

Planned Transit Improvements

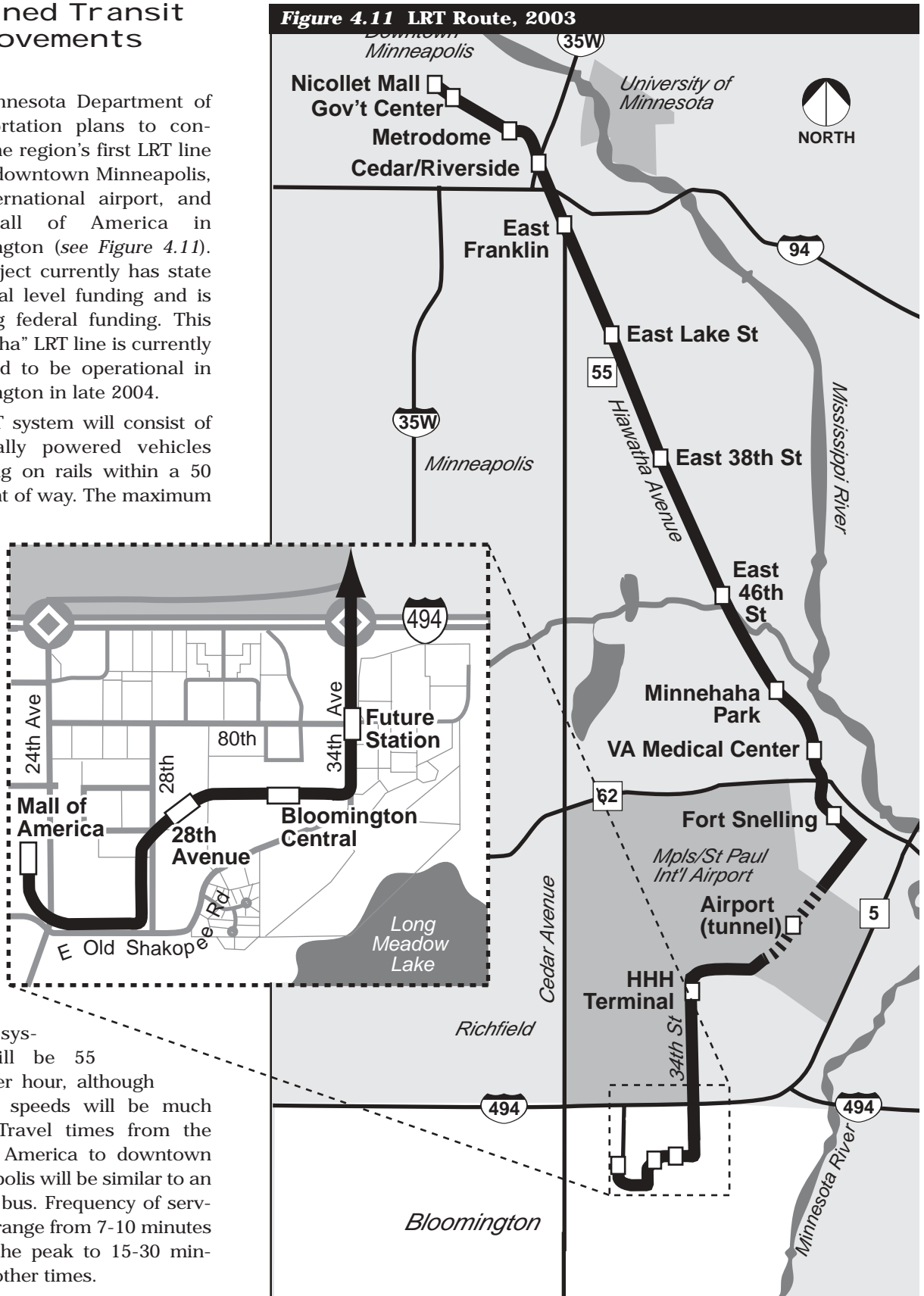
LRT

The Minnesota Department of Transportation plans to construct the region's first LRT line to link downtown Minneapolis, the international airport, and the Mall of America in Bloomington (see Figure 4.11). The project currently has state and local level funding and is awaiting federal funding. This "Hiawatha" LRT line is currently projected to be operational in Bloomington in late 2004.

The LRT system will consist of electrically powered vehicles operating on rails within a 50 foot right of way. The maximum

speed of the system will be 55 miles per hour, although average speeds will be much lower. Travel times from the Mall of America to downtown Minneapolis will be similar to an express bus. Frequency of service will range from 7-10 minutes during the peak to 15-30 minutes in other times.

