson Road)
- County Road F (Lexington Ave to Victoria St.)
- County Road E/Soo Street/Owasso Boulevard (Lexington Ave to Rice St.)

Major Collectors

Major collector roadways are designed to serve shorter trips that occur primarily within the City, and to collect and distribute traffic from neighborhoods and employment centers to the arterial system. These streets are typically part of the City’s municipal state aid system. The City’s major collector system includes the following streets:

- Rice Creek Parkway (CR J to CR I)
- Hamline Avenue, scheduled for turnback from Ramsey County to the City of Shoreview in 2012 (Lexington Ave. to Co. Road I)
- Sherwood Road/Turtle Lake Road (Hodgson to eastern boundary of City)

- Tanglewood Drive (Lexington Avenue to Hodgson Road)
- Victoria St (Tanglewood Dr to Highway 96 & Lexington Av to County Rd F)
- Snail Lake Boulevard/ Snail Lake Road (Victoria Street to Hodgson Road)
- Gramsie Road (Victoria Street to Hodgson Road)
- Owasso Boulevard (Victoria Street to Rice Street)
- County Road D (Lexington Avenue to Victoria Street)
- County Road F (Hodgson Road to Rice St.)

Minor Collectors

Minor collector roadways collect and distribute traffic from neighborhoods to the major collector and arterial network. These roads are generally shorter and less continuous than major collectors, but serve to supplement those streets. These streets are typically part of the City’s municipal state aid system. The City’s minor collector system includes the following streets:

- Parkview Drive (Rice Creek Parkway to County Road J)
- Hamline Avenue (Lexington Avenue to Royal Oaks Drive)
- Fernwood Street (County Rd. J to Lexington Avenue)
- Royal Oaks Drive (County Road J to Lexington Avenue)
- Sherewood Road (Hodgson Road to Turtle Lake Road)
- Oakwood Drive (Turtle Lake Road to Sherewood Road)
- Hodgson Connection (Hodgson Road to Tanglewood Drive)
- Dale Street/Laura Lane (Tanglewood Drive to Highway 96)
- Mound Avenue (Victoria Street to Dale Street)
- Snail Lake Boulevard (Highway 96 to Snail Lake Road)
- Snail Lake Road (Hodgson Road to Rice Street)
- Mackubin Street (Gramsie Road to Snail Lake Boulevard)
- Owasso Street (Victoria Street to Harriet Avenue)
- Harriet Avenue (Victoria Street to Chandler Avenue)
- Chandler Avenue (Harriet Avenue to Owasso Boulevard North)
- Owasso Boulevard West (Owasso Blvd North to southern City boundary)
- Gramsie/Chatsworth (Lexington Avenue to County Road F)

Existing Traffic Lanes and Traffic Volumes

Existing roadway capacity in terms of number of travel lanes for each roadway in the City is shown on **Map 5-3**. The existing (2005) and forecast (2030) traffic volumes for all arterial and collector roadways are displayed on **Map 5-4**. The traffic forecasts are discussed below in the Analysis of Future Needs section of this Chapter. Mn/DOT and Ramsey County conduct routine

counts of traffic volumes for roads under their jurisdiction. The City of Shoreview performs traffic counts on collector streets every two years.

Existing Transit Services and Facilities

The term transit applies to all forms of ridesharing. Transit services within the City of Shoreview are provided by regular route bus service, para-transit, park and ride lots and travel demand management. These services are supported by transit facilities that accommodate the needs of transit users.

Shoreview is in the Metropolitan Transit Taxing District, and designated by the Metropolitan Council as Transit Market Area III. This Market Area is characterized by lower density housing and jobs, and so is served by peak-only express bus service, small vehicle dial-a-ride, midday circulators, special needs paratransit and ride sharing services,

Bus Service

Providers for bus service within the City include Metro Transit and North Suburban Lines. Bus routes, including route numbers and bus stop locations, are depicted on **Map 5-5**.

As illustrated in Map 5-5, Metro Transit and North Suburban Lines provide limited transit service within the City of Shoreview. Para-transit service is also provided by Metro Mobility as a service of the Metropolitan Council. This door-to-door service is available to persons with disabilities who cannot use Metro Transit's regular service.

Transit Facilities

The Rosedale Shopping Center in the City of Roseville, south of the City of Shoreview, serves as a transit hub for Metro Transit bus routes. The facility includes a bus staging area, passenger facilities, a park-and-ride lot and bicycle lockers. The Park-and-ride facility in the City is located at the Shoreview Community Center (Highway 96 and Victoria St.).

Several other park-and-ride lots are accessible to Shoreview residents. These lots are located in the adjacent communities of Vadnais Heights, Arden Hills, Blaine and Mounds View and are shown on **Map 5-5**.

Metro Transit has bike lockers available at three transit stops along Hodgson Road served by Routes 62 and 262. These lockers are safe storage units that allow commuters to combine the benefits of transit with cycling. Commuters can rent out these lockers seasonally or annually for a small fee. The following locker facilities are available in the City:

- Hodgson Road at County Road I - 4 lockers
- Hodgson Road at Tanglewood Drive - 2 lockers
- Hodgson Road at Gramsie Road - 4 lockers

Existing Transit Characteristics

According to the 2000 Census, approximately 1.9 percent of City residents used some form of public transportation as a means for traveling to work. Another 8.4 percent carpooled with one or more other individuals. Half of the respondents to the 2005 Resident Survey reported that they left the City daily to go to work. 4% reported that they or a family member regularly use public transportation to get to work. Of those who do not use public transit, 35% reported that it is not convenient and another 11% reported that no transit service route is available. When asked about the importance of public transit, 30% answered that it is very important, and 28% rated public transit good or excellent. The 2000 Transportation Behavior Survey (Met. Council/MnDOT) reported that transit ridership accounts for about 2.5% of total trips in the metro area.

MetroTransit obtained boarding data in March, 2008 to estimate the ridership counts for some of the bus routes operated in Shoreview. This data was obtained at point checks and provides a good representation of ridership for the inbound and outbound weekday rush hour routes. The midday service ridership for Route 62 was not counted, however, it is estimated that there are about 20 residents served by this route. **Table 5-3** summarizes the findings:

Table 5-3. Weekday (Daily) Transit Boardings

<i>Route</i>	<i>Boarding Count</i>
62 - Local	19
225 - Circulator	78
227 - Circulator	50
250- Express	50
255 – Express	15
261 – Express	13
262 – Limited Stop	58

Source: Metro Transit

In addition, MetroTransit also provided the City with information regarding park and ride lot users. The two primary park and ride locations used by Shoreview residents are the Rosedale Transit Center (City of Roseville) and 1-35W/95th Ave Transit Center (City of Blaine). Ridership data found that 65 residents were using the Transit Center at Rosedale. The majority of these users live in the southern and midsection of the City, however, some users reside on the City’s northside. The Transit Center at I-35/95th Avenue is primarily used by residents who live north of County Road I. The data indicates that 19 residents use this facility. Other park and ride facilities are used by Shoreview residents, however, use of these facilities is low with one or two user.

Travel Demand Management

Travel demand management is a set of techniques used to reduce peak period vehicle trips by shifting travelers from driving alone into shared ride arrangements or by encouraging alternative work arrangements, such as flextime and telecommuting that remove trips from the peak travel times. Travel demand management techniques are best implemented through a partnership of

cities, regional and state agencies and employers to encourage travelers to change their behavior through incentives, enhanced services and high occupancy facilities.

