



07. TRANSPORTATION

The transportation network in Richfield developed over the decades with a strong vision of car mobility over all other modes of transportation. In the last decade, Richfield has placed a stronger emphasis on the pedestrian, transit user, and bicyclist. Past planning efforts have embraced this approach by establishing a long-term vision for better multi-modal options, while placing them as the highest priority for future transportation investments. Notable projects include the reconstruction of 66th Street, which was envisioned in the 2008 Comprehensive Plan as a major pedestrian corridor/parkway. Recent improvements include enhanced pedestrian, transit, and bicycle amenities. City Council has also adopted a Complete Streets Policy and Guiding Principles; and, specific master plans for the pedestrian and bicycle network.

Past Comprehensive Plans have focused heavily on roadways and automobile. The 2018 Comprehensive Plan has embraced a new vision for a multimodal network by bring the pedestrian, bicycle, and transit elements to the front of the Transportation Chapter. Identifying these elements first, stresses the importance of placing multimodal elements as a top priority over the automobile. Balancing these elements as a top priority will require some trade-offs. Moving forward, the City will continue to keep an open and transparent planning process to ensure future transportation improvements are coordinated collectively with the public, elected leaders, and roadway/transit agencies.



PEDESTRIANS & BICYCLISTS

Pedestrian and bicycle trails play a large role in the City's overall transportation network by offering an alternative means of transportation to places of employment, primary points of interest and recreational areas. The City's commitment to providing pedestrian and bicycle facilities is demonstrated through the City's "Sweet Streets" initiative led by the Public Works Department. The initiative is focused on the development and implementation of policies and plans that support bicycle and pedestrian improvements, in addition to meeting legal requirements under the American with Disabilities Act (ADA). This requirement includes a self-evaluation of current transportation infrastructure policies, practices and programs. The City performed this assessment and is documented in *Richfield's ADA Transition Plan in Public Rights-of-way*, which was adopted on February 25, 2014

Other policies and plans include:

- » Complete Streets Policy
- » 5 Year Reconstruction Plan
- » Bicycle Master Plan
- » Pedestrian Master Plan
- » Guiding Principles
- » Parks Master Plan

These plans and policies were used to establish the foundation for this chapter. Full versions of the plans and policies can be found on the City's Sweet Streets website. The Complete Streets Policy and Guiding Principles are included as a sidebar for reference.

Existing Conditions

Over the last decade, Richfield has incorporated bike lanes and sidewalks into major roadway improvements throughout the City, creating key linkages within the trail network.

Many roadway improvement projects have included trails on both sides of the road, providing more connections to neighborhoods and key destinations, while enhancing the local and regional trail network. The majority of north-south roadways (i.e., Penn Avenue, Lyndale Avenue, Nicollet Avenue, Portland Avenue, and Bloomington Avenue) have adjacent pedestrian facilities in the way of concrete sidewalks. There are also other important existing local trails adjacent to City streets that create connections into neighborhoods and business centers. That said, the existing trail system in Richfield (see Figure 7-1) is somewhat constrained in terms of expansion opportunities because the City is a fully-developed community surrounded by four major freeways. Major freeways can create obstacles for local trails because there are often large bridges and expansive intersections at the edge and within the center of key destinations. Planning for trail connections to and within these locations is an important first step in ensuring that future projects include multi-modal facility enhancements, such as off-road trails, independent pedestrian bridges, and Americans with Disabilities (ADA) compliant street crossings.

Overcoming freeway barriers is slowly becoming part of the design process for larger roadway reconstruction projects. A planned improvement includes the 77th Street reconstruction and underpass at Cedar Avenue (TH 77). The project received federal funding through the Metropolitan Council's Regional Solicitation process and will begin construction in 2019. The project will enhance east-west pedestrian and bicycle connections between Richfield and Bloomington. The project will further open up opportunities to safely access the Nine Mile Creek Regional Trail (see Figure 7-2 & Figure 7-3). The Nine Mile Creek Regional Trail is part of the Three Rivers Park District's system providing a 15 mile trail connecting Hopkins and the Minnesota River Bluffs LRT Regional Trail. Segments in Richfield, Hopkins and Edina are complete. From Richfield, users can access the Nokomis-Minnesota River Regional Trail and travel north to Lake Nokomis or south to the Minnesota River.

Future System

Improving the local trail system involves identifying gaps and planning to fill those gaps in order to enhance connections between neighborhoods and destinations within and outside the City limits. These gaps have been identified through separate master planning efforts. Richfield has adopted a Bicycle Master Plan (2012) and Pedestrian Master Plan. The plans identify important enhancements to the transportation system that allow residents and visitors an alternative means of getting to work, school, employment centers and transit centers. Richfield continues to improve its pedestrian/bicycle network and future multimodal planning will focus on filling gaps in the existing local and regional trail system. Findings and recommendations from the Bicycle and Pedestrian Master Plans are highlighted throughout this section.

Pedestrian Master Plan

Walking is fundamental to all aspects of transportation. People walk for exercise, to the bus stop, from their bike to their house, from a car to a restaurant, or just for the fun of it. Regardless of the nature of the trip, all pedestrians have the right to a safe, efficient, and enjoyable pedestrian experience. Safety, active living, environmental sustainability, good health – walking is a primary thread connecting these trends and is a critical component of making Richfield a truly livable community for the residents of today and the future.

The vehicle-centric transportation planning of Richfield's past has resulted in an efficient street grid for automobiles, but it has also led to a disconnected and inefficient pedestrian system. There are many examples of great places to walk in Richfield – several trails around parks and lakes provide a serene walking environment; newly constructed streets such as Portland Avenue provide a pleasant and efficient walking experience, complete with slower traffic, safer crossings, and sidewalk art; and there

Pedestrian & Bicycle Guiding Principles

Adhering to Richfield's Complete Streets Policy, the City has adopted Guiding Principles (2013) to direct the implementation of pedestrian and bicycle facilities. A summary of these guiding principles include:

- » **Multimodal Design:** Multimodal design of public rights of way will be consistent with the City's Complete Streets Policy and will utilize innovative and non-traditional design standards in a way that is equitable for all modes/users, inter-modal activities and is respectful of the surrounding community.
- » **Connectivity and Public Realm:** The street and public right-of-way network will be used to connect various public realm amenities so that a range of inter-modal activities (walking, biking, driving, etc.) support how neighborhood residents travel to and from destinations such as schools, parks/open space, shops and businesses.
- » **Local Economy:** Community improvements and reinvestment will reinforce and support all businesses in the local economy and provide a safe and more convenient way to access and connect neighbors, residents, pedestrians, cyclists and motorists.
- » **Design for People:** How people use community amenities and facilities is the most important criteria regarding the planning, engineering, implementation and maintenance of any improvement. Design for people will address universal accessibility as well as comfort, safety, and convenience for all users.
- » **Community Character and Identity:** The design and implementation of community facilities and improvements will recognize the community character of single family residential scale and pattern and will also respond to local features such as natural resources, public art, aesthetics and gateways.
- » **Sustainable Solutions:** New improvements, growth and development will utilize sustainable solutions that are adaptable, flexible, built to last and that consider implications of long-term maintenance to ensure the future economic, environmental and social health of the community.
- » **Healthy and Active Lifestyles:** Elements will be incorporated into planning and design efforts to encourage comfortable corridors and places to walk and bike to, safe and well-landscaped routes that inter-connect the community, and promote healthy and active lifestyles.
- » **Unique Location:** Community and transportation improvements will support a well-designed and functional regional system, which complements local land uses, and capitalizes on Richfield's unique location through enhanced access to the regional multimodal transportation system to improve livability and convenience.

RICHFIELD'S COMPLETE STREETS VISION

Consistent with the direction of the Transportation Commission and City Council, the Complete Streets Policy incorporates the philosophy that the streets and roadway sections throughout Richfield should be:

- » Designed and operated in a safe, accessible, maintainable, and financially reasonable way with an acceptable level of service.
- » Determined with consideration of the community values identified on a project-by-project basis using a thorough public involvement process that invites all residents and impacted parties to participate as stakeholders.

Complete Streets Policy

1. The City of Richfield seeks to enhance the safety, access, convenience and comfort of all users of all ages and abilities, including pedestrians (including people requiring mobility aids), bicyclists, transit users, motorists and freight drivers, through the design, operation and maintenance of the transportation network so as to create a connected network of facilities accommodating each mode of travel that is consistent with and supportive of the communities values, recognizing that all streets are different and that the needs of various users will need to be balanced in a flexible manner.

2. Transportation improvements will include facilities and amenities that are recognized as contributing to meet the needs and values of the Community, which may include street and sidewalk lighting; sidewalks and pedestrian safety improvements such as median refuges or crosswalk improvements; improvements that provide ADA (Americans with Disabilities Act) compliant accessibility; transit accommodations including improved pedestrian access to the destinations; bicycle accommodations, shared-use lanes, wide travel lanes or bike lanes as appropriate; and streetscape elements such as street trees, boulevard landscaping, street furniture and adequate drainage facilities.

3. Early and frequent public engagement/involvement will be important to the success of this Policy. Those planning and designing street projects must give due consideration to the community values, from the very start of planning and design work. This will apply to all roadway projects, including those involving new construction, reconstruction, or changes in the allocation of pavement space on an existing roadway (such as the reduction in the number of travel lanes or removal of on-street parking).