Figure 4.11 LRT Route, 2003





The City of Bloomington views the development of LRT within the city as one way to diversify available transportation options, conserve natural resources, facilitate economic development and redevelopment, and increase the number of people with easy access to employment in Bloomington. The City plans to assist in the preparation of LRT station area plans to review area land use and pedestrian infrastructure in light of LRT.

Through a \$500,000 state grant, Dakota County is currently preparing a Cedar Avenue Transit Study to evaluate opportunities for connecting communities south of the Minnesota River with the Hiawatha LRT line through frequent bus service or an LRT extension. Such planning should be done in a manner that minimizes negative impacts on Bloomington.

Bus Route Enhancements

Metro Transit plans to initiate frequent, limited stop bus service along I-35W by 2002. Service will run between northern Bloomington and downtown Minneapolis with five stops along the route. The southern most station is proposed in Bloomington near 82nd Street. Service would be similar in nature to LRT with buses running 18 hours per day at 15 minute intervals. Travel times to downtown Minneapolis would rival automobiles, especially during times of congestion when buses would have shoulder lane authorization.

As the first step toward improving east-west bus connections along the employment rich I-494 corridor, a new bus route (#590) began service in December of 1999. Route 590, a joint venture between Metro Transit and Southwest Metro Transit, runs between the Mall of America and Southwest Station in Eden Prairie.

Metro Transit is also considering redesigning some local bus routes to provide timed transfer with both the proposed LRT line and the I-35W limited stop service. Instead of numerous individual routes focused on taking riders to downtown Minneapolis, local bus service in the future may include more circulator/feeder routes (such as the BE Line Routes 88 and 89). These circulators would focus on transporting residents from their homes to local destinations and to transit stations where they can transfer to limited stop transit bound for regional destinations.

Other Fixed Guideway Transit Opportunities

LRT has been proposed in the past along I-35W. As reflected in the *January 1995 Final Environmental Impact Statement*, the Minnesota Department of Transportation's I-35W expansion and improvement plans included an LRT line linking Bloomington with downtown Minneapolis. The route was proposed to start at 95th Street in Bloomington and run northward to downtown Minneapolis within the freeway right of way. Stations and park and ride facilities for Bloomington were proposed at 95th Street and 80th Street. This proposal has not received funding and, due to its high cost, does not appear likely to receive funding in the foreseeable future. Still, by virtue of the large number of vehicles currently using the I-35W corridor throughout Bloomington and beyond, this corridor presents an opportunity for a fixed guideway transit route when the system is expanded in the future. The I-35W corridor is also depicted as a future route on the Hennepin County Regional Railroad Authority's *LRT System Plan*.

The Canadian Pacific Railroad right of way through central Bloomington

may also be conducive to fixed guideway transit. This railroad line currently supports low levels of freight train service that may be discontinued in the future. Its continuous, linear nature coupled with significant adjacent residential and industrial redevelopment opportunities, make this corridor well suited for fixed guideway transit. The fact that this corridor parallels I-35W makes it an alternative route to any proposed fixed guideway transit along I-35W. Advantages of this railroad right of way over I-35W include proximity to employment and increased redevelopment opportunities. Costs may be significantly lower due to reduced right of way acquisition costs. Alignment along the railroad corridor would also allow transit vehicles to operate independently of I-35W congestion and would eliminate negative operational impacts the transit vehicles may have on I-35W automobile traffic.

As one of the most recognizable, densely developed, and defined linear corridors in the region, Bloomington's I-494 corridor has strong potential for transit. With its high concentration of employment and retail destinations, this corridor would be an essential component of any metropolitan-wide fixed guideway transit system.

The routes described above are those that would easily lend themselves to a metropolitan-wide system, as might be anticipated with commuter rail or light rail. If a technology such as personal rapid transit (PRT) is used, a denser network of routes may be feasible. It is envisioned that PRT routes would connect major traffic generators and activity centers much as the bus system does today.

Assessment of Existing Transit Weaknesses

The primary transit weaknesses in need of improvement from the City's perspective are:

1. Lack of Suburb-to-Suburb Transit Connections - Existing transit service in Bloomington is designed primarily around transporting commuters to downtown Minneapolis and back. Clearly, this transit task remains essential. However, in recent years, a large number of jobs have been generated outside the downtown core. For example, current total employment in five cities along I-494 (Bloomington, Edina, Eden Prairie, Minnetonka, and Plymouth) exceeds that of Minneapolis. Living in Bloomington, it is very difficult and time consuming to use transit to access employment in these other suburbs. It is also difficult for residents of those cities to use transit to access the significant employment opportunities available in Bloomington. As roadway congestion increases and large-scale construction projects will significantly reduce roadway capacity on a temporary basis, it will be vital to improve suburb to suburb connections.