Rideshare is a travel demand management tool being used in the City. Metro Commuter Services provides carpool-matching services to employers and individuals in the Metro area.

Light Rail Transit and Commuter Rail

Currently, there is one existing rail transit corridor in the Twin Cities Metropolitan Area, the Hiawatha Corridor Light Rail Transit. There are four others that have been proposed:

- The Central Corridor is proposed to be approximately 11 miles long to connect the downtowns of Minneapolis and Saint Paul running along University Avenue.
- The Northstar Commuter Rail Corridor, currently under construction, is a 40-mile long transportation corridor which runs along Highway 10 and Highway 47 from downtown Minneapolis to the Big Lake area.

In addition to these corridors, a land use/transit study was completed in August of 2002 for the Northeast Diagonal Corridor which was identified in the Metropolitan Council's *Transit 2020* plan as a potential busway to be implemented post 2010. The proposed Northeast Diagonal is a seventeen-mile corridor from downtown Minneapolis to White Bear Lake and runs through the southeast corner of Shoreview. This corridor is an active rail line owned by the Burlington Northern San Francisco Railroad. The study recommended that the communities along the corridor adopt "smart growth" policies to promote business and residential development and build transit ridership in the Highway 36 corridor before this transit way is implemented. The Metropolitan Council has since determined that it is unlikely that this route will serve as a transit corridor due to issues pertaining to the rail infrastructure, access to downtown Minneapolis, potential ridership and proximity to the Highway 36 transit corridor.

Although the City understands there are complicating factors associated with this corridor, Shoreview remains supportive of this transit route and will continue to participate in discussions regarding future rail transit activities with other agencies as needed.

Existing Pedestrian and Bicycle Facilities

In 1998, the City of Shoreview developed a Basic Level of Service Plan and has since implemented this plan by construction an off-street system consisting of approximately 50 miles of asphalt multi-use trails and concrete sidewalks. This system provides pedestrian and bicycle connections between parks, neighborhoods, community resources, and commercial nodes and represents substantial completion of the basic level of service plan. (See *Map 5-6: Trails and Bikeways*) There are several types of trails and walkways within the City:

- Regional Trail Corridors- Trails connecting to destinations outside the City.
- Regional Park Trails - Trails located within regional parks or open spaces that serve the City and surrounding communities.

- Local Sidewalks and Trails – These pedestrian/bicycle facilities serve the local community by connecting neighborhoods and providing safe access to schools.

Based on the 2005 resident survey, the trail system is one of the characteristics of the City that is a very important quality of life indicator. Over 75% of the survey respondents reported using the trail system at least monthly.

Regional Trail Corridors

There are three trail segments within the City that are part of the regional trail system: the Highway 96 Corridor Regional Trail, Lexington Parkway and the Rice Creek North Regional Trail.

The Highway 96 Corridor Regional Trail is a 7-mile long trail that parallels Highway 96 from Old Highway 8 in New Brighton to Highway 61 in White Bear Lake. It is an off-road bituminous multi-use trail that exists in Shoreview on the south side of County Road 96. This regional trail connects a series of regional parks, including Snail Lake Regional Park.

The Lexington Parkway Regional Trail extends north to Anoka County and south into the City of St. Paul. This trail consists of an existing County trail along Lexington Avenue extending from County Road D to County Road J. The Metropolitan Council's Regional Park System Plan does show a portion of this trail alignment extending into open space between County Road I and County Road J. Currently, there is an improved trail segment along the road alignment, which provides a connection between these two roadways. There is some concern that the proposed alignment is not feasible since access is currently provided between the two roadways and due to environmental constraints.

The Rice Creek North Regional Trail is part of a 14-mile regional trail corridor that connects the Chain of Lakes Regional Park Reserve in the City of Lino Lakes to the Mississippi River in the City of Fridley. Within the City, this trail follows Rice Creek from County Road J to County Road I. Approximately 112 acres along Rice Creek south of County Road I was recently incorporated into this regional trail corridor and trails have been constructed along both sides of the Creek.

Regional Park Trails

A significant portion of the Vadnais-Snail Lake Regional Park is also located in the City and extends into the City of Vadnais Heights, immediately to the east of Shoreview. This park system includes a variety of trail systems including a 4.1 mile network of paved and unpaved trails that extend from Snail Lake to Grass Lake

Local Sidewalks and Trails

Paved sidewalks and paved/unpaved local trails are located within or adjacent to each of the community's parks and recreation areas, located along several streets, and within existing

residential and commercial developments. These transportation facilities link pedestrians to parks, schools, community facilities and transit routes. Paved trails and sidewalks also typically adjoin the city's minor arterial and collector roadways. Primary north-south routes include trails and walkways along Lexington Avenue, Hodgson Road north of Highway 96, Royal Oaks Drive, Rice Creek Parkway, Snail Lake Boulevard, and Victoria Street north of Owasso Boulevard N. Primary east-west routes include walkways along County Roads F, I and J, Tanglewood Drive, Highway 96, Gramsie Road and North Owasso Boulevard.

Neighborhood connections encourage trail use, promote physical activity and provide safe routes connecting residents to other neighborhoods, schools, recreation and commercial nodes. Neighborhood trails and walkways are located throughout the City, linking neighborhoods with each other and providing connection to primary trails. This trail network also provides safe routes to school for the school age population, many of which rely on these pedestrian facilities since the Mounds View School District does not provide bus service for residents living within a 2-mile radius of a school facility.

The City has enhanced the usability of the trail system by installing trail map signs at major junctions to facilitate navigation on the trails to destinations throughout the City. The City also publishes and regularly updates a trail map that is available to residents and area businesses.

Shoreview has a Bikeway and Trailways Committee that reviews the network of sidewalks and trails within the community and makes recommendations to the City Council regarding the trail and walkway facilities.

Cycling

Cyclists also use the arterial roadways and collector roadways within the City. The Minnesota Department of Transportation has identified several roadways as part of the metropolitan bikeway system. To increase the safety of these routes for cyclists, the City of Shoreview and Ramsey County have incorporated design improvements when feasible for new and/or reconstruction of these roadways. These safety improvements often include improving lane and paved shoulder widths, improving crossings, signage, and overall road conditions. County Road 49 (Hodgson Road/Rice Street) has for several years been discussed as a designated commuter bikeway corridor.

Goods Movement

There are no truck terminals or heavy industrial uses in the City that generate large volumes of heavy vehicle traffic. Semi-trailer truck traffic is generated by the light industrial and commercial uses in the City for pick-up and delivery of the goods necessary for operations, not for trans-shipment. There are axle weight limits on certain routes during the springtime. The routes where weight limits are placed are primarily on local roadways that were constructed to a lower structural (weight) capacity.

One of the first structures located within the City was the rail facility at Cardigan Junction north of Interstate 694. Although this facility no longer exists, the two rail lines served by Cardigan Junction still remain. These lines are currently owned and operated by the Canadian Pacific Railroad. The main line parallels County Road E while the second line is adjacent to Soo Street, east of Wabasso Lake and Lake Owasso. At grade crossings are found at Lexington Avenue, Victoria Street, Lake Owasso Boulevard North and Jerrold Avenue. Separated crossings are found at Interstate 694, County Road E and Rice Street. According to the 2006 Mn/DOT Railroads Volume Inventory Map, on average these lines carry less than five trains per day.