4. Where community values are established, bicyclist and pedestrian transportation users shall be included in street construction and reconstruction projects, except in circumstances where:

- » The existing right-of-way limits the ability to safely accommodate all desired modes.
 - » It is technically determined that all desired modes cannot be accommodated safely.
 - » Excessive and disproportionate costs limit the feasibility of establishing a bikeway, walkway or transit enhancement as part of a project.
-
-

5. The project development process must include early consideration of the land use and transportation context, identify gaps or deficiencies in the network for various user groups that could be addressed by the project, including an assessment of the trade-offs to balance the needs of all users. Specific factors that should be considered and given priority include; whether the corridor:

- » Provides a primary access to a significant destination such as a community or regional park or recreational area, a school, a shopping / commercial area, or an employment center;
- » Provides access across a natural or man-made barrier such as a freeway;
- » Is in an area where a relatively high number of non-motorized transportation users can be anticipated;
- » Currently provides important continuity or connectivity links for an existing trails or path networks; or
- » Has nearby routes that provide a similar level of convenience and connectivity already exist.

6. The design of new or reconstructed facilities should anticipate likely future demand for bicycling and walking and should not preclude the provision of future improvements. [For example, under most circumstances bridges (which last for 50 years or more) should be built with sufficient width for safe bicycle and pedestrian use in anticipation of a future need for such facilities.

7. The City will maintain a comprehensive inventory of the pedestrian and bicycling facility infrastructure integrated with the Capital Improvements Plan and will carry out projects to eliminate gaps in the sidewalk and trail networks that are identified in the City's Comprehensive Plan and/or Bicycle Master Plan.

8. The City will generally follow accepted or adopted design standards when implementing improvements intended to fulfill this Complete Streets policy but will consider innovative or non-traditional design options where a comparable level of safety for users is present.

9. The City will develop implementation strategies that may include developing and adopting network plans, identifying goals and targets, and tracking measures such as safety and modal shifts to gauge success.

Figure 7-1. Existing Trail System

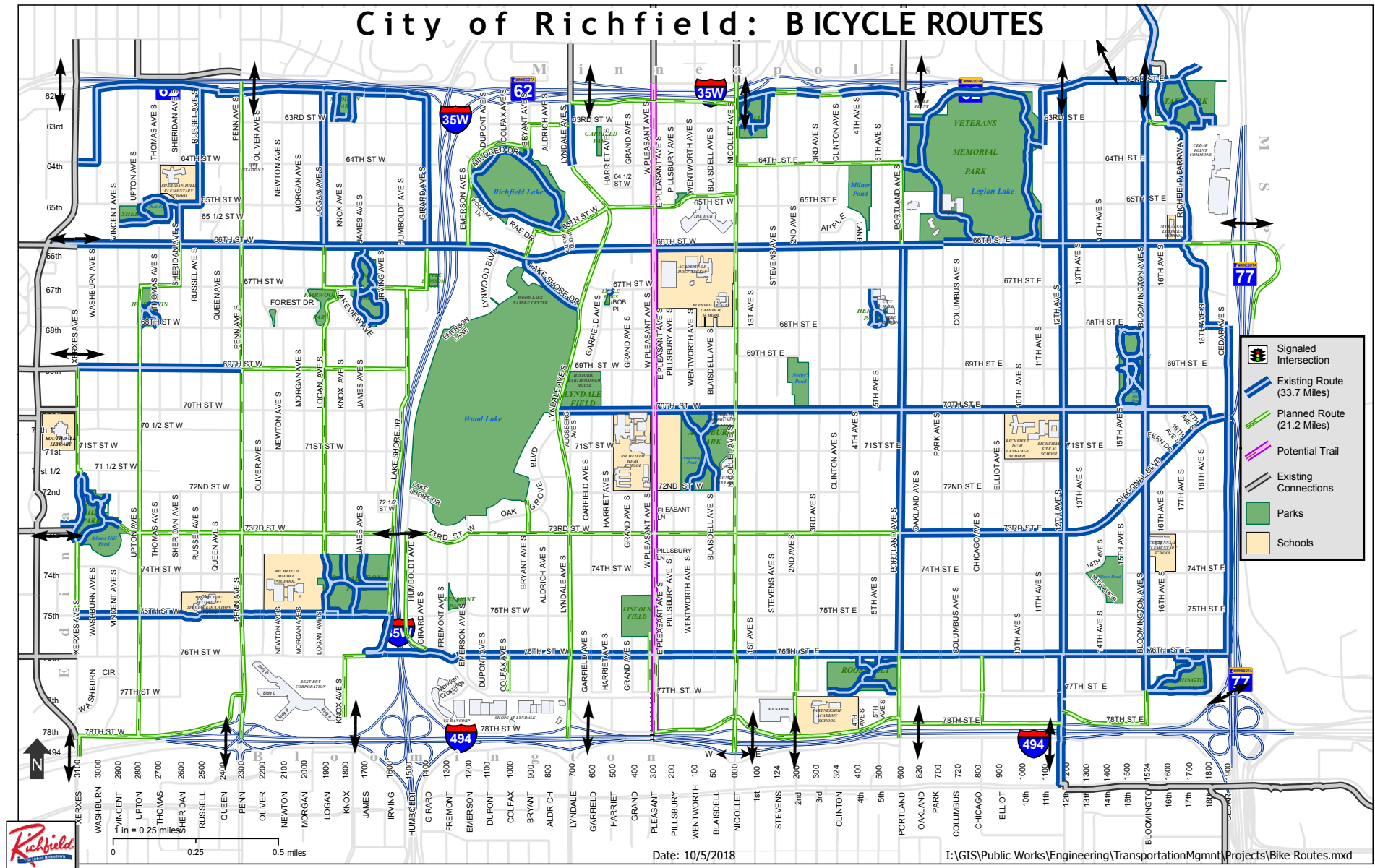


Figure 7-2. RBTN Corridors

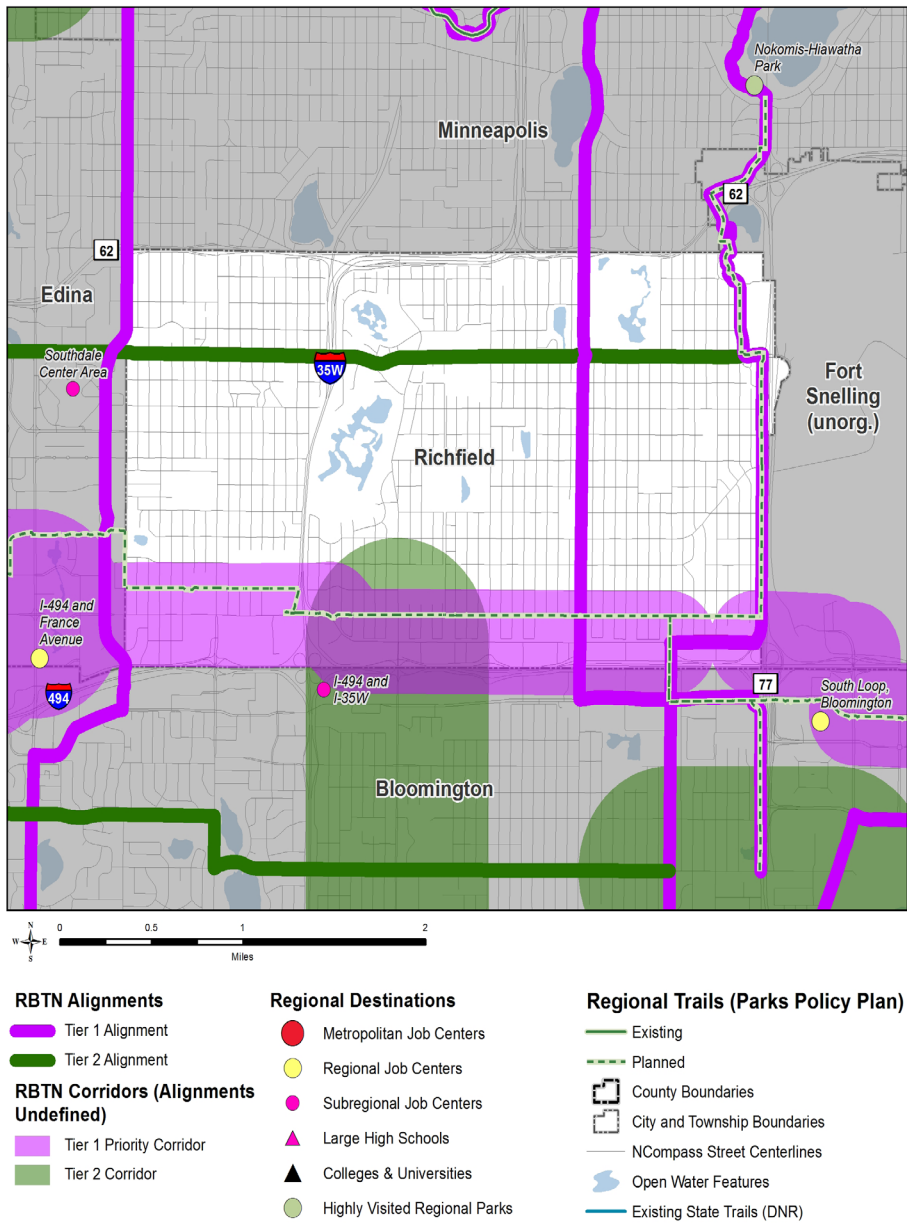
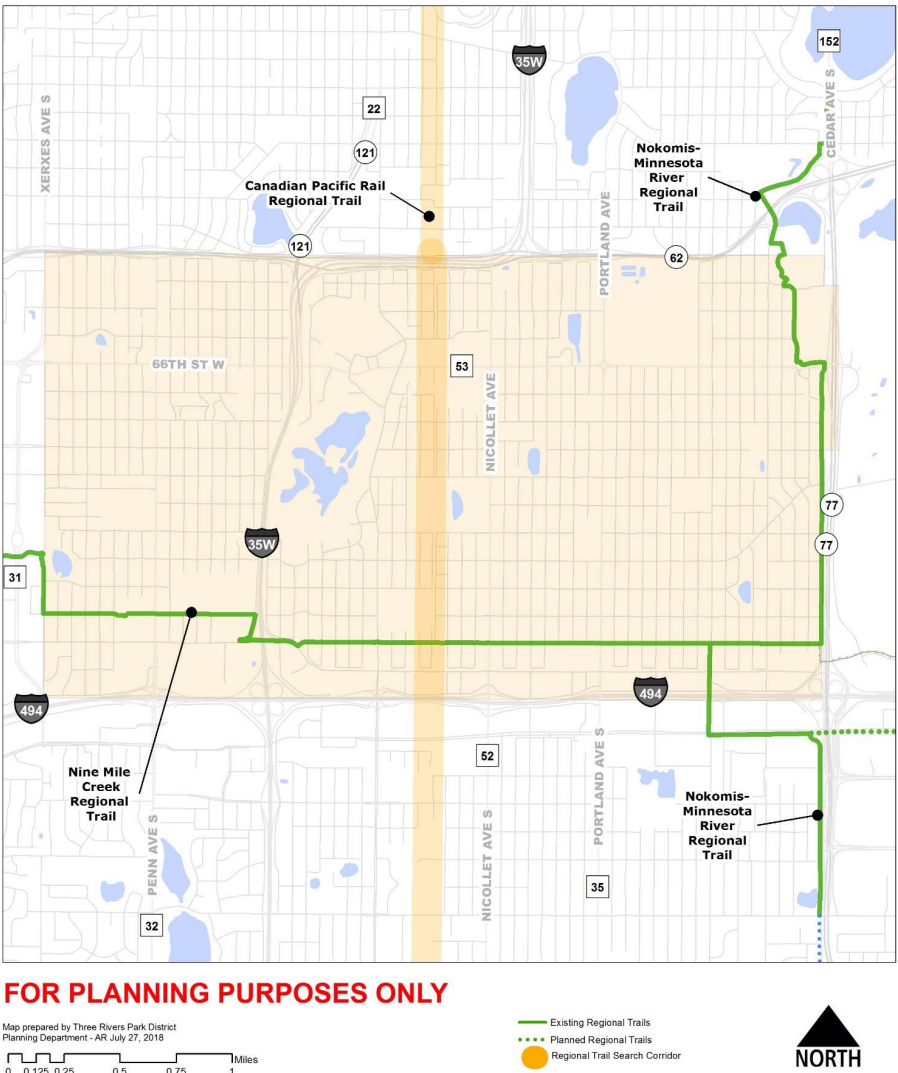