2. Lack of Service to Bloomington's Primary Employment Concentrations - The I-494 corridor is a high density, linear employment corridor with over 68,000 employees in Bloomington's portion alone. Although it is one of the region's largest employment corridors and its linear nature is conducive to transit, this corridor is not currently well served by transit. Segments of the corridor are served by various routes; other segments have no bus service. With significant employment growth forecast along

the corridor and with planned infrastructure improvements creating renewed parallel arterials on both sides of I-494, the time has arrived to create continuous east-west bus routes on both sides of I-494. These routes will facilitate vital transit connections between this linear employment corridor and both the proposed I-35W limited stop bus service and the proposed Hiawatha LRT line.

Recommendations for Needed Transit Improvements

Bloomington recommends the following specific transit improvements:

1. Establish Limited Stop, Trunk Bus Service along I-494 - To facilitate suburb to suburb trips via transit, the City joins the I-494 Corridor Commission in advocating a new, limited stop, trunk bus service along I-494. This service would be similar in nature to the limited stop bus service proposed along I-35W. It would be designed to transport riders from central stations or transfer points such as the Mall of America LRT Station, the I-35W transfer station at 82nd Street, and Southwest Station. The line could continue to follow I-494 northward as additional stations are created. Riders would be able to transfer at the stations to local or circulator routes to their ultimate destination. While not ideal due to the need for transfers, this type of service may be the only way to facilitate suburb to suburb transit connections where both housing and employment are at relatively low densities. To make this type of service possible, it is vital that the stations be designed and located to allow quick bus access.

2. Establish Regular Bus Service along Both Sides of I-494 - To serve this linear employment corridor, Bloomington advocates creation of two continuous bus routes running along the parallel arterials on the north and south sides of I-494. These routes would greatly improve transit access to the bulk of Bloomington employment and would serve as valuable feeder routes for LRT, I-35W limited stop bus service, and possibly commuter rail. Route 590, which began service in December of 1999, is a step in the right direction. However, Route 590 follows a circuitous route. By crossing I-494 four times and attempting to serve both the north and south sides of I-494, Route 590 adds significant time onto transit trips and fails to serve critical segments of the corridor. An appropriate time to modify Route 590 to two separate routes would be at the time of transit redesign in anticipation of LRT and I-35W limited stop bus service. Several planned infrastructure improvements will also facilitate two separate routes, most notably the planned bridge over I-35W at 79th/80th Street.

3. Create a Viable, Permanent Transit Station near I-35W and 80th Street - In conjunction with Metro Transit's planned I-35W limited stop bus service, a temporary bus transfer station is proposed adjacent to the freeway off ramp at the northwest corner of 82nd Street and I-35W. This station will be an important future transfer point between I-35W trunk bus service, east-west bus service along the ring route, and other neighborhood circulator buses. While this temporary site has the advantage of being the low cost alternative, it has significant disadvantages that require its quick replacement with a permanent, viable transit station. The



temporary site is very inconvenient for both limited stop and local buses, adding significant time onto any trip utilizing the temporary station. There is also no parking proposed in conjunction with the station, reducing the viability of limited stop bus service on I-35W. Bloomington strongly recommends that a permanent transit station be constructed in a timely fashion near I-35W and the planned 80th Street bridge. This station should allow I-35W buses to stop and start on-line, allow for easy transfers to ring route buses, include an appropriately sized park and ride facility, and be convenient to the surrounding area in which significant redevelopment is anticipated.

4. Extend the Proposed I-35W Limited Stop, Trunk Bus Service to the South with a New Station and Park and Ride at 98th Street - The City of Bloomington joins the I-35W Solutions Alliance in advocating an extension of I-35W limited stop, trunk bus service to the south, perhaps ultimately to the Burnsville Transit Station or Burnsville Center. Such an extension would improve transit access to employment in Bloomington for Dakota County residents. The southward extension should include a station and park and ride at 98th Street where the City already owns land for this purpose. A 98th Street station would serve the Oxboro redevelopment area, would provide a central location for a community park and ride, and would be a good connection point for buses operating in the 98th Street/Old Shakopee Road Transit Corridor.

5. Consider Additional Circulator Bus Service within Bloomington - At the time when local bus routes are redesigned to work with LRT and I-35W limited

stop, trunk bus service, Metro Transit should consider creation of several circulator routes similar to the two existing BE Line routes. These circulator routes, with smaller buses, may be the best option for providing service to low density residential areas and connecting smaller, scattered employment nodes.