Aviation

A small portion of the City lies within the influence area of the Blaine-Anoka County Airport, located just northwest of the I-35W/County Road J interchange. The areas within the City that fall under both the Airport Safety Zone C and the Airport Land Use Zone are shown on Map 5-7.

The Anoka County-Blaine Airport is the largest of the reliever airports in the Twin Cities Metro Area. The facility serves the most diverse aircraft mix in the reliever system including corporate jets, recreational pilots and many antique aircraft. The airport has a contract air traffic control tower, a 4,855-foot north-south runway and a 5,000-foot east-west runway equipped with an instrument landing system(ILS). Two full-service operators and a number of single-service operators are based at the airport. The airport supports more than 90,000 takeoffs and landings annually and there are 490 aircraft based at the airport.

Planned improvements at the Blaine-Anoka County Airport include improved instrumentation, the possible addition of runways parallel to each existing runway, and an extension of the existing east-west runway to 5,000 feet.

Since the airport runways run directly north-south and east-west the impacts of the airport on Shoreview are limited since the City lies to the southeast. The City of Shoreview does recognize its responsibility as a community to protect the general airspace surrounding this airport, as well as others in the region. Shoreview lies outside of the airport's safety zones A and B, but lies within zone C, which encompasses all land within an arc with a 6,000-foot radius from the ends of all runways. Uses in this zone are only subject to general restrictions regarding interference with electronic communications, airport lighting and the impairment of visibility. Shoreview does lie beyond the airport's existing and projected noise contours.

Structures which are 200 feet or higher above ground level may pose hazards to air navigation. The primary structures of this type in Shoreview are the broadcast towers located north of I-694. Because of their height, the Federal Aviation Administration (FAA) has established flight rules that prohibit aircraft from operating in the vicinity of the towers. The construction of any structure or alteration exceeding a height of 200 feet or any construction or alteration of greater height than an imaginary surface extending upward at a slope of 100:1 from the nearest point of the nearest runway of a public airport requires notification to the Mn/DOT Commissioner and potentially FAA.

Seaplane operations are permitted on two of the City’s lakes: Turtle Lake and Lake Owasso. The Mn/DOT, Aeronautics Division, regulates these types of seaplane operations. On Lake Owasso, seaplane operations are restricted during the day on weekends and holidays in the summer (although limited use of personal seaplanes by residents is permitted). Mn/DOT does not monitor the use of these lakes by seaplanes, unless conflicts are occurring. When lakes are frozen, ski-equipped craft may operate on all City lakes.

Analysis of Future Needs

2030 Forecast Traffic Volumes

Traffic forecasts were prepared for the year 2030 using the Metropolitan Council’s Transportation Analysis Zone (TAZ), based on forecasts of population, household, and employment, reported by TAZ. The TAZ boundaries are illustrated on **Map 5-8**. Socio-economic forecasts were prepared by the City for each TAZ and the forecast is tabulated in **Table 5-4**.

Table 5-4. Transportation Analysis Zones (2030)

FORECAST 2030, by TAZ			Population	Households	Employment
Location	#	Area (sq. mi.)			
North of County Road I					
East of I-35W	1017	1.9	3142	1218	4000
East of Lexington Ave	1018	1.5	3617	1410	332
East of Hodgson Rd	1019	1.4	2539	990	75
North of Highway 96					
East of Lexington Ave	1016	2.3	4592	1790	2543
South of Highway 96					
East of Lexington Ave	1014	1.4	4592	1790	625
East of Hodgson Rd	1015	0.4	1411	550	270
North of I-694/US 10					
East of Victoria St	1012	1.4	1898	740	790
East of Lexington Ave	1013	0.4	852	332	1942
South of I-694/US 10					
East of Lexington Ave	1011	0.4	134	53	1183
East of Victoria St	1010	0.78	3363	1311	3480
South of County Road E					
East of Lexington Ave	1009	1.32	2861	1115	1600
Totals		13.2	29001	11299	16840

Safety Assessment

The Minnesota Department of Transportation’s crash mapping software (MnCMAT) was used to identify crash locations and statistics for the City of Shoreview. A three year reporting period beginning January 1, 2003 and ending December 31, 2005 was utilized in this assessment. Reported crashes during this time period are illustrated on **Map 5-9**. During this period a total of 1,307 crashes were reported for roadways of all classifications and jurisdiction.

Overall, the crash frequency on local City streets is relatively low. The vast majority of crashes occur along I-694, I-35W, and at County Road intersections. A more rigorous investigation of crash rates, types, and severity would be necessary to identify potential corrective measures. As improvements in these corridors and intersections are considered, these safety concerns should be explored more thoroughly.

Capacity Assessment

An assessment of the existing and forecast operational concerns through the community has been completed using the 2030 traffic forecast data, crash data, and coordination with Ramsey County and Mn/DOT.

Existing and Forecast Congestion Issues

In an effort to assess capacity deficiencies, existing (2005) and forecast (2030) traffic volumes were reviewed along with design capacity guidelines. For example, traffic operations data indicates that two-lane roadways begin to experience noticeable problems once traffic volumes exceed approximately 10,000 trips per day. Capacity thresholds are based on roadway type (see **Table 5-5**).

Table 5-5. Roadway Capacity Guidelines

Roadway Type	Estimated Daily Capacity ¹
Two-lane	10,000
Three-lane (center left turn lane)	16,000
Four-lane undivided	23,000
Four-lane divided (center median)	34,000
Four-lane metered freeway	85,000
Six-lane metered freeway	127,000

¹ Based on average daily traffic volumes

The capacity thresholds presented in **Table 5-5** were used to identify segments of roadway that are either nearing capacity or exceeding capacity of the roadway type. **Maps 5-10** and **5-11**

illustrate the existing (2005) and future (2030) capacity deficiencies within the community. The capacity thresholds do not indicate the congestion that may occur at intersections, as a result of relative traffic flow and movements. Capacity as used here, is a measure only of the adequacy of the number of lanes to carry a daily volume of vehicles.

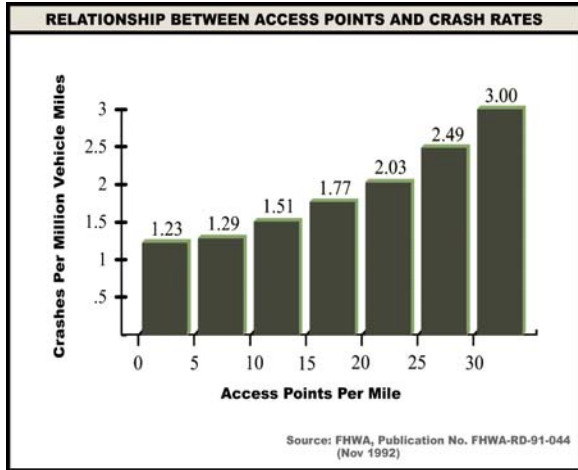
The portions of both I-694 and I-35W that pass through the City of Shoreview are currently at or nearing the existing capacity of these facilities. The *Metropolitan Freeway System 2005 Congestion Report, February, 2006*, identifies I-694 and I-35W through the City of Shoreview as experiencing unacceptable levels of congestion during both the AM (6:00 a.m. to 9:00 a.m.) and PM (2:00 p.m. to 7:00 p.m.) peak periods. In the report, congestion is defined as a condition when traffic is flowing at speeds less than or equal to 45 miles per hour. By the year 2030, traffic demand on both interstate highways will exceed the roadways capacity for more hours of the day if improvements are not constructed.