Figure 7-3. 2040 Proposed Regional Trails (Source: Three Rivers Park District)



FOR PLANNING PURPOSES ONLY

Map prepared by Three Rivers Park District
Planning Department - AR July 27, 2018

Existing Regional Trails
Planned Regional Trails
Regional Trail Search Corridor



are multiple mid-block crossings in strategic areas providing needed connectivity to high activity locations. However, there is still much work to be done. High vehicle speeds create unsafe crossing conditions for pedestrians, outdated sidewalks make for an uncomfortable walking experience, and there are gaps in pedestrian connectivity at many high traffic locations.

The Pedestrian Master Plan (see Figure 7-4) was developed to foster a more proactive and purposeful approach to planning the pedestrian network in Richfield; one that recognizes the needs of vehicle traffic, but does more to meet the unique demand of pedestrians and abilities. The plan includes a systematic approach for the evaluation of pedestrian demand for a given location, based on proximity to land uses which generate demand for pedestrian trips, social, economic and physical disability factors that generate a higher demand for pedestrian mobility, and the overall context of a given location within the broader transportation network (see Figure 7-5). The plan also establishes measures to evaluate the physical network to determine its ability to meet the specific demand and priority. Finally, the plan includes guidance on new and emerging pedestrian design tools and recommendations for implementation of a city-wide pedestrian improvement program.

Bicycle Master Plan

Richfield's Bicycle Master Plan was adopted in 2012. The overall purpose of this Bicycle Master Plan is to guide Richfield in the planning of current and future non-motorized vehicle transportation facilities, and to meet the demand of citizens. The benefit of completing this plan and implementing the recommendations are many. It will provide economic, health and safety benefits, just to name a few. As Richfield continues to grow and evolve, the overall purpose is to create a livable community that offers non-motorized vehicle transportation options that

are convenient, reliable, safe, and efficient. If implemented successfully, people will be able to travel comfortably and safely to the places where they live, work, shop, learn, dine and recreate, without requiring the use of a motor vehicle. Creating more mobility options can promote healthy lifestyles, lower vehicular congestion on the streets, reduce frustration for residents, lower road maintenance costs, and reduce pollution. By implementing the recommendations of this master plan, Richfield can take steps toward creating a more comprehensive and balanced transportation network.

The master planning process consisted of detailed data collection and analysis, followed by concept development. One of the primary goals of the Bicycle Master Plan project was to develop a sense of what the general public desires with respect to bicycling and walking. This was accomplished using several methods:

- » The creation of a task force made up of residents.
- » The publication of a survey to allow for public input on key issues.
- » The use of public meetings to gather thoughts and concerns relevant to the plan.

This input was valuable in helping to shape the vision, goals, and objectives for the master plan. During the planning process, goals and objectives were finalized, existing and proposed corridors were identified and analyzed, design standards were determined and high, medium and low priorities were identified. The residents of Richfield, City leaders and staff, the Bike Task Force and other involved parties collectively established the master plan to create a more livable community through a cohesive transportation system, thus increasing opportunities for active living and reducing our dependence on the automobile.

Future Destinations and Routes

Figure 7-6 was developed as part of the Bicycle Master Plan to identify the key Richfield destinations and routes for



bicyclists. Key destinations include public areas, schools, business areas and regional employment clusters. The identified routes include: existing/approved on-street routes, existing/approved trails, and routes to consider. The goal of this map was to assist with identifying efficient bicycle access and connectivity to the key destinations within or adjacent to the Richfield.

Plan Recommendations

One of the recommendations that evolved from the Bicycle Master Plan was a future routes plan (see Figure 7-1). To help create the proposed bicycle route plan a combination of existing roadway classification, potential destinations and the proximity to existing or planned bicycle routes was considered. An effort was made to provide opportunities for all user types (local, recreational and commuter) and to limit the length of travel to access these various routes.

Dependent on existing conditions, funding opportunities, neighborhood involvement and continued evaluation, these routes may begin to be implemented into Richfield's infrastructure improvements. Additionally, many of the recommended routes could be implemented through coordination with the City Pavement Management program with little impact on existing operations. The Richfield Capital Improvement Program (CIP) has started to program these improvements (see Appendix D).