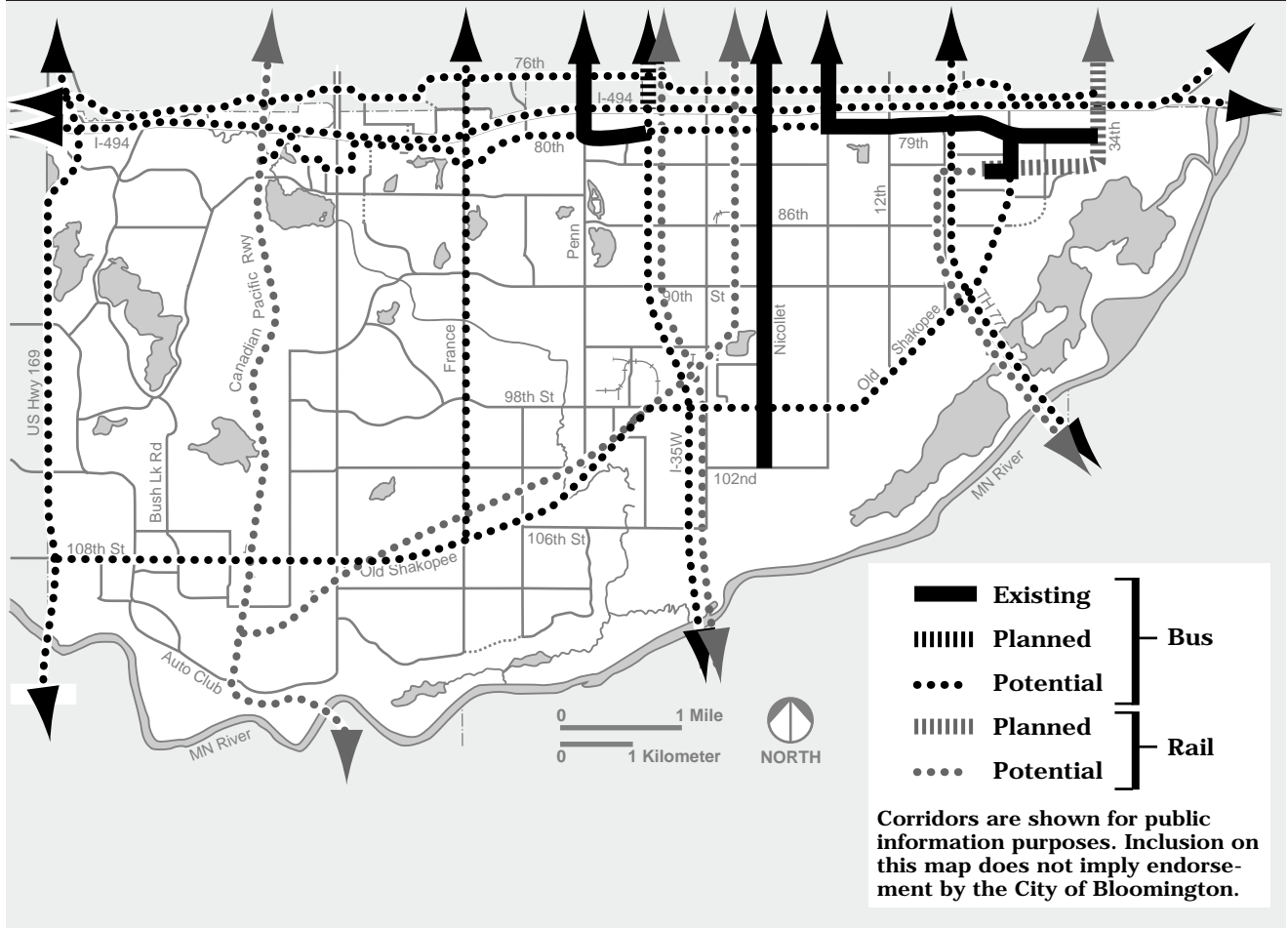
Two of the recommendations above involve high speed, trunk bus service on freeways. For bus service using freeways to succeed, it is critical that buses have advantages over single occupant vehicles, including HOV lanes, HOV ramp meter bypasses, and shoulder authorization. Equally important for freeway bus service success is that stations or stops be located and designed to minimize stop time. When feasible, freeway trunk bus service stations or stops should be located on-line to enable the bus to stop and reenter traffic without entering the surface street system and waiting at stoplights. Such design requires sufficient physical space within the right of way. One example of an area where sufficient right of way space may be available for an on-line transit station or stop is along I-494 immediately east of France Ave. In areas where an on-line station or stop is not feasible, the off-line station or stop must be sited to minimize time the bus must spend off the freeway. Inconvenient stations or stops would defeat the purpose of high speed, trunk bus service.

Park and Rides

The location of existing Bloomington park and rides is depicted in *Figure 4.10*. Bloomington has historically used the approach of having numerous, small park and rides scattered throughout the city. These park and rides generally utilize existing parking lots through agreements at minimal cost. The City has found church sites to be particularly well adapted to shared use as park and rides due to their general lack of use during the working day. The one exception to this approach is the 200 space park and ride located near the City's only transit station at the Mall of America.