These capacity deficiencies result in increased congestion, reduced travel speeds, and increase travel times. Furthermore, roadway congestion causes drivers to seek out alternative routes, which places additional traffic on county and city streets that may not be designed to handle such a function and number of trips.

As depicted in **Maps 5-10** and **5-11**, several segments of county road are currently experiencing and/or are projected to experience capacity deficiencies. County Road J, County Road 49 (Hodgson Rd./Rice St.), County Road E (CR 15), County Road 52 (Victoria St), and County Road 99 (Owasso Blvd.) are all anticipated to experience some level of capacity deficiency by the year 2030. Congestion occurring on the regional roadway system impacts the local road system, and this is exacerbated by the City's dependence on a limited number of arterial streets, which are carrying an increasing amount of regional traffic. The development of additional north-south and east-west arterials in Shoreview or the adjacent communities does not appear to be practical due to natural features and existing land use patterns.

No roadways under the City of Shoreview's jurisdiction currently have or are projected to have capacity deficiencies. The local roadway system has been designed to serve local transportation needs. There are, however, conflicts caused when regional traffic uses local roads as alternative routes. The local roads used as relievers to the regional system are typically those that serve a collector roadway function. Residential property owners along these routes recognize the increase in traffic when congestion on the regional system occurs. This increase in traffic can create conflicts with those residential land uses. The City recognizes that collector roads may be used in this manner, and has identified some methods that could be employed to discourage the use of these roadways by regional traffic. These methods include access management, signage and traffic calming.

Table 5-6. Access Management and Safety



Access Management

Properties must be provided access via public roadways; however, access must be managed to ensure the roadway functions according to the roadway classification. As the number of access points on a roadway increases, capacity and safety of these roads can diminish. Access control can be accomplished by developing spacing guidelines, constructing medians, restricting median cuts and crossings or restricting the location and number of land access points. **Table 5-6** identifies the relationship between access points and crash rates.

Traffic Calming

Traffic calming is the management of traffic to improve safety not only for vehicles, but other users of the roadway such as pedestrians and cyclists. Management techniques include the physical modification of the street to divert non-local traffic off local roadways and influence the behavior of drivers using the street, particularly to lower the vehicle speed. The objective is to achieve a traffic behavior pattern that is compatible with other appropriate street activities and adjacent land uses.

Planned Improvements

The regional transportation system within the City is under the jurisdiction of Mn/DOT and Ramsey County, and these road authorities control the function, design, maintenance and improvement of these roadways. Many of transportation issues within the community relate to the regional transportation system, including issues such as interstate highway access, signalization, road design, speed, access management and congestion. When the need arises or when opportunities exist, the City works with the appropriate agencies to resolve these issues. Following is a list and brief description of planned transportation improvements within or adjacent to the City of Shoreview that will benefit area residents and will be carried out by

Mn/DOT or Ramsey County. In some cases, funding for these improvements has not been identified and construction is not currently scheduled and is dependent upon funding availability.

- I-694 Expansion: 35E to 35W. This project involves expansion of I-694 to a six-lane freeway section, construction of auxiliary lanes, and interchange improvements at the Rice Street, Victoria Street, and Lexington Avenue interchanges within the City of Shoreview. This project has been put on hold since the 2008 Transportation Policy Plan strives to preserve the existing system. The region will invest in low-cost/high benefit projects that mitigate congestion and provide alternatives. These projects, in addition to expansion projects, will be assessed in a study to be conducted in 2009.
- I-35W Expansion Plan. This capacity expansion project would involve adding through lanes and auxiliary lanes along both southbound and northbound directions of I-35W. This project is not included in the 2030 TPP.
- I-35W/County Road J/Lake Drive Interchange Reconstruction. Proposed improvements include constructing a northbound on-ramp from County Road J to I-35W, a southbound on-ramp from County Road J to I-35W, a southbound exit ramp from I-35W to County Road J, and a collector-distributor road for southbound I-35W traffic destined to Highway 10.
- Rice Street/I-694 Interchange Reconstruction. While this project has been identified with the I-694 Expansion: 35E to 35W Project, it may be constructed in advance of improvements to the rest of I-694. Ramsey County and Mn/DOT are coordinating efforts to accelerate improvements to the Rice Street Interchange.
- Vadnais Boulevard Reconstruction: Twin Lakes Boulevard to Rice Street. Construction of this Ramsey County project began in 2007 with completion of the improvements anticipated in 2008. This project will improve safety and operations at the Rice Street/Vadnais Boulevard intersection.
- County Road 96/Highway 10 Interchange Project and Reconstruction of CR 96 between Old Highway 8 in New Brighton to just west of Snelling Avenue in Arden Hills.

The City will maintain the network of city streets and make improvements to address safety and capacity as needed. The City has an aging roadway network that requires on-going maintenance. The City has a pavement management program to monitor the condition of local road and the City has adopted a street renewal program policy to guide the replacement and rehabilitation of local streets. The Capital Improvement Program is reviewed and updated annually to identify road maintenance expenditures over a rolling 5-year time frame. Some neighborhood roadways will be reconstructed in the planning timeframe. The City has recently identified the remaining substandard local street areas and tentatively programmed those for reconstruction over the next ten years (2008-2018). These streets are depicted on Map 5-12.

Transit

Metro Transit routinely monitors transit ridership and adjusts the number and frequency of routes based on transit demand. No significant changes in transit service are planned within the City of Shoreview. A new park-and-ride lot near I-35W and County Road 96 has been discussed that would benefit commuters in the City of Shoreview.

Rail Service

Rail transit is being considered as another form of future transit for residents within the Twin Cities metropolitan area. The Northeast Diagonal Corridor is a proposed busway that would run from downtown Minneapolis to the City of White Bear Lake and pass through the southeastern corner of Shoreview. This corridor has also been considered as a possible long-range commuter rail corridor. In accordance with the study recommendations for the Northeast Diagonal Corridor, the City has established land use policies in Policy Development Area #18, Rice Street Crossings and Vicinity (See Chapter 4, Land Use) that support mixed use development just south of the Interstate 694/Rice Street interchange. The intent is this designation is to establish land use patterns that support transit use.

The location of and access to future rail corridors will influence the use of rail transit by Shoreview residents. The City should participate in rail transit planning to ensure that this form of transit becomes a feasible alternative for residents.

Pedestrian and Bicycle Facilities

The City has completed most of the trail improvements identified in the adopted Basic Level of Service plan. That trail network is intended to provide an “arterial” trail system, with neighborhood connections. The existing system provides trails along most arterials and collector streets, and connects neighborhoods to community destinations, parks, schools, regional trails and open space. The City has recently received funding assistance to further explore Active Living principals and to identify areas within the community where these principals can be applied. Transportation infrastructure can provide for and encourage active transportation (walking, cycling), which is a key component of active living. The City will continue to strive for a connected, accessible, and safe trail system that will promote everyday use of these facilities, which will result in active living and better health for the community.