Figure 7-4. Pedestrian Network Map

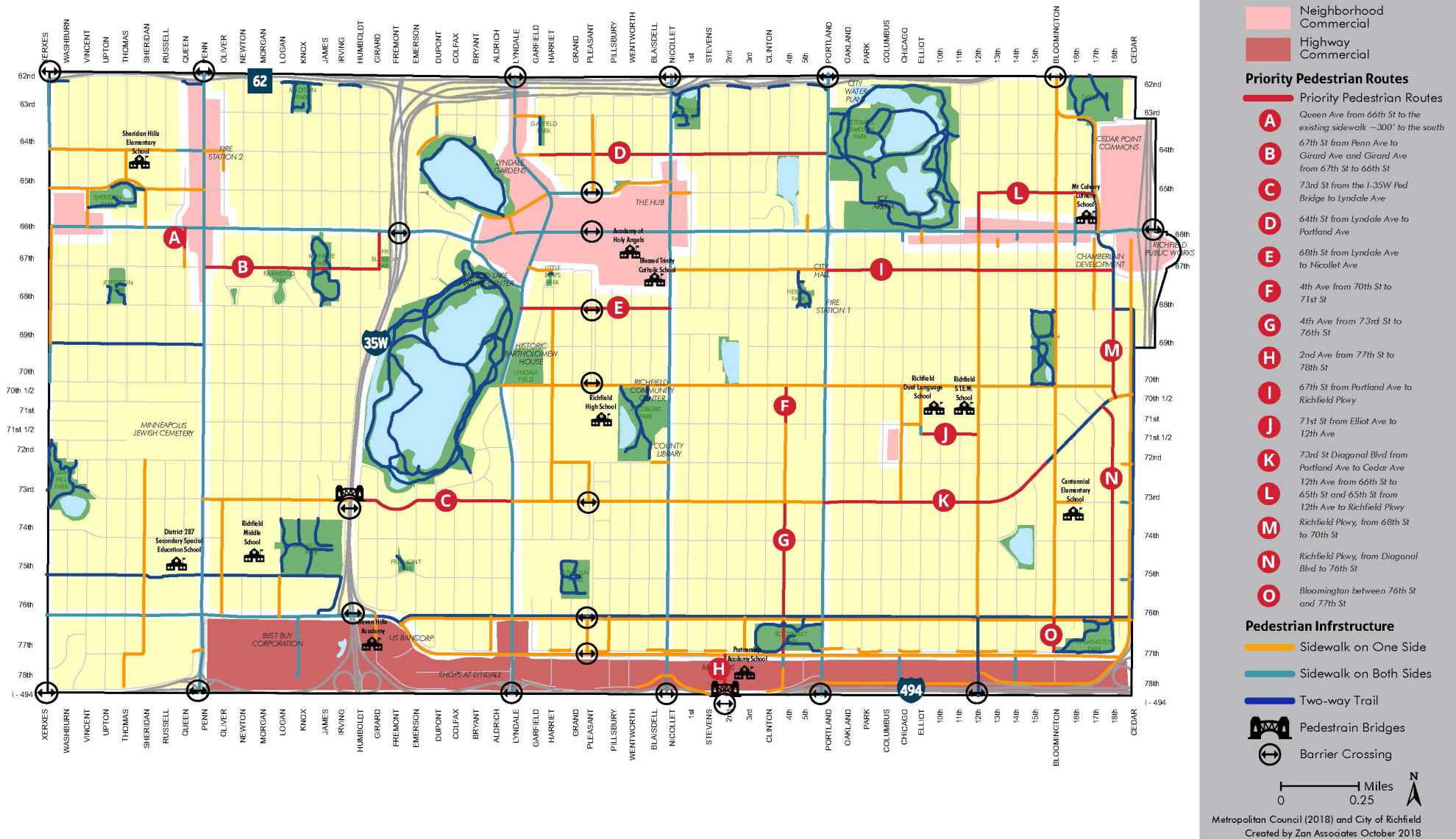
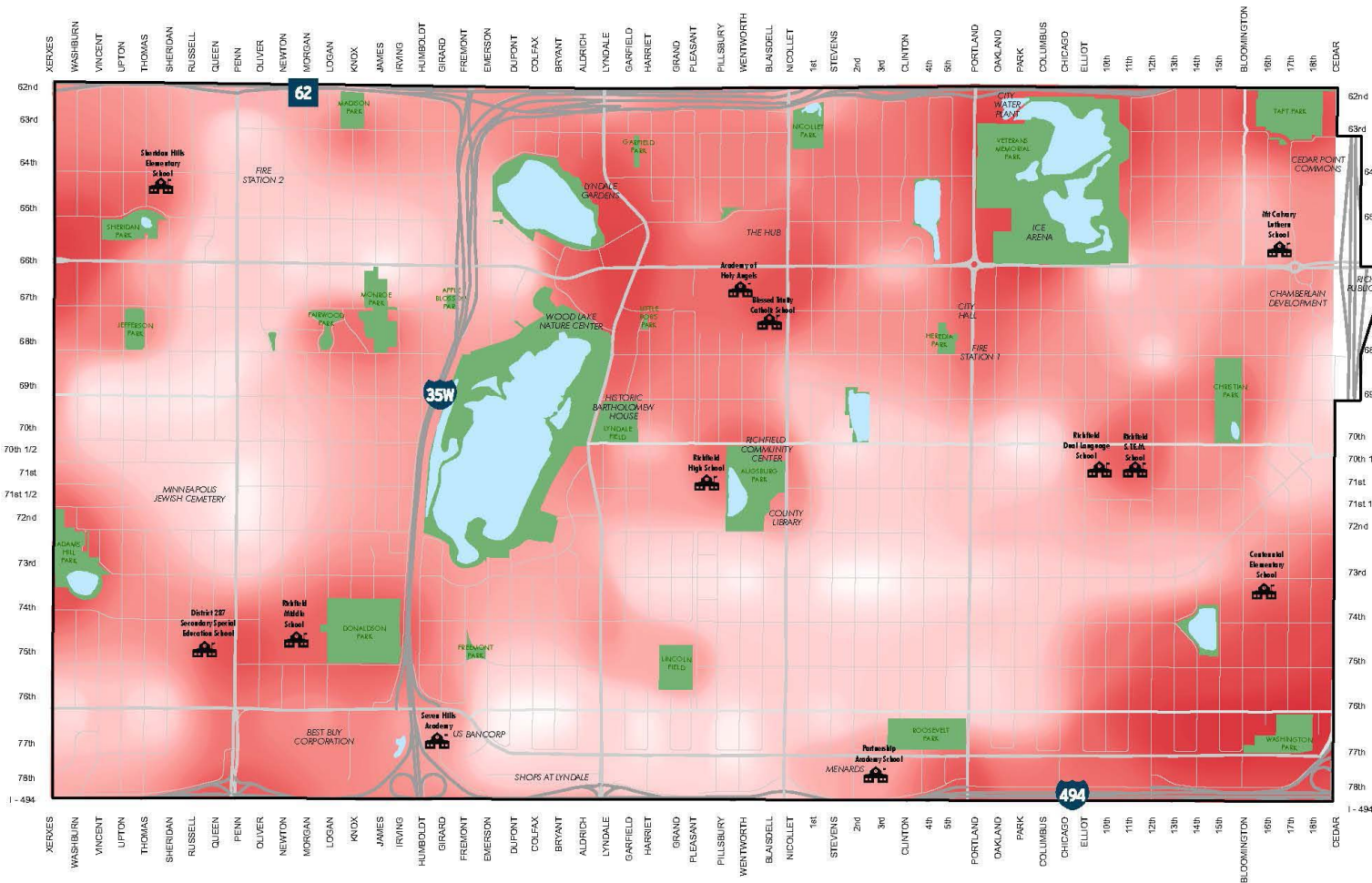


Figure 7-5. City-Wide Pedestrian Demand Map



Pedestrian Demand

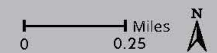


Pedestrian Demand Methodology

Pedestrian demand was determined based a review of arterial, collector, and connector roadways and their relative proximity to activity centers and population density. A higher concentration of, or closer proximity to activity centers, means higher demand. Activity centers considered include:

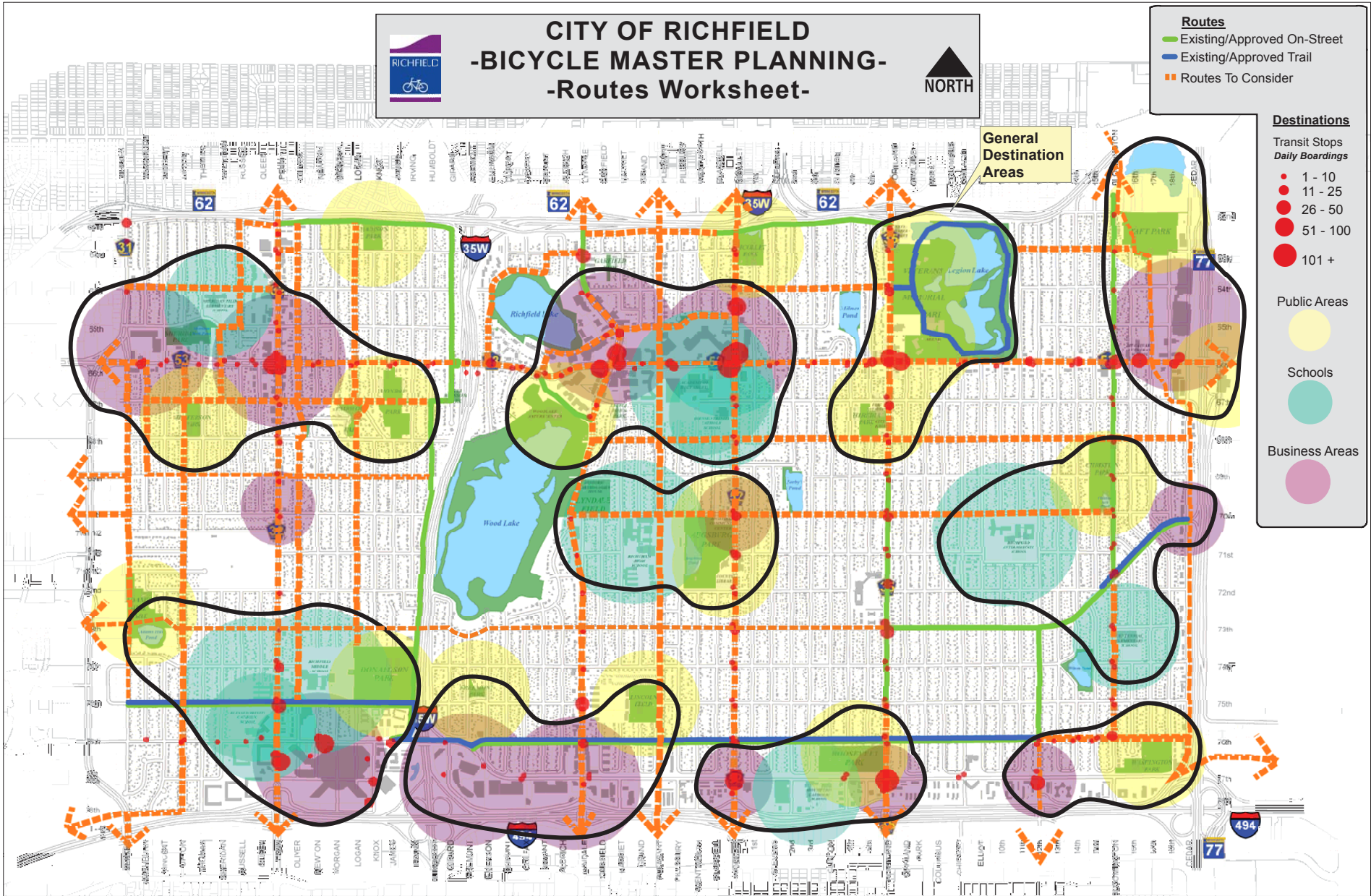
- Community buildings such as the community center, libraries, and city offices
- Businesses and commercial areas such as shopping centers, restaurants, retail stores, large offices and industrial parks
- Schools, recreation facilities and parks

Likewise, closer proximity to higher population density means higher demand, as well as proximity to concentrations of older adults, people living in poverty, minority populations, and young people.