With the advent of LRT and limited stop, trunk bus service on I-35W, additional park and rides will be needed. The Minnesota Department of Transportation proposes an additional 200 space park and ride in conjunction with the Mall of America LRT station. The City has concerns that 200 additional spaces may not be sufficient and recommends further study on this issue and having plans and funding in place for future expansion should the facility prove to be undersized. A new park and ride is appropriate in conjunction with a bus transfer station at I-35W near 80th Street. The City has also acquired land for a future transit station and park and ride in the vicinity of 98th Street and I-35W. A medium sized park and ride at this location would be desirable after the extension of limited stop, trunk bus service along I-35W south to 98th Street. In the long term, if Bloomington commuter rail stations are created, consideration should be given to creating associated small park and rides.

Figure 4.13 Frequent Transit Service Corridors



Transit Supportive Land Use

The success of a transit route is heavily dependent upon the land use and density along the route. While transit providers control route locations and service characteristics, cities control land use and density. On a small scale, cities can facilitate transit by requiring pedestrian access ways linking new development with transit stops and by requiring waiting shelters or bus pull out lanes in high passenger volume locations. On a larger scale, cities control land use and density, elements vital to transit's viability. Land use and density decisions clearly go well beyond the issue of transit compatibility and are

based on many factors including market demands, resident input, and infrastructure constraints. Still, as depicted in *Figure 4.13*, there are existing and potential future corridors of frequent transit service that deserve special consideration for transit oriented land uses and design. New development and redevelopment along these corridors should be designed to facilitate transit use. If and when frequent transit service is implemented along these corridors, land use plans for areas in proximity to stations should be reevaluated.



4.4 Bikeways, Walkways, and Other Forms of Transportation



Bloomington supports the provision of a high quality, non-motorized transportation system for bikes and pedestrians as a way to:

- Provide a viable transportation alternative to residents who may not have access to an automobile, such as the young, the elderly, the poor, and the disabled;
- Provide an attractive alternative to the automobile, thereby reducing auto trips, traffic congestion, air and noise pollution, resource consumption, wear and tear on roadways, and the need for roadway expansions and automobile parking;
- Provide recreational opportunities, thereby improving residents' health and well being;
- Provide safer, more convenient access to transit; and,
- Interconnect businesses, thereby allowing a motorist to access several destinations from one parking spot.

Existing Bikeway and Pedestrian Transportation System

Bloomington's existing bikeway and pedestrian transportation systems are depicted in *Figure 4.14*. Except in parks, these facilities generally run parallel to the street system. While the majority of the City's minor arterial and collector streets are accompanied by sidewalks and/or bikeways, most of the City's local streets are not.

Assessment of Existing Bikeway and Pedestrian Transportation System

There are pockets of excellent bikeway and pedestrian path resources within the city. Prime examples include the recreational pathways within Hyland Lake Park Reserve, the trails around Normandale Lake, and the paths along lower Nine Mile Creek. Bloomington's residential neighborhoods, however, are generally not well connected with these amenities or other common pedestrian/bike destinations such as schools and

parks. The primary bikeway and pedestrian transportation system weaknesses in need of improvement from the City's perspective are:

1. Lack of Sidewalks Along Local Streets, Especially in the Vicinity of Schools

Except in some newer residential areas in western Bloomington, the City's local streets generally have no sidewalks. Children who walk or bike to school, to the park, or to a friend's house are forced to share space with motorized vehicles on the street. This situation is even more undesirable in the winter when the streets may be icy and narrowed by snow.

2. Sidewalks Directly Adjacent to the Street

In some areas, sidewalks are constructed directly adjacent to collector and minor arterial streets. One major example of this phenomenon is along Nicollet Avenue north of 98th Street, an area of frequent pedestrian traffic heading to and from Kennedy High School. Such situations are highly undesirable for safety reasons and the fact that roadway snow storage and water/salt spray makes the sidewalk inhospitable and difficult to use. Even in the best weather, this situation discourages use of the sidewalk by making it uncomfortable to use due to its proximity to fast moving traffic.

3. Pedestrian/Bike Unfriendly Environment

In making Bloomington auto friendly, pedestrian and bike accommodations have at times been overlooked. Many street intersections are difficult to cross by foot or bike. Pedestrian connections between adjacent businesses are sometimes lacking, forcing customers to use vehicles for very

short trips. A lack of bike racks at many businesses makes them inconvenient to visit by bike.

4. Freeways and Railroads Reduce Pedestrian and Bicycle Access

Freeways and railroads that bisect Bloomington sometimes block pedestrian and bicycle access to what would otherwise be accessible amenities and facilities. A good example of this situation is the Lyndale Avenue bridge over I-494 with its very narrow sidewalks directly adjacent to the road that inevitably becomes the exclusive domain of snow storage in the Winter. Pedestrians or bicyclists at this location who wish to access amenities on the opposite side are forced to go a great distance out of their way (Nicollet Avenue) to find a safer crossing point. This situation can be avoided through providing better pedestrian and bicycle infrastructure at the time of freeway and bridge construction or reconstruction.