Aviation

The issues regarding aviation pertain to future expansion plans at the Blaine-Anoka County Airport and seaplane operations on local lakes. Development within the northwestern corner of the City will need to meet requirements regarding interference with electronic communications, airport lighting and impairment of visibility. An airport zoning ordinance is being developed for the Blaine-Anoka County Airport, and the City has two representatives on the zoning board. It is not expected that the Ordinance will affect development or land use within the City, and the City will participate in and comply with the land use requirements developed for the Airport.

Although two of the City’s local lakes are designated seaplane lakes, use by seaplanes on these lakes is minimal. No known conflicts between lake users and seaplanes are occurring.

Private Streets

Another issue relates to the maintenance of private streets. The private streets that exist in the community primarily serve townhome and multi-family residential developments, however, there are a small number of private streets that serve single-family residential land uses. The creation of new private streets is prohibited by the City's Development Code, except in Planned Unit Developments, due to the long-term maintenance issues and emergency service access. As the existing private streets age and require increased maintenance, the City expects the property owners may request that the City accept responsibility for these streets, including them into the public road system.

Active Living

As previously discussed in Chapter 4, Land Use, barriers to active living exist in the community due to the existing development pattern, the transportation network and lifestyles. Current studies have found that there is a strong association between land use, automobile dependency, the level of a person's physical activity and their health. The evidence indicates that automobile oriented land use policies reduce transportation choice, negatively affect air quality and safety and discourages physical activity. Transportation policies that support accessibility and a multi-modal transportation network have been found to encourage active living. Accessibility planning focuses on the degree to which people can easily get to destinations by a variety of transportation modes. Multi-modal transportation systems provide residents with greater choice and flexibility in deciding how to access activities and it also increases accessibility for residents who do not drive and/or are transit dependent.

Shoreview's past practices pertaining to transportation planning have recognized this multi-modal approach but have been challenged in developing a true multi-modal system due to roadway jurisdictions, the existing development pattern and limited transit service and use. The goals and policies that follow are intended to strengthen the system by improving accessibility for residents through transportation choice.

To increase opportunities for active living, the City commissioned the Shoreview Active Living Study, with funding received from Blue Cross and Blue Shield of Minnesota Prevention Minnesota program. This study identified three neighborhoods that are "isolated" because the existing transportation infrastructure creates barriers for pedestrian and cyclist movement. These neighborhoods include: Rice Street/Rustic Place, Soo Street and East Lake Owasso (**Map 5-6**) The study includes recommendations and an implementation plan for each of these neighborhoods to improve pedestrian and bicycle connections with the larger community. The recommendations are included in the discussion regarding goals, policies and recommended actions.

Goals, Policies and Recommended Actions

The transportation goals and policies reflect Shoreview's vision of a multi-modal transportation system within the community and provides a guide for decision-makers regarding priorities and future investment. Listed below are a set of goals and policies that will be applied and assessed when considering potential infrastructure improvements throughout the City. These goals and policies are not ranked or presented in order of importance or need.

Transportation System

Goals

1. The transportation system shall facilitate the safe and efficient movement of people and goods within the City and to/from regional highway facilities.
2. To establish a multi-modal transportation system that accounts for all modes of travel.

Policies

- A. Transportation facilities will be planned to function in a manner compatible with adjacent land uses while also taking into consideration social, economic, and environmental factors.
- B. The City will work cooperatively with all agencies including, but not limited to, federal, state, county and regional agencies, to improve the transportation system throughout the City.
- C. The transportation system should be designed and constructed to accommodate existing and future travel demand.
- D. The City will develop a transportation system that is cost-feasible, where expenditure satisfies a public transportation policy.
- D. The transportation system should integrate and achieve a mix of all transportation modes. Consequently, all projects should be evaluated as to the impact on each mode.
- E. Continue to establish and maintain an interconnected affordable network of roadways, transit services, and pedestrian facilities between neighborhoods, recreational and community facilities, employment and commercial centers.
- F. The City's land use development standards will promote safe and efficient access to the transportation system. New development will be required to provide an adequate system of local streets while limiting direct access to major thoroughfares (e.g. Highway 96, Lexington Avenue, Rice Street) in order to maintain safe and efficient operations on these roadways.

- G. Require the dedication or preservation of right-of-way consistent with adopted right-of-way standards when property is platted or subdivided, and work with landowners/developers during the site planning and platting process to implement safe and efficient roadway design.
- H. Coordinate transportation planning and investments with anticipated changes in land use to maximize the effectiveness of both

Roadways

Goals

- 1. Provide a roadway system in which each roadway is designed and functions according to its travel demand and classification.
- 2. Provide safe traveling conditions on all streets through proper planning, design, and routine maintenance.

Policies

- A. Design local streets for moderate traffic volumes and speed, and to facilitate pedestrian and bicycle circulation.
- B. Continue to serve regional traffic on the federal, state, and county road system while ensuring that local streets serve primarily local traffic.
- C. Improve travel safety and operations by managing property access to each classification of roadway consistent with its existing and planned function.
- D. Establish priorities for maintenance and reconstruction through the ongoing pavement management program.
- E. Consider developing a formal policy to guide the public acquisition of existing private streets.
- F. Review all plans for new development or redevelopment to determine their impact on the roadway system.
- G. Coordinate street improvements with County, Metropolitan, and State transportation departments, and surrounding communities.
- H. Use streetscape improvements to improve traffic safety, especially for pedestrians, while at the same time preserving community identity and linking neighborhoods together.
- I. Consider the noise generated by principal arterial roads, and evaluate the need for noise mitigation when those roads are reconstructed.

- J. Consider incorporating complete street practices into road projects when street improvements are proposed and such practices are feasible. Complete streets are designed and operated to provide safe access for all users.

Recommended Actions

Programmed improvements

Programmed roadway improvements are included in the current City and County Capital Improvements Programs (CIP), the current Metropolitan Council Transportation Policy Plan (TPP), the State Transportation Improvement Program (STIP), and Mn/DOT Metro District Transportation System Plan (TSP). Several of these projects were discussed in Section 5.2.B of this Transportation Chapter.

Other improvements

The City has identified the following roadway improvements as important to the continued functioning of the transportation system. The City recognizes that deficiencies in the regional transportation system impact the local road system, and that intergovernmental coordination is needed to address these regional issues in order to minimize impacts on the local street network:

1. Work with adjacent communities and Ramsey County to identify deficiencies in arterial intersection capacity, and develop strategies to improve traffic capacity for intersections with identified deficiencies.
2. The City will continue to participate in the Highway 49 Taskforce and to encourage Ramsey County to construct improvements that integrate needed vehicular capacity, safety, and pedestrian and bicycle friendly design features,
3. The City will continue to work with Ramsey County and MnDOT for reconstruction of the roadway, bridge and interchange at I-694 and Rice St. The City expects that this will be designed as multi-modal project that incorporated vehicle, pedestrian and cycling uses.
 - A. The City will cooperate with MnDOT in property acquisition for additional ROW for the interchange.
 - B. The City will encourage the design to incorporate a walkway, trail or other pedestrian design elements to insure local residents can safely cross the interchange.
4. The City will encourage MnDOT to address City issues when I-694 is expanded:
 - A. Maintain pedestrian and bicycle connection to the portion of the City south of Grass Lake.