City of Richfield
Created by Zan Associates October 2018

Figure 7-6. Bicycle Master Planning - Key Destinations





Additional recommendations are included in the Bicycle Master Plan. Table 7-1 illustrates the key action items to be implemented to improve bike education, understanding and physical infrastructure for bicycles. Table 7-1 also details specific actions that can assist the various bicycle users (i.e., local, recreational and commuter) in the community. Richfield's Bicycle Master Plan should be referenced for more information regarding these action items.

Regional Bicycle Transportation Network

Planning the next phases of the multi-modal system within the City should correspond closely to the corridors identified in the Regional Bicycle Transportation Network (RBTN) in order to provide seamless connections to neighboring communities and the broader regional transportation network. According to the Metropolitan Council, the RBTN corridors and alignments make up the "trunk arterials" of the overall system of bikeways that connect to regional employment and activity centers. The goal of the RBTN is to establish an integrated seamless network of on-street bikeways and off-road trails that complement each

other to most effectively improve conditions for bicycle transportation at the regional level. These routes are further classified into two tiers of corridors and alignments:

- » Tier 1 corridors have been identified as the highest priority for regional transportation planning and investment. The priority corridors/alignments are planned in locations where they can attract the most riders and where they can most effectively enhance mode choice in favor of biking, walking, and transit over driving alone.
- » Tier 2 corridors are the remaining corridors in the overall RBTN.
- » Similar to the regional bicycle transportation corridors, there are Tier 1 and Tier 2 regional bicycle transportation alignments where specific route alignments have been designated through the Regional Bicycle System Study process that included discussions with local agency staff. The designated RBTN alignments are based on local bicycle plans and in many cases (particularly in the core cities) already exist in some form and may need little or no improvement for the regional network. Other designated alignments have not been developed and are based on planned on-street and off-road route alignments or other factors as discussed with local agency staff.

Several RBTN alignments have been identified in the City (see Figure 7-3). Please note that these alignments are in various stages of development (e.g., planning, design, and construction):

- » **Xerxes Avenue (Tier 1):** The proposed north-south corridor links the City of Minneapolis, Richfield, Edina and Bloomington. A small portion of this route falls within Richfield along Xerxes Avenue between Trunk Highway (TH) 62 and 66th Street.
- » **Portland Avenue (Tier 1):** The proposed north-south corridor links the City of Minneapolis, Richfield, Edina and Bloomington.

- » **Cedar Avenue (Tier 1):** The proposed north-south corridor links the City of Minneapolis, Richfield, and Bloomington.
- » **66th Street (Tier 2):** The proposed east-west corridor links the City of Edina and Richfield, and connects to the Nokomis Minnesota Regional River Trail.

Regional Trail Search Corridors

The RBTN is further supported by Regional Trail Search Corridors. Regional Trail Search Corridors (see Figure 7-2) include proposed regional trails to provide connections between Regional Parks System facilities where the trail alignment has not yet been planned. The Canadian Pacific Rail Regional Trail Search Corridor is located in the City. The trail corridor is a proposed regional trail that would follow an existing north-south railroad grade. The railroad is still in active use, so planning for the conversion to a regional trail is on hold pending a change in status of the railroad operations. There is no schedule for the rail to be discontinued at this time.

This corridor would connect schools, parks and destinations through the center of the City, including Academy of Holy Angels, Augsburg Park, Lincoln Field and the I-494 Corridor. This trail would also extend to and connect with the City of Bloomington trail system and the Minneapolis Chain of Lakes.

The City also recognizes the Nokomis-Minnesota River Regional Trail. This is a regional trail that travels through Minneapolis, Richfield and Bloomington as it connects Nokomis-Hiawatha Regional Park and Nine Mile Creek Regional Trail.

Table 7-1. Bicycle Master Plan Recommendations

		Primary Bicycle Recommendations	Local Users	Recreational/ Regional Users	Commuter Users
Destination	Operations (Policy & Programming)	<ul style="list-style-type: none"> * Improve Bike Awareness (bike map, schools, media, newsletters, web, public relations campaigns, etc...) * Safety Education * Reduce vehicle speeds * Increase enforcement of traffic laws (vehicular & bicycle) * Expand "Nice Ride Minnesota" initiative into Richfield * Make the City of Richfield a model employer (encourage bicycling among its employees by providing parking, showers & lockers) 	<ul style="list-style-type: none"> * Riding clinic/celebration/annual bike ride Implement "Safe Routes to School" recommendations * "Passport" program (community building) 	<ul style="list-style-type: none"> * Coordinate with surrounding communities to ensure smooth transitions * Coordinate with Three Rivers Park District * Promote Richfield destinations & alternative modes of transportation * Riding clinic/celebration/annual bike ride 	<ul style="list-style-type: none"> * Coordinate with surrounding communities to ensure smooth transitions * Coordinate with Metro Transit (routes, schedules, transfers, etc...) * Integrate bicycling with alternative modes of transportation (walking, transit, carpooling) * Bike route application software (app) * Promote Richfield destinations & alternative modes of transportation * Winter riding clinic/celebration * Financial incentives (bus pass subsidy, discounts, give-a-ways) * Provide incentives for employers to promote/encourage bicycling to work
	Infrastructure	<ul style="list-style-type: none"> * Provide accessible destinations * Provide wayfinding/signage for bicyclists * Provide well defined intersection crossings * Provide priority bicycle storage at key destinations (retail, schools, parks, key employers, etc...) * Expand "Nice Ride Minnesota" initiative into Richfield * Make the City of Richfield a model employer (encourage bicycling among its employees by providing parking, showers & lockers) 	<ul style="list-style-type: none"> * Provide adequate pedestrian lighting 	<ul style="list-style-type: none"> * Designate regional routes with bike lanes or independent bike trails/pathways * Coordinate with Three Rivers Park District on signage and wayfinding * Install kiosks with mapping at key destinations 	<ul style="list-style-type: none"> * Provide signage and pavement paint to identify designated routes & destinations * Add amenities to key transportation nodes and destinations to integrate alternate modes of transportation (bicycle lockers, shelters, lighting, showers, etc...)
Route	Operations (Policy & Programming)	<ul style="list-style-type: none"> * Improve Bike Awareness (bike map, schools, media, newsletters, web, public relations campaigns, etc...) * Safety Education * Reduce vehicle speeds * Increase enforcement of traffic laws (vehicular & bicycle) * Expand "Nice Ride Minnesota" initiative into Richfield * Establish a citywide multi-disciplinary committee for non-motorized mobility to report to the Transportation Commission/Council 	<ul style="list-style-type: none"> * Implement "Safe Routes to School" recommendations * Add a bike police position to the law enforcement staff 	<ul style="list-style-type: none"> * Coordinate with surrounding communities to ensure smooth transitions * Coordinate with Three Rivers Park District * Promote Richfield destinations & alternative modes of transportation * Improve bicycle awareness (maps, media, newsletters, etc...) 	<ul style="list-style-type: none"> * Coordinate with surrounding communities to ensure smooth transitions * Coordinate with Metro Transit (routes, schedules, transfers, etc...) * Integrate bicycling with alternative modes of transportation (walking, transit, carpooling) * Bike route application software (app) * Promote Richfield destinations & alternative modes of transportation * Winter riding clinic/celebration * Financial incentives (bus pass subsidy, discounts, give-a-ways) * Provide incentives for employers to promote/encourage bicycling to work
	Infrastructure	<ul style="list-style-type: none"> * Provide accessible destinations * Provide wayfinding/signage for bicyclists * Provide well defined intersection crossings * Provide priority bicycle storage at key destinations (retail, schools, parks, key employers, etc...) * Expand "Nice Ride Minnesota" initiative into Richfield * Make the City of Richfield a model employer (encourage bicycling among its employees by providing parking, showers & lockers) * Install bike friendly storm grates & continuous pavements 	<ul style="list-style-type: none"> * Provide adequate pedestrian lighting * Increase the shoulder width (retrofitting existing streets) * Identify/sign shared roadways * Add additional bicycle lanes 	<ul style="list-style-type: none"> * Designate regional routes with bike lanes or independent bike trails/pathways * Coordinate with Three Rivers Park District on signage and wayfinding * Develop a "Richfield Loop" for bicyclists (similar to the Grand Rounds in Minneapolis) 	<ul style="list-style-type: none"> * Provide continuous bicycle lanes through intersections * Differentiate between the bicycle lane & the vehicle lane using contrasting color or material (paint, asphalt/concrete) * Add amenities to key transportation nodes and destinations to integrate alternate modes of transportation (bicycle lockers, shelters, lighting, showers, etc...) * Identify/sign shared roadways * Increase the shoulder width (retrofitting existing streets)

TRANSIT

Pedestrian and bicycle facilities alone will not be able to address all of the transportation needs within Richfield. Other systems, such as transit, are required to serve the varied needs of a metro community. Transit is an important element in the overall transportation network because it:

- » Offers an option to senior citizens and people who cannot drive or cannot afford an automobile with access to various services within the area (i.e., medical care, shopping and governmental services).
- » Provides opportunities to people who prefer an alternative to automobile travel.
- » Potentially removes a portion of existing or future automobile traffic from the roadway, possibly reducing travel time and congestion for other vehicles on the roadway.

Existing Conditions

The 2040 Transportation Policy Plan identifies four existing transit market service areas for all communities within the Twin Cities metropolitan area. Richfield is located within Transit Market Area II. Transit Market Area II has high to moderately high population and employment densities and typically has a traditional street grid. Much of Market Area II is also categorized as an Urban Center and it can support many of the same types of fixed-route transit as Market Area I, although usually at lower frequencies or shorter service spans. Richfield is currently served by Metro Transit and Metro Mobility.