Safety

When assessing the bicycle and pedestrian transportation system, it is important to evaluate accident data. *Figure 4.15* depicts the location of reported bike and pedestrian accidents in the five years between 1995 and 1999. Within this period, there was an average of 17 reported bicycle accidents per year. The frequency of reported bicycle accidents has dropped in number since the City's Bikeway Plan was prepared. Between 1971 and 1974 there were an average of 34 reported bicycle accidents per year. It is difficult to analyze the drop in reported bicycle accidents because there is no comparative data on the relative number of

bicycle trips for the two time periods. Factors that may account for the decrease include:

- A significant reduction in the number of school aged residents (from 22,000 in 1972 to 11,500 in 1999);
- Improved bicycle safety features, such as hand brakes;
- Improvements to the bicycle/sidewalk infrastructure;
- Changing attitudes about public safety and the advisability of children travelling alone; and
- Increased bike usage during the early 1970s energy crisis.

In the five years between 1995 and 1999 there were a total of 92 reported accidents between pedestrians and motor vehicles, or an average of 18 per year. Pedestrian accident data has not been discussed in previous City plans which makes it difficult to know if accident levels are rising or falling. 54 percent of the reported pedestrian accidents occurred on public streets and sidewalks, with the remainder occurring on private property, most often in parking lots. The month with the highest frequency of accidents is February with an average of 3.75 accidents.

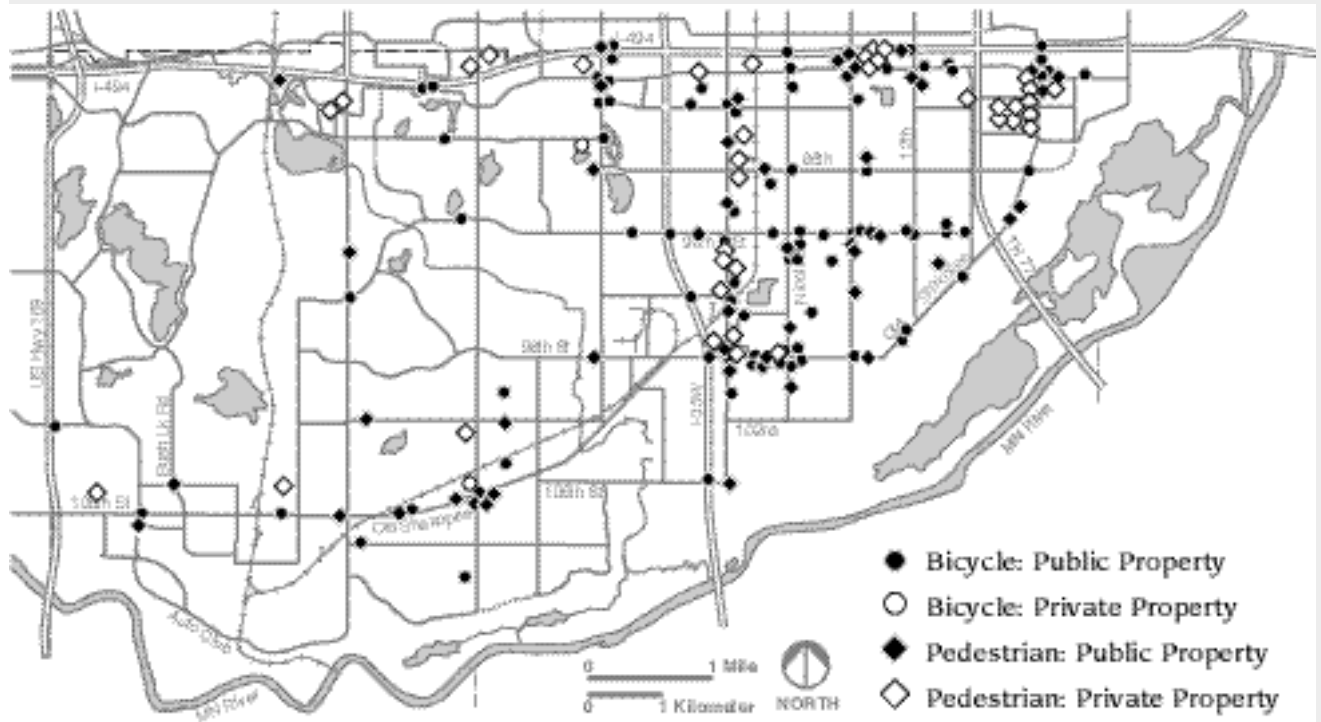
Drawing conclusions from the location of bike and pedestrian accidents is difficult because of the lack of data on bike and pedestrian traffic levels. One could reasonably assume that an area with significantly more bike/pedestrian traffic would correspondingly have higher bike/pedestrian accident levels. Still, analysis of bike/pedestrian accident locations does show striking correlations and can assist in identifying areas of highest priority for bike/pedestrian infrastructure improvements.