- B. Mitigate traffic noise through the use of vegetation and sound barriers as warranted.
5. The City will work with Ramsey County to determine suitable upgrades to, and management authority for Owasso Blvd. North/Soo Street/County Road E between Rice Street and Victoria. With the closure of the County Public Works facility, the existing road jurisdiction may not best reflect the current and future use of these streets.
- A. Trail improvements along the south and west sides of Soo Street, between Owasso Boulevard and Cardigan Road should be considered.

Access Management

The City can control access onto local roadways. However, access onto other roadways becomes the responsibility of the state or county. Access onto local roadways is managed through local subdivision and zoning standards. When the City receives a development proposal that proposes access onto a roadway under the jurisdiction of the state or county, the City will coordinate the review of these proposals with the appropriate agencies, and encourage that access to arterials is managed to minimize safety and congestion impacts. The City will also participate in the design process with the appropriate agency when roadways are proposed for construction or reconstruction to ensure proper design and location of access points.

Traffic Calming

Examples of traffic calming measures include narrow streets, roundabouts, speed bumps, medians, curb extensions (bump-outs), crosswalks, and entry treatments. The City will review these techniques during the design process for local road construction and reconstruction to determine if they are appropriate. Traffic calming measures will generally be considered for local streets only if:

1. The measure selected is consistent with the problem being addressed.
2. The measure will not divert traffic onto other local streets or degrade public safety.
3. State Aid Design Standards are met, if applicable.

Transit

Goals

1. Encourage transit use through improvements to accessibility, service, and choice.
2. To improve the quality of, and increase the emphasis on transit use and pedestrian travel.

Policies

- A. Continue to work with the Metropolitan Council and Metro Transit to provide adequate transit service that serves the needs of the City's residents and business community.
- B. Evaluate the need for transit in the redesign and reconstruction of roadways whether or not they are currently used by transit providers.
- C. Evaluate the need for transit during the review of development/redevelopment proposals.
- D. Reduce travel demand by encouraging programs that provide alternatives to single occupant vehicles.
- E. Encourage collaboration with surrounding communities on the need for and location of improved and/or expanded transit services.
- F. Provide trail connections to transit facilities.

Recommended Actions

The use of transit will be supported as a transportation mode to reduce congestion on roadways with the City and to provide an alternative form of transportation. The design of the transit system should be attractive to potential users by providing alternative modes that are desirable, easily accessible, cost efficient and user friendly. Since the City does not have direct authority in controlling the availability of transit within the community, it is necessary to work with transit operators, the business community and residents to develop a cost-effective system that meets the community's needs. Actions the City may take include:

1. Enacting land use controls which provide incentives to developers and businesses to use travel demand management, car-pooling and transit.
2. Publicizing the transit opportunities available to residents, including special populations, and businesses.
3. Work with Metro Transit to improve park-and-ride lot locations and to provide bus service that makes transit a viable transportation option.
4. Participate in discussions regarding commuter rail.

Travel Demand Management

The City supports travel demand management as a way to alleviate congestion on roadways within the City. However, since the majority of the City is developed, the City cannot rely on the development review process, with the exception of Policy Development Areas (PDA's), to encourage transit-friendly design or to require employer participation in travel demand

management. The City will work with businesses within the community to encourage the development of voluntary travel demand management programs. Development plans will also be reviewed to ensure transit is accommodated where it is feasible.

Rail Service

Goals

1. Maintain a rail system that serves the needs of the City's residents and businesses.

Policies

- A. Work with the railroad companies, Mn/DOT Rail Office, Ramsey County Regional Railroad Authority, and other agencies to reduce conflicts with vehicular and other travel modes and land uses.
- B. Monitor the progress and participate, as appropriate, in the planning of passenger rail services such as commuter and light rail.

Recommended Actions

Railways in the City generally provide for movement of goods. There are no lines or spurs that directly serve industrial areas or specific businesses. The location of the lines does affect and isolate neighborhoods. The City will examine the impact of the railways and work to mitigate the impact that the lines have on businesses and residents. The City will strive to insure that the rail lines and switching areas located within the City are used as transportation lines and not for the storage of goods and materials, or as terminals for transfer to other shipping modes.

1. Analyze the potential for trail connections crossing the railways in Cardigan Junction area and connecting to the City of Vadnais Heights.
2. Continue to evaluate the potential for a rail crossing for a road connection to the Cardigan Road industrial area from County Road E. This can aid in removing heavy trucks and traffic from the adjoining residential neighborhoods.

Trails, Bikeways, and Walkways

Goals

1. Continue to develop an integrated system of trails and walkways that promotes active living and provides efficient links to City neighborhoods, to transit routes, employment nodes, important community destinations, parks, schools, and regional trails, including those regional and local trails and walkways in adjacent municipalities.

2. Maintenance of the existing trail system includes mowing, snow removal and upkeep. As the existing system ages, maintenance of the system will be increasingly important in order for the system to remain an attractive community amenity.
3. The emphasis for future trail improvements must strike a balance between building new arterial trail segments, expanding neighborhood connections and to properly maintain existing trails.
4. To implement the recommendations of the *Shoreview Active Living Study* and improve trail connections and access for isolated neighborhoods in the community.

Policies

- A. Provide trails or walkways along all minor arterial, collector, and neighborhood collector streets.
- B. Evaluate the safety of trail crossings at arterial and collector roads to improve the usability of the trail system.
- C. Provide off-street trails through city and regional parks and open space where feasible and appropriate.
- D. Include future trail upgrades and replacements in the City's Capital Improvement Program budgeting process.
- E. Consider trail and walkway connections when reviewing proposals for development and redevelopment of land within the City.
- F. Continue to work with regional and county agencies, and adjacent communities to improve linkages to both regional and local trails in adjacent municipalities that can provide both recreational and commuting benefits.
- G. Incorporate trail and walkway construction with roadway improvement projects. Corridor analysis will be a part of each road project in which the City is involved.
- H. The City will continue to strongly advocate for trails, bikeways and walkways with other agencies of government, including the school districts to promote safe routes to schools.
- I. The City will organize and support group events that focus attention on the trail system.
- J. The City will work with Ramsey County and the Canadian Pacific Railroad to review opportunities for off-street trails and crossings that provide connections to neighborhoods and County parks and open space.

Recommended Actions

The City has made significant progress toward the completion of the trails system originally developed in the 1988 Master Trail Plan. The remaining trail segments to be completed are listed in no priority order:

1. County Road 49 (CR 96 to Owasso Boulevard North)
2. County Road I (Snelling Avenue to Lexington Avenue)
3. Victoria Street (Arbogast Street to County Road D)
4. County Road E/ Soo Street (Victoria Street to Owasso Boulevard North)
5. Turtle Lake Road (Sherwood Road to County Road J)
6. Hamline Avenue (County Road I to Lexington Ave)

The City will continuously evaluate the system and as road projects are planned determine if arterial trails and walkways can be reasonably incorporated into the project. Possible additional trails include:

1. The Grass Lake segment of Vadnais-Snail Lake Regional Park is improved with nature trails in the area of Grass Lake and a multi-purpose trail along the east side of Grass Lake. There is an interest in expanding the multi-purpose trail around Grass Lake to create a loop. The feasibility of this trail expansion needs to be further studied and coordinated with Ramsey County and Mn/DOT.