Metro Transit

Metro Transit is the transit operating division of the Metropolitan Council. There are a number of Metro Transit routes (see Figure 7-7) through Richfield, including limited stop or non-stop service including to/from downtown

Minneapolis. The high-frequency routes offer service every 15 minutes during weekdays from 6:00 a.m. to 7:00 p.m., and also on Saturdays from 9:00 a.m. to 6:00 p.m. Key transit corridors in Richfield include 66th Street, 76th/77th Streets, Portland, Penn, Lyndale and Nicollet Avenues, as well as TH 62 and I-35W.

There is one transit center/park-and-ride location within the city located at the Best Buy Headquarters along Knox Avenue, just south of 76th Street. The park-and-ride has a capacity of 500 vehicles and offers a connection to 2 bus routes (535 and 539). In addition, the Southdale Transit Center, which has a capacity of 102 vehicles, is located just outside of the City limits at the corner of 69th Street and York Avenue. This park-and-ride location offers a connection to nine routes (6, 515, 537, 538, 539, 578, 579 and SWFlex Blue and Red).

Metro Mobility & Transit Link

Metro Mobility is a paratransit service for persons with mobility impairments. The Metro Mobility system divides the metro area into zones with service providers within each zone actually operating the vehicles under contract to the Metropolitan Council. Routes and schedules are planned to transport multiple passengers to assorted locations. Rider eligibility is based on a person's functional inability to use regular-route services due to disability or health condition. The federal Americans with Disabilities Act (ADA) forms the structure that the Metropolitan Council must follow in providing this service. Metro Mobility service is funded through appropriations from the Minnesota State Legislature, passenger fares and federal funding. The Metro Mobility service in Richfield is 24-hour.

Another transit option in Richfield includes Transit Link. Transit Link is a curb-to-curb minibus or van service for the general public that operates on weekdays throughout the seven-county metropolitan area. It is a shared-ride service, which must be reserved in advance.

Travel Demand Management:

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

Travel demand management may include both incentives and disincentives meant to reduce trip-making activity, decrease single-occupant vehicle travel, shift travel away from congested locations, increase high occupancy vehicle travel and decrease peak hour travel. Most TDM actions are targeted toward the peak hour work trip in highly congested areas.

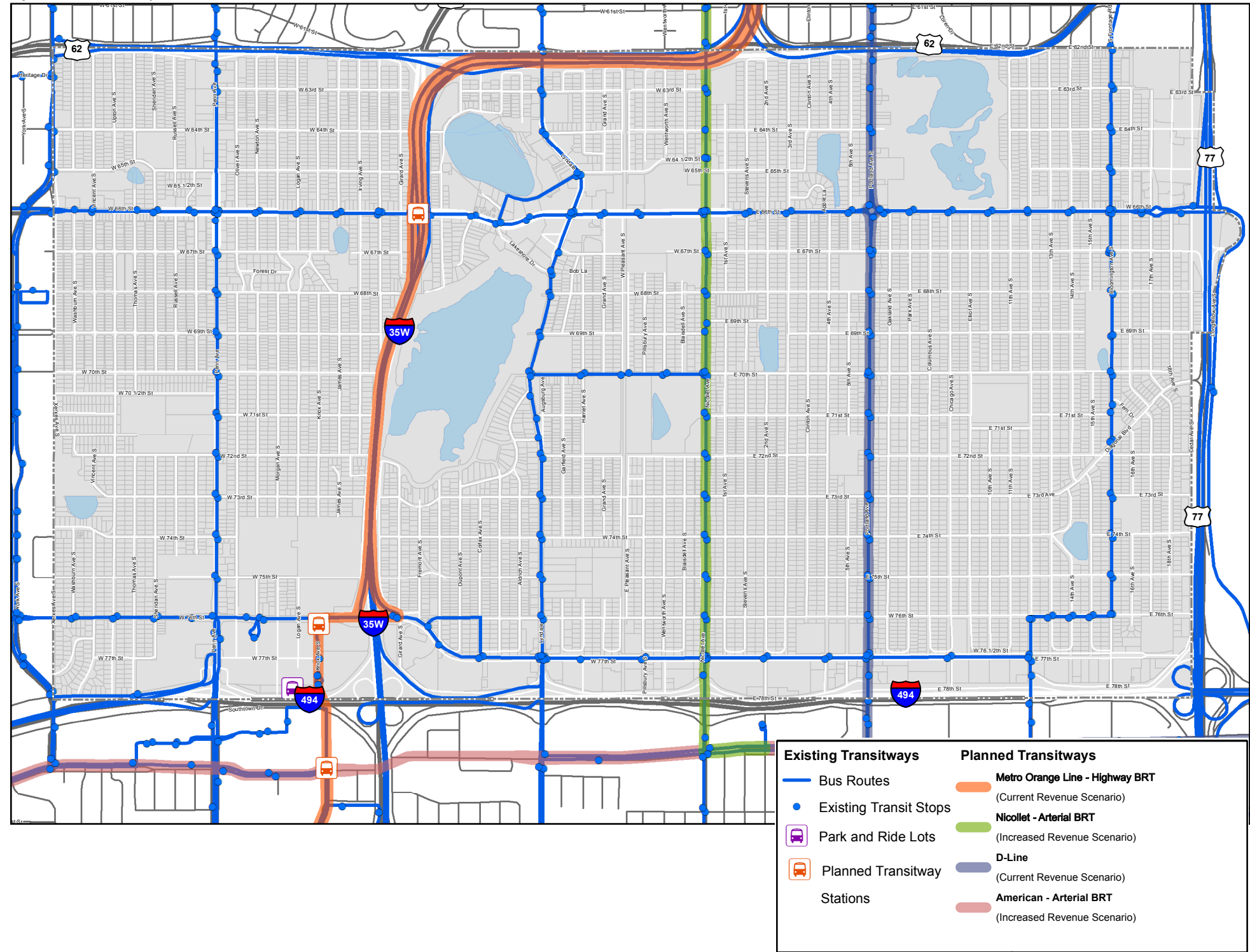
Richfield has a TDM program that requires developers to provide a sidewalk/trail alignment plan and describe efforts to promote walking, biking, transit and carpools with each development proposal. As part of the City's TDM program, they will also consider reduced zoning ordinance requirements, such as a reduction in requirements for auto parking in transit-oriented developments or bike/walk districts.

Existing Transitways

- Bus Routes
- Existing Transit Stops
- Park and Ride Lots
- Planned Transitway Stations

Planned Transitways

- Metro Orange Line - Highway BRT** (Current Revenue Scenario)
- Nicollet - Arterial BRT** (Increased Revenue Scenario)
- D-Line** (Current Revenue Scenario)
- American - Arterial BRT** (Increased Revenue Scenario)



Future Systems

Richfield recommends and supports an aggressive approach to transit expansion projects and funding mechanisms that will materially reduce congestion, improve urban mobility, and bolster our regional economy and lifestyle. Furthermore, Richfield acknowledges the transitway investments planned for the community in the Current Revenue Scenario in the 2040 Transportation Policy Plan, which includes the Orange Line and D-Line. Other planned transit advantages (i.e., transitways, transit stations and bus stops) are discussed throughout this section.

Transitways

Metro Transit and the Metropolitan Council are proceeding with two transitway projects that will enhance Richfield's transportation system. The 2040 Transportation Policy Plan calls for continued development of the Orange Line Bus Rapid Transit (BRT) and Chicago Avenue (D-Line) Arterial BRT that will connect the suburbs with downtown Minneapolis and other transit modes in the region. Transit stations at key points on these routes will offer park-and-ride facilities and bus transfers from local routes to expedite travel in the Metro area.

- » **Orange Line (Source: Metro Transit BRT website)**
Current Review: The METRO Orange Line is a 17-mile planned highway Bus Rapid Transit (BRT) line that will connect Minneapolis, Richfield, Bloomington, and Burnsville along I-35W. The Orange Line will provide frequent, all-day service in both directions, seven days a week. This route is being planned as part of Thrive 2040's Current Review Scenario.

This route will upgrade and replace the existing local Route 535 with enhanced service and amenities, and new station features will benefit other transit riders along the I-35W corridor. No changes to existing

express bus routes are planned. Orange Line service will have competitive running times for station-to-station trips and offer a new option for reverse-commuters (riders traveling from urban areas to suburban destinations).

The project includes street and highway improvements, upgraded transit stations, and improved bus routes. BRT provides high quality, reliable service like light rail transit, but is less expensive to build and allows for a more flexible route.

Funding commitments for the Orange Line have been provided by the Counties Transit Improvement Board, the State of Minnesota, the Metropolitan Council, Hennepin County, Dakota County, and the Federal government. The project is currently in the engineering phase. A transit-only access ramp between downtown Minneapolis and I-35W and a new Lake Street Station have completed engineering and are now under construction, led by MnDOT.

- » **Chicago Avenue Corridor – D-Line (Source: Metro Transit website and ATCS Study):** In 2011, Metro Transit embarked on the Arterial Transitway Corridors Study (ATCS), a year-long study of improvements along some of the most heavily traveled transit corridors in the Twin Cities area. The purpose of the ATCS was to develop a bus facility and service plan to enhance efficiency, speed, reliability, customer experience, and transit market competitiveness on 11 high-demand urban transitway corridors. One of those corridors includes the Chicago Avenue Corridor.

The D-Line is being planned as part of Thrive 2040's Current Review Scenario for arterial bus rapid transit (arterial BRT). Arterial BRT is high-frequency, limited-stop service offering an improved customer experience on urban arterial streets. Arterial BRT provides improved speed, frequency, passenger experience, and

reliability by upgrading vehicle, runningway, and station quality without the higher capital costs, construction impacts, and right-of-way requirements of an LRT or dedicated busway corridor. These improvements lead to lower operating costs and improved ridership. Lower costs also allow for faster implementation of transit improvements.