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Figure 4.15 Reported Auto-Related Bicycle and Pedestrian Accidents, 1995 - 1999



Source: Bloomington Police Department, 1999

There is a strong correlation between reported bike/pedestrian accident locations and areas with commercial services, indicating that one of the most probable locations for bike and pedestrian accidents is at an access point to a commercial business or within a commercial parking lot. Outside of commercial areas, the highest concentration of reported bike/pedestrian accidents appears along East 90th Street, a phenomenon likely explained by the location of Valley View playfields and swimming pool in this area, a major bike/pedestrian destination point for the surrounding neighborhood.

Recommended Improvements

To improve Bloomington's bicycle and pedestrian transportation system, specific recommended physical improvements are shown

in Figure 4.14. While sidewalks are desired along all local streets, the focus of those depicted is on improving connectivity within the existing system. The proposed Citywide Bicycle and Pedestrian Plan will prioritize and depict recommended sidewalk improvements on local streets, with a focus on school-neighborhood connections. The following are general recommendations:

1. Prepare a Citywide Bicycle and Pedestrian Plan

The City's Bikeway Plan was last updated in 1975 and there is no comprehensive pedestrian pathway plan. There is a strong need to prepare a new citywide Bicycle and Pedestrian Plan. This new plan should focus both on major connecting routes (river valley, NSP Park Ave. transmission line corridor, East Bush Lake Road, Ring Route) and smaller scale but equally important neighborhood

improvements. Previous plans have provided grand visions with little discussion of implementation or funding. The focus of the new plan should be on providing pedestrian and bikeway infrastructure to link neighborhoods with destination points such as schools and with the remainder of the citywide system. To be successful, the updated plan must include a funding/implementation component along with clear priorities on the timing of proposed improvements.

2. Provide Separation between Sidewalks and Roadways

As discussed above, sidewalks immediately adjacent to roadways are highly undesirable for a variety of reasons. All newly constructed sidewalks/bikeways should be appropriately separated from the adjacent roadway, in most cases at least eight feet of

separation. As those roadways that have immediately adjacent sidewalks are reconstructed, the sidewalks should be separated. In situations where no roadway reconstruction is anticipated in the foreseeable future, the City should pursue available resources to accomplish separation.

3. Provide Pedestrian and Bicycle Connections across Physical Impediments

Freeways and major roadways represent significant impediments to bicycle and pedestrian movement. To minimize the effects of these impediments and provide better pedestrian and bicycle connections, freeway and interchange redevelopment must include appropriate pedestrian and bicycle accommodations. The City should also pursue grade separated pedestrian and bicycle crossings over minor arterial streets at locations of high pedestrian and/or bicycle traffic.

4. Improve Pedestrian and Bicycle Access to Transit

With major transit improvements such as LRT, high speed bus service, and potentially commuter rail being planned in Bloomington, pedestrian and bikeway infrastructure surrounding the stations will need to be closely evaluated and in places augmented to ensure station accessibility.

5. Improve Private Pedestrian and Bicycle Accommodations at Commercial Properties

At the time of site plan review and approval, the City will require appropriate pedestrian and bicycle connections with public sidewalks and between adjacent commercial uses as well as appropriate bicycle storage and locking opportunities.

Influencing Factors

The City also recognizes that numerous factors beyond actual pedestrian and bikeway pathway infrastructure can have a significant influence on the viability and desirability of pedestrian and bicycle trips. These factors and the City's role in positively shaping them include the following:

Land Use - Land use patterns significantly affect the viability of pedestrian and bicycle trips. Well dispersed, pedestrian oriented commercial nodes make non-motorized trips more feasible. Since Bloomington is fully developed and land use patterns are set, the City's role in positively shaping land use patterns is focused on redevelopment. As redevelopment occurs, mixed uses in close proximity to commercial services will be encouraged.

Weather - Minnesota's weather is inhospitable to pedestrian and bicycle trips for several months out of the year. The City has an important role to play in providing snow removal for vital pedestrian ways and in designing pedestrian and bicycle pathways to minimize negative impacts from adjacent roadway snow storage.

Lighting - Depending on the purpose and role of the pathway, lighting is another critical factor in making pedestrian and bicycle trips viable and improving safety.

Building Orientation - Buildings that are set back from the road with large parking lots in front are uninviting and difficult for pedestrians to access. Buildings close to, and oriented toward sidewalks, with parking in the rear or on the side, are more likely to encourage pedestrian use and are more transit-friendly.