In addition, the City should evaluate the feasibility of expanding the trail network to include a trail connection from Gramsie Court/Gramsie Road to accommodate existing use.

2. The City should participate in planning and design efforts by other jurisdictions (e.g., adjacent communities, Ramsey County, Anoka County, and Mn/DOT) to ensure pedestrian and bicycle facility needs are addressed on projects within and adjacent to Shoreview.
3. The Metropolitan Council has identified a future regional trail along Lexington Avenue. The City has constructed walkways and trails along the length of Lexington Avenue that can be incorporated into a regional trail. The traffic volumes carried by Lexington Avenue may not provide the best available environment for commuter and recreational bicyclists. The City will work with other agencies of government to identify and establish a suitable north-south regional trail corridor.

Expansion of the trail network can improve connections to the regional trail system, public facilities, commercial nodes, transit facilities, and neighborhoods. The City will evaluate development proposals and require trail and walkways improvements as deemed necessary to expand the network.

The City expects that during the period of this Comprehensive Plan, several major road projects will occur that can affect the City trail and walkway system. These projects may provide opportunity to expand and enhance trail connections within the City, but improvements for motorized traffic can also create a challenging design environment for pedestrian and cyclist friendly features. The City will continue to work with the appropriate agencies on these projects to address pedestrian and cyclist needs.

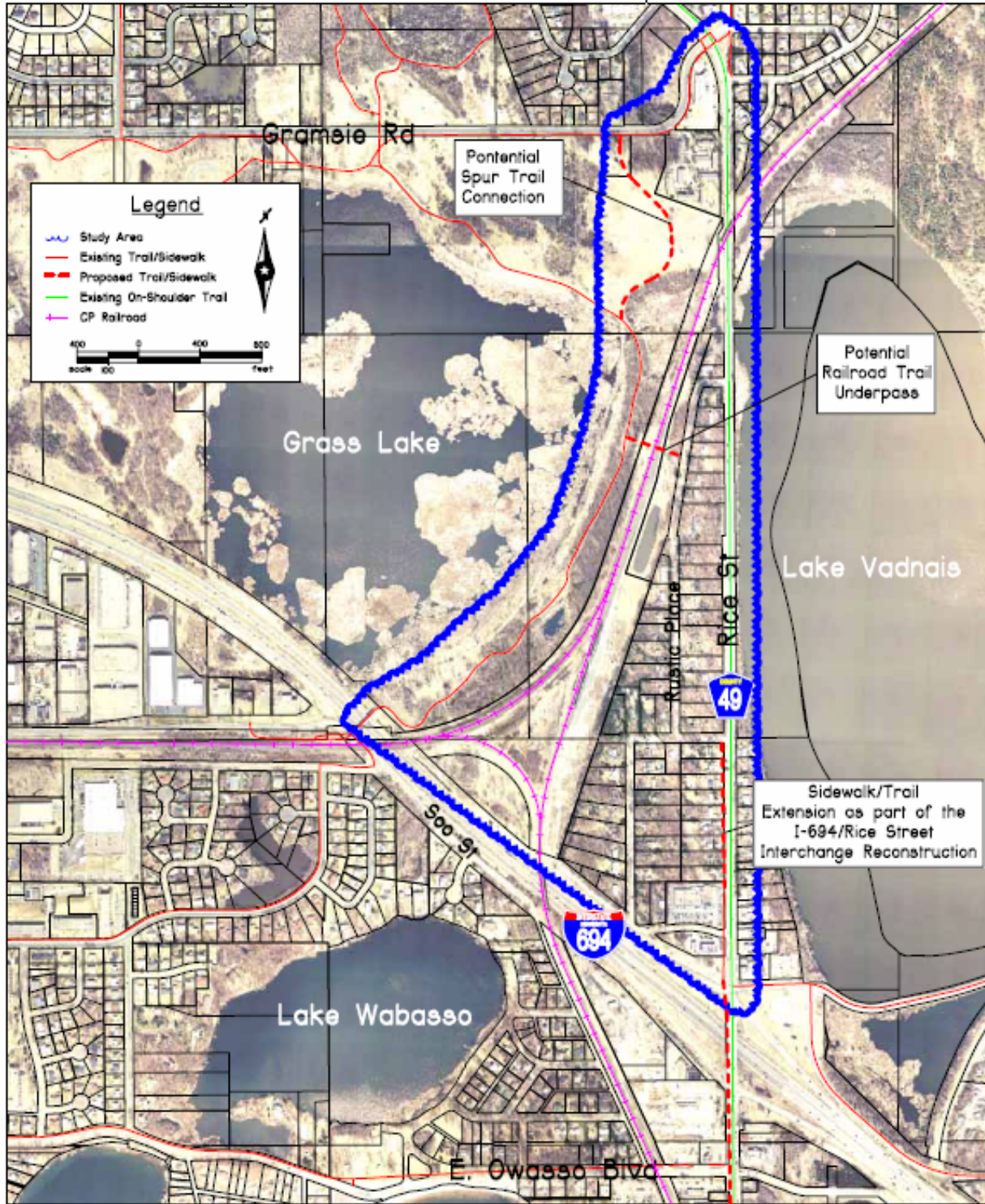
These significant road projects include the expansion of Interstate 694, the reconstruction of the Interstate 694/Rice Street interchange and Rice Street improvements. The *Shoreview Active Living Study* considered these road projects and potential impacts and opportunities for the regional and local trail network. Recommendations of the study include:

The Rustic Place neighborhood, west of Rice Street and north of County Road E

1. Spur Trail. A 10-foot paved spur trail should be constructed connecting Gramsie Road (near Gramsie Court) to the regional trail network near the northeast corner of Grass Lake (**Table 5-7**). Based on field observations, residents living near the Gramsie/Rice Street/Hodgson Road intersection are accessing the regional trail via a footpath through open space within the Vadnais-Snail Lake Regional Park. This extended trail section will provide a safe and convenient connection to the regional trail and will further enhance north-south pedestrian movements that otherwise would be forced to use the shoulders along Rice Street or access the regional trail approximately ¼-mile further west along Gramsie Road. The preliminary cost for extending a 10-foot bituminous trail a distance of approximately 1,450-feet (0.275 miles) is estimated to be \$27,500 – \$32,500.
2. Interstate 694 and Rice Street. The City must continue to participate with Ramsey County and Mn/DOT on the Interstate 694/ Rice Street Interchange reconstruction project and the Rice Street improvements. The City expects both Ramsey County and the MN/DOT to address the local and regional pedestrian and cycling needs in the interchange and roadway design. Items that must be addressed include:
 - A. Trail and/or sidewalk improvements on the west side of Rice Street extending from the interchange north to Saint Marie Street.
 - B. Providing trail or sidewalk connections along Rice Street north to Gramsie Road. The City recognizes that the existing Canadian Pacific Railroad Bridge which crosses Rice Street may impede the future construction of this trail or sidewalk segment. However, this along with other potential options, such as providing a tunnel under the bridge, should be studied to determine their feasibility. This trail segment is a priority and would enable the City to close a gap in the existing trail and sidewalk system.
 - C. Commuter cyclists do use Rice Street as a commuting bicycle route. Identification of this route through pavement markings and/or signage should be explored during the reconstruction process. Better identification will make automobile drivers aware that

they are sharing this transportation corridor with commuter bicyclists. If a safety concern is identified then additional measures such as a narrow rumble strip or curb could be considered to delineate the modes of travel.