The D-Line corridor follows Chicago Avenue and Portland Avenue to American Boulevard, ending at the Mall of America. The alignment serves North Minneapolis, Downtown Minneapolis, the Midtown area medical facilities, and the Chicago-Lake Transit Center. The alignment crosses into Richfield south of TH 62, then turns east on American Boulevard, serving commercial uses before ending at the MOA.

- » **Other Transitways:** Other transitways that may provide benefits to Richfield commuters and travelers include the Blue Line LRT (existing), the Southwest Corridor LRT (planned), and enhanced bus service or BRT along I-494 (planned). Potential routes being considered as part of Thrive 2040's Increased Revenue Scenario include the Nicollet Avenue and American Boulevard BRT Arterial (see Figure 7-7).



Transit Stations and Bus Stops

Richfield recognizes and supports the routes/alignments for the Orange Line and D-Line Arterial BRT. The City will continue to coordinate with its partners (e.g., Metropolitan Council and Metro Transit) in the station-area plans. Richfield will also continue to support Metro Transit's initiatives to enhance the transit user's experience by providing customers a safe, secure and comfortable experience at bus stops. Metro Transit is considering improvements at the 12th Avenue/78th Street bus stops (lighting improvements), an the 77th Street/Chicago Avenue bus stops (new shelters and lighting improvements).

ROADWAYS

Roadways provide for an integrated transportation system that will serve the future needs of its residents, businesses and visitors, support the City's redevelopment plans and complement the portion of the metropolitan transportation system that lies within the City's boundaries. Maintaining and improving this system is important to the ongoing economic health and quality of life of the City, as well as for people to travel easily and safely to work and other destinations, to develop property and to move goods.

Existing Conditions

Richfield has excellent access to the regional transportation

Table 7-2. Roadway Mileage by Jurisdiction

Jurisdiction	Lane Miles	Percentage
City	151.07	81%
County	19.45	10%
State	16.62	9%
Total	187.14	100%

roadway system with Interstate (I) routes I-35W, I-494, Trunk Highway (TH) 77, and TH 62 serving as the City's boundaries. Figure 7-8 displays the existing roadway lane configuration and traffic volumes. The roadway network portion of the transportation system in Richfield is fully built out given its urban footprint. There are approximately 187 lanes miles of roadways, including highway/interstate ramps in Richfield (see Table 7-2 and Figure 7-9 for the number of lanes). Richfield is responsible for operating and maintaining over 80 percent of this system. Enhancements to this system are primarily focused on traffic operations, preservation and the integration of multimodal improvements.

Roadway Jurisdiction

As with all municipalities, jurisdiction over the roadway system is shared among three levels of government: state, county and city. The Minnesota Department of Transportation (Mn/DOT) maintains the trunk highway system on behalf of the state; Hennepin County maintains the County State Aid-Highway (CSAH) and County Road (CR) systems and the remaining streets in the city are the responsibility of Richfield.

The jurisdiction of roadways is an important element in the Transportation Plan because it affects a number of critical organizational functions and obligations (regulatory, maintenance, construction and financial). The primary goal of reviewing jurisdiction is to match the roadway function with the organizational level best suited to handle the route function. The existing jurisdiction of roadways in Richfield is illustrated in Figure 7-9 and Table 7-2.

Functional Classification

Roadway functional classification categories are defined by the role they play in serving the flow of trips through the overall roadway system. Within the Twin Cities metropolitan area, the Metropolitan Council has established detailed

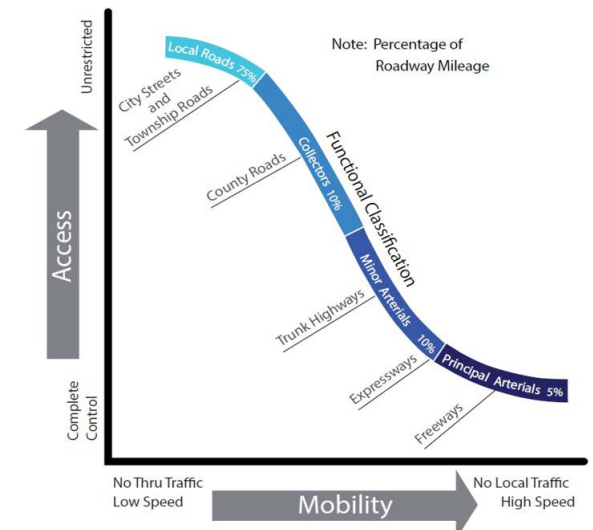


Figure 7-8. Mobility and Access

criteria for roadway functional classifications (see Table 7-3). The intent of the functional classification system is to create a hierarchy of roads that collect and distribute traffic from neighborhoods to the metropolitan highway system. Roadways with a higher functional classification (arterials) generally provide for longer trips, have more mobility, have limited access and connect larger centers. Roadways with a lower functional classification (collectors and local streets) generally provide for shorter trips, have lower mobility, have more access and provide connection to higher functioning roadways. A balance of all functions of roadways is important to any transportation network. Figure 7-8 depicts the relationship of the various functional classifications to access and mobility. The existing functional classification (2018) of roadways in Richfield is shown in Figure 7-10. The existing functional classification system represents the system that has been approved by the Metropolitan Council and is in place at the time this document was written.

Table 7-3. Roadway Functional Classifications

Criteria	Principal Arterial	Minor Arterial and Other Arterial	Collector	Local Street
Criteria	Principal Arterial	Minor Arterial and Other Arterial	Collector	Local Street
Intersections	Grade separated desirable where appropriate. At a minimum, high-capacity controlled at-grade intersections	Traffic signals, roundabouts, and cross-street stops	Four-way stops and some traffic signals	As required
Parking	None	Restricted as necessary	Restricted as necessary	Permitted as necessary
Large Trucks	No restrictions	Candidates for local truck network, large trucks restricted as necessary	May be candidates for local truck network, large trucks restricted as necessary	Permitted as necessary
Management Tools	Ramp metering, preferential treatment for transit, access control, median barriers, traffic signal progression, staging of reconstruction, intersection spacing	Traffic signal progression and spacing, land access management/control, preferential treatment for transit	Number of lanes, traffic signal timing, land access management	Intersection control, cul-de-sacs, diverters
Typical Average Daily Traffic Volumes	15,000-100,000+	5,000-30,000+	1,000-15,000+	Less than 1,000
Posted Speed Limit	40-65 mph	30-45 mph	30-40 mph	Maximum 30 mph
Right-of-Way	100-300 feet	60-150 feet	60-100 feet	50-80 feet
Transit Accommodations	Transit advantages that provide priority access and reliable movement for transit in peak periods where possible and needed	Transit advantages for reliable movement where needed.	Regular-route buses, transit advantages for reliable movement, where needed	Normally used as bus routes only in nonresidential areas
Bicycle and Pedestrian Accommodations	On facilities that cross or are parallel to the principal arterial, with greater emphasis along transit routes and in activity centers. Crossings should be spaced to allow for adequate crossing opportunities.	On facilities that cross or are parallel to the minor arterial, with greater emphasis along transit routes and in activity centers. Crossings should be spaced to allow for adequate crossing opportunities.	On, along, or crossing the collector with higher emphasis along transit routes and in activity centers. Crossings should be spaced for adequate crossing opportunities.	On, along, or crossing the local road

Source: Metropolitan Council, 2040 Transportation Policy Plan, 2015

This table summarizes characteristics for existing roadways to be used in evaluating functional classification and should not be used as design guidelines.

Criteria	Principal Arterial	Minor Arterial and Other Arterial	Collector	Local Street
Place Connections	Connect regional job concentrations and freight terminals within the urban service area.	Provide supplementary connections between regional job concentrations, local centers, and freight terminals within the urban service area.	Connect neighborhoods and centers within the urban service area.	Connect blocks and land parcels within neighborhoods and within commercial or industrial developments.
Spacing	Urban communities: 2 – 3 miles Suburban communities: Spacing should vary in relation to development density of land uses served, 2 – 6 miles	Regional job concentrations: 1/4 – 3/4 mile Urban communities: 1/2 – 1 mile Suburban communities: 1 – 2 miles.	Job concentrations: 1/8 – 1/2 mile Urban Communities: 1/4 – 3/4 mile Suburban Communities: 1/2 – 1 mile	As needed to access land uses
System Connections	To Interstate freeways, other principal arterials, and select A-minor arterials. Connections between principal arterials should be of a design type that does not require vehicles to stop. Intersections should be limited to 1-2 miles.	To most interstates, principal arterials, other minor arterials, collectors and some local Streets.	To minor arterials, other collectors, and local streets.	To a few minor arterials. To collectors and other local streets.
Trip-Making Service	Trips greater than 8 miles with at least 5 continuous miles on principal arterials. Express and highway bus rapid transit trips	Medium-to-short trips (2-6 miles depending on development density) at moderate speeds. Longer trips accessing the principal arterial network. Local, limited-stop, and arterial bus rapid transit trips.	Short trips (1-4 miles depending on development density) at low-to-moderate speeds.	Short trips (under 2 miles) at low speeds, including bicycle and pedestrian trips. Longer trips accessing the collector and arterial network.
Mobility vs. Land Access	Emphasis is on mobility for longer trips rather than direct land access. Little or no direct land access within the urbanized area.	Emphasis on mobility for longer trips rather than on direct land access. Direct land access limited to concentrations of activity including regional job concentrations, local centers, freight terminals, and neighborhoods.	Equal emphasis on mobility and land access. Direct land access predominantly to development concentrations.	Emphasis on land access, not on mobility. Direct land access predominantly to residential land uses.
System Mileage	5-10%	10-15%	5-15%	60-75%
Percent of Vehicle Miles Traveled	15-35%	15-25%	10-25%	10-25%