Traffic Noise and Perception of Danger - Roadways with side-

walks directly adjacent to noisy, high-speed travel lanes are often perceived as being undesirable for walking. Greater separation, especially with planting strips/trees and slower traffic speeds, increases the level of comfort for pedestrians.

Access Management - Every driveway creates conflicts for pedestrians and bicyclists. Reducing the number of driveways and limiting access from one or more directions improves pedestrian and bicyclist safety and comfort while increasing vehicle safety as well.

Street Crossings - Wide multi-lane roadways are difficult to cross on foot. Crossing opportunities can be provided with techniques such as raised medians, refuge islands, curb extensions, and pedestrian signals, where appropriate.

Intersections - Intersections built for the movement of motor vehicles can be very difficult for pedestrians and bicyclists to cross. A network of streets with sidewalks and bike lanes does not fully accommodate pedestrians and bicyclists if intersections present obstacles. Free-turning movements for vehicles offer particular safety challenges. Improvements for pedestrians include refuge islands, shorter crossing distances, reduced curb radii, crossings at right angles, and slower traffic speeds. At busy interchanges, grade-separation for bicyclists and pedestrians may be needed.

Public Education - The City plans to improve public understanding of available pedestrian and bicycle resources and of general bicycle/pedestrian safety through summary brochures, newsletter articles, and cable access TV programming.

Truck and Rail Transportation

Truck and rail service are important to the City's economic development objectives and transportation needs, but often are disruptive to traffic flow and adjacent residential neighborhoods. The City's truck and rail transportation goal is to facilitate access for commercial traffic and at the same time be considerate of associated adverse land use and safety impacts.

Truck traffic constitutes about three percent of vehicle trips in Bloomington. These trips are concentrated on, but not restricted to, serving commercial and industrial land uses. Bloomington does not have a city-wide truck route policy because the arterial road network is organized to discourage trucks from using local roadways. Most truck traffic on local streets occurs because it is serving properties in the immediate vicinity.

To maintain satisfactory truck circulation, the City intends to:

- continue to review arterial road access to industrial and commercial land uses, ensuring that these routes are the fastest, most convenient routes for truck access;
- separate collector road systems for industrial and commercial land uses from residential collector roads as feasible; and,
- improve land and landscape buffers between residential areas and arterial roads with high traffic volumes when there is feasible opportunity.

The Canadian Pacific Railway operates two routes in Bloomington, a main line (5.8 miles) running north to south across Bloomington about 3/4 mile west of Normandale Boulevard and a spur line (6.9 miles) serving numerous

industries in central Bloomington. In 1999, the Canadian Pacific Railway main line typically carried four to six train trips per day. Operating speed is less than 20 miles per hour. The spur line carries an average of two train trips per day at speeds of 10 miles per hour. In Bloomington, there are three grade crossings of the Canadian Pacific Railway main line and 19 grade crossings of Canadian Pacific Railway spur lines and sidings. All three main line crossings and several of the spur line crossings are protected by automatic flashing light signals. There are two bridged crossings of the main line.

Future automobile and train traffic volumes and emergency vehicle access considerations warrant a grade-separated crossing of the Canadian Pacific Railway main line at Old Shakopee Road. Access control and roadway gradient considerations are arranged for that bridge implementation. Grade separation at East Bush Lake Road may also be a prudent future action as decades continue.

River Transportation

The Minnesota River upstream from the T.H. 77 Bridge is one of three principal port areas in the metropolitan region. Barge traffic on the Minnesota River supplies petroleum products, fertilizers and metal products to Port Richards and Port Cargill and serves grain terminals in Savage and Shakopee. A large percentage of the grain raised for export is shipped by barge to New Orleans and many of those shipments originate on the Minnesota River. Intermodal transfer for grain traffic is predominantly truck to terminal to barge. Most of this traffic is grain shipments that originate south and west of the metropolitan area and do not seriously impact roads in Bloomington. The only commercial transportation related uses in Bloomington are barge fleeting areas or mooring areas on the north side of the river channel.

The U.S. Army Corps of Engineers is responsible for maintaining a nine-foot barge navigation channel to river mile 14.7. An additional seven miles of nine foot channel from Savage to Shakopee is maintained by the Peavey Company. The Corps of Engineers maintains a four foot channel to mile 25.6 of the Minnesota River for recreational craft.

The City of Bloomington controls land use on the north bank of the Minnesota River. However, the City does not have permitting responsibilities with respect to the waterway system itself. The Bloomington land use guide plan classifies all Minnesota River bottomlands for conservation use. The City opposes river uses or land uses on the south side of the river that would conflict with the use of the north side of the river for conservation uses.