Table 5-7. Potential Spur Trail Connections



- D. The City anticipates the planned Interstate 694 improvements will require the removal of the existing pedestrian bridge located over Interstate 694 connecting the Grass Lake regional trail to trails in southern Shoreview. The City has been a key partner in facilitating the planned interstate improvements by working with the MN/DOT and the Metropolitan Council and acquiring the former Ramsey County Public Works facility for the future interchange improvements through the Metropolitan Council's Right of Way Acquisition Loan Funding program. In return for this cooperation, the City expects MN/DOT to address the loss of this bridge and its replacement. This bridge is vital to the City's and region's trail network since it provides a safe crossing and links both local and regional park and recreation facilities. The City expects MN/DOT reconstruction plans for the interstate improvements to include replacement of this pedestrian bridge. The City expects the MN/DOT identify options for the replacement and relocation of the bridge that also address access issues with the railroad tracks as well as financially participate in this project.

- E. The realignment of Vadnais Boulevard and County Road E intersection presents an opportunity to improve connections between the Grass Lake arm and Vadnais Lake arm of the regional park. Construction plans for Vadnais Boulevard include an on-street 6-foot wide shoulder and could accommodate cyclists. The City should continue to work with Ramsey County Public Works Department, Ramsey County Parks Department and the City of Vadnais Heights to improve connections for pedestrians and cyclists in this area.

Soo Street Study Area

1. Interstate 694 and Rice Street. According to Mn/DOT's preliminary design, a portion of Soo Street will need to be reconstructed near Cardigan Road and will provide an opportunity to include a future pedestrian/bicycle trail along Soo Street. This trail segment, along with the pedestrian bridge, is key to providing access to local parks, County parks and regional open space areas, including Lake Owasso, Island Lake, and Lake Wabasso County Parks, Vadnais-Snail Lakes Regional Park.

2. Soo Street and County Road E. An off street trail along the south and west sides of Soo Street between Owasso Boulevard and Cardigan Road should be further reviewed to provide safe connection between the pedestrian overpass bridge and the off-street trail along the north side of North Owasso Boulevard .

3. Wabasso Avenue "Paper" Street. Immediately adjacent to the east shore of Lake Wabasso is a paper street (exists on paper only and is not improved) known as Wabasso Avenue. This platted roadway is not improved and currently appears as an extension of yard area for homes immediately west of this platted roadway. The Wabasso Avenue right-of-way does connect to Ramsey County's park area located on the south side of Lake Wabasso.

Although there has been some past issues with respect to the use of this right-of-way and lake access issues with adjacent property owners, the City should explore the potential for converting this right-of-way to an off-street trail use. Such a trail would improve access for pedestrian and cyclists to the County park facilities who currently need to use Soo Street and North Owasso Avenue to access the park facilities.

The Wabasso Avenue right-of-way ends south of Soo Street and does not provide a direct connection to this roadway. If a trail is installed in this right-of-way in the future, the City should consider options to extend this trail north to Soo Street. This connection would improve regional access to the County park facilities for users who are coming from the north.

4. West Lake Wabasso area. The City's Trails and Bikeways map should be amended to include "Bikeway on Road" designations along Chandler Avenue and Dale Street between Harriet Street and Owasso Boulevard (a distance of approximately ¼-mile) and along County Road E between the pedestrian bridge and Victoria Avenue (a distance of approximately ¾-mile). If at a later date pedestrian/bicycle safety improvements are deemed necessary at these locations it is suggested that on-street improvements such as parking restrictions, pavement markings, and/or signage be considered.

East Lake Owasso Study Area

1. Rice Street.

- A. The City should continue to work with Ramsey County during the Rice Street Interchange reconstruction project to ensure the off-street trail/sidewalk along Rice Street is extended from the interchange south to Jerrold Avenue.
- B. Commuter cyclist do use Rice Street as a commuting cycling route. The City should work with Ramsey County to explore improved identification of this route through pavement markings and/or signage during the reconstruction process. Better identification will make automobile drivers aware that they are sharing this transportation corridor with commuter bicyclists. If a safety concern is identified then additional measures such as a narrow rumble strip or curb could be considered to delineate the modes of travel.

2. Canadian Pacific Railroad Corridor. An off-street trail along the west side of the Canadian Pacific Railroad corridor should be pursued to provide a safe and convenient connection between Jerrold Avenue and Owasso Boulevard. Coordination with one residential property owner and Ramsey County will need to occur since the trail would likely require acquisition or an easement to cross these properties. In 2009 the City is planning to reconstruct the streets and underground utilities in the East Lake Owasso Neighborhood, which will provide an opportunity to work with the potentially affected property owners and to implement the trail connection. The preliminary construction cost of the trail (excluding right-of-way/easement costs) is \$17,000 - \$20,000.

3. If further pedestrian/bicycle improvements are deemed necessary within the East Lake Owasso Neighborhood it is suggested that on-street improvements such as parking restrictions, pavement markings, and/or signage be considered rather than off-street facilities.

Lake Judy

1. The City will work to establish connections to the Lake Judy neighborhood by developing an east-west corridor.

Other

The City expects that during the period of this Comprehensive Plan, several major road projects will occur that can affect the City trail and walkway system. These projects may provide opportunity to expand and enhance trail connections within the City, but improvements for motorized traffic can also create a challenging design environment for pedestrian and cyclist friendly features. The City will continue to work with the appropriate agencies on these projects to address pedestrian and cyclist needs. These projects include:

- Ramsey County will reconstruct the Rice Street bridge over I-694.
- Ramsey County will reconstruct all or portions of Highway 49 (Hodgson Road/Rice Street).
- MnDOT will expand I-694 to 6 traffic lanes. This project will also result in the re-configuration of the interchanges at Victoria Street and Rice Street. The expansion will affect the existing pedestrian bridge connecting the Grass Lake Open Space with County Road E/Soo Street.

Aviation

Goals

1. To protect the general airspace for the region's public aviation facilities.
2. Regulate and ensure the compatibility of land use (vertical obstructions) that could impede air traffic

Policies

- A. Notify the Mn/DOT Commissioner of any sponsor who proposes any construction or alteration that would exceed a height of 200 feet above ground level at the site, or any construction or alteration of greater height than an imaginary surface extending upward and outward at a slope 100:1 from the nearest point of the nearest runway of a public airport at least 30 days in advance.
- B. Monitor the progress and participate, as appropriate, in the planning process of enhancing the Blaine-Anoka County Airport.

Recommended Action

1. *Blaine-Anoka County Airport.* The City may participate in discussions regarding future improvements of this airport to learn more about potential impacts within the City of Shoreview. If necessary, the City may also develop land use controls for land within the safety zones. Currently a zoning board is being assembled that includes representation from the City Shoreview. *Seaplane Lakes.*
2. The City will monitor the use of Turtle Lake and Lake Owasso by seaplanes. If conflicts are present, the City may request Mn/DOT review seaplane operations on these lakes to establish regulations controlling the use.