Figure 7-9. Jurisdiction & Existing Traffic Volumes

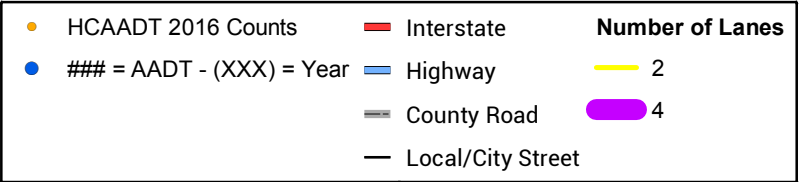
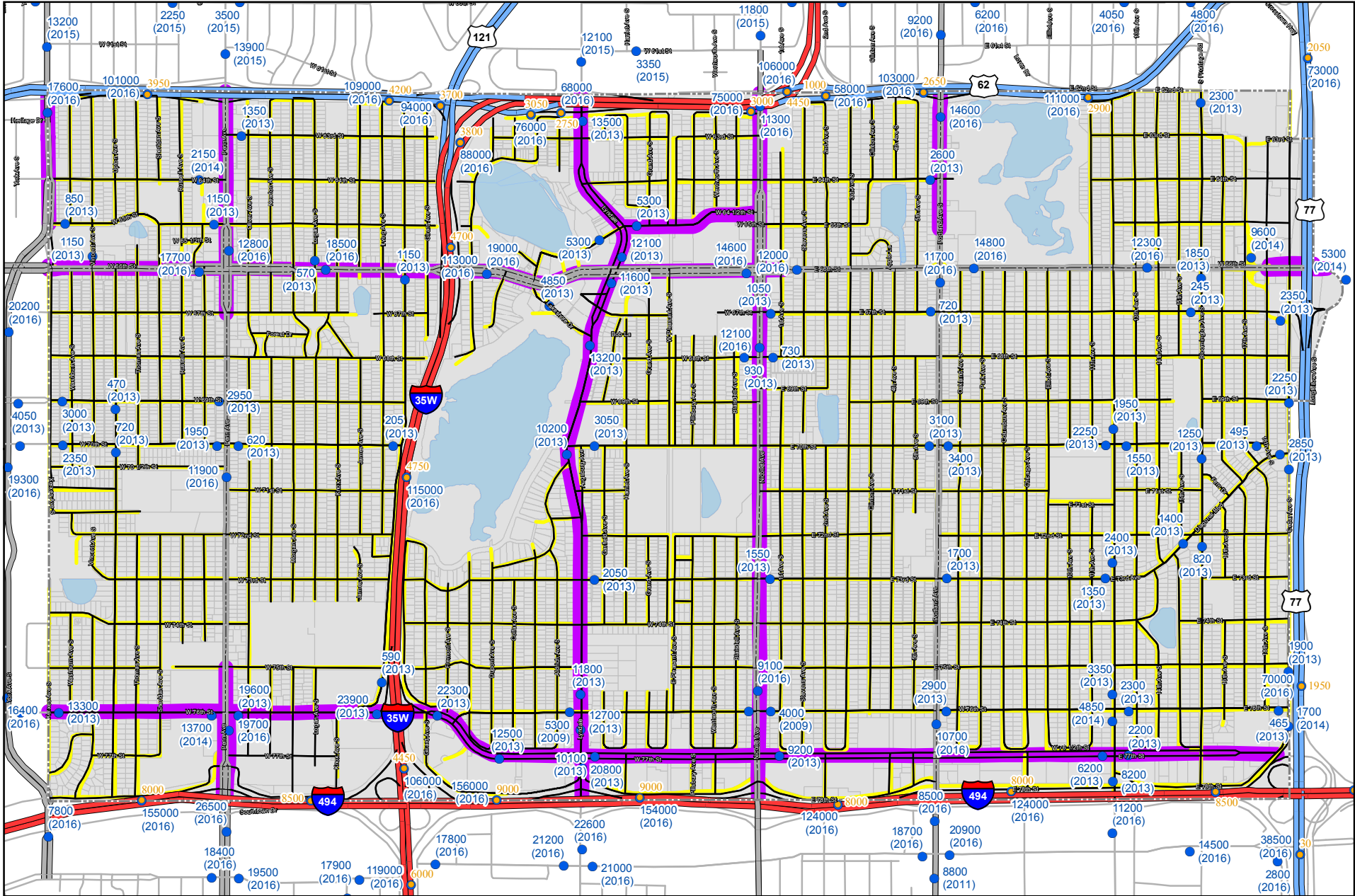
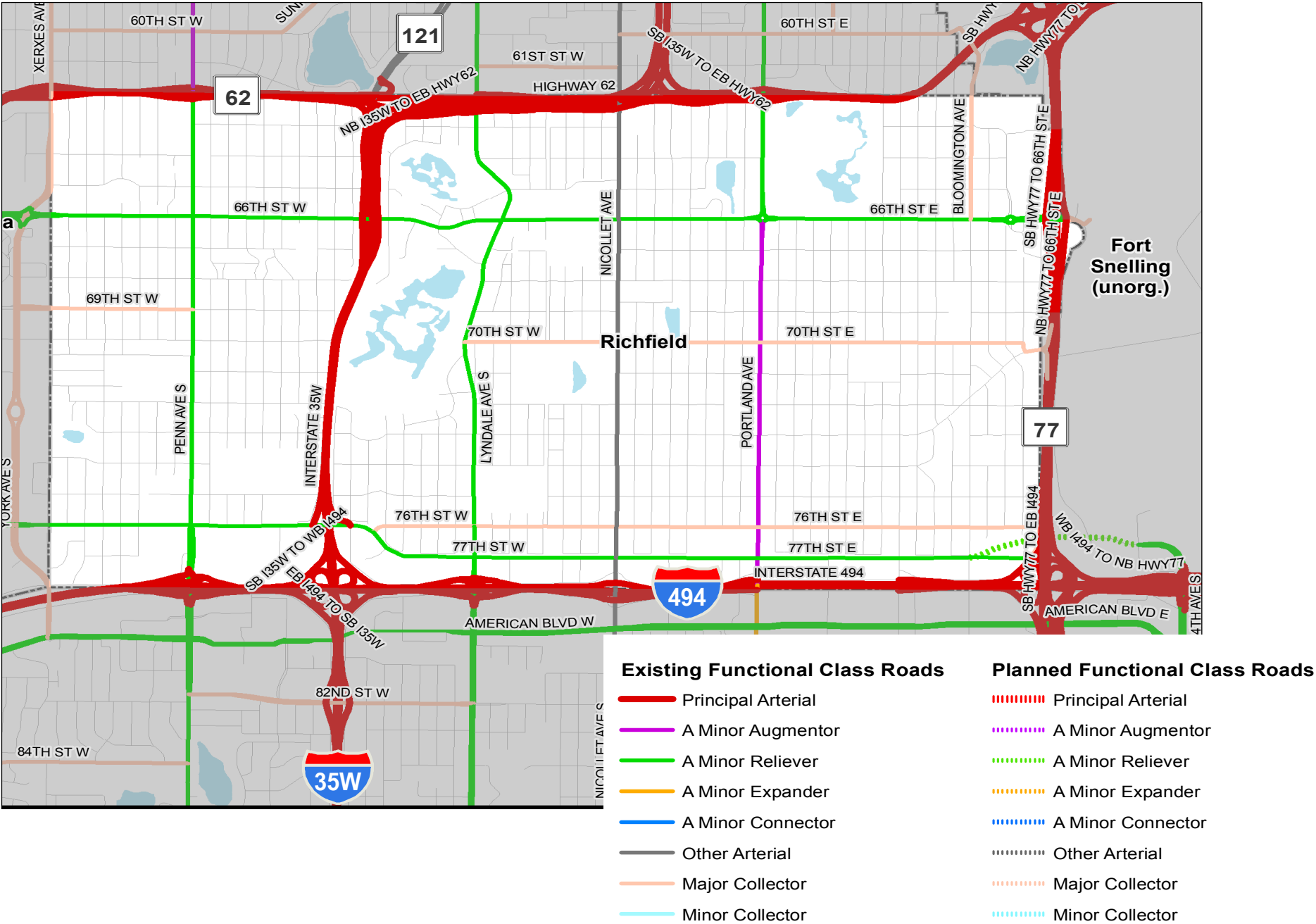


Figure 7-10. Functional Classification



Principal Arterials

Principal arterials are part of the metropolitan highway system and provide high-speed mobility between the Twin Cities and important locations outside the metropolitan area. They are also intended to connect the central business districts of the two central cities with each other and with other regional business concentrations in the metropolitan area. Principal arterials are generally constructed as limited access freeways in the urban area, but may also be constructed as multiple-lane divided highways.

A Minor Arterials

'A' minor arterials are roadways that are of regional importance because they relieve, expand or complement the principal arterial system. Minor arterials also emphasize mobility over land access, serving to connect cities with adjacent communities and the metropolitan highway system. Major business concentrations and other important traffic generators are located on minor arterial roadways. In urbanized areas, one to two mile spacing is considered appropriate. 'A' minor arterials are also categorized into four types, consistent with Metropolitan Council guidelines. Several of which applies to Richfield:

- » **A-Minor Augmentor:** Supplement the principal arterial system in more densely developed or redeveloping areas.
- » **A-Minor Reliever:** Provide supplementary capacity for congested, parallel principal arterial
- » **Other Arterial:** 'Other' arterials provide a citywide function, serving medium to long distance trips.

Collectors

Collectors are designed to serve shorter trips that occur within the city and to provide access from neighborhoods to other collector roadways and the arterial system. They are expected to carry less traffic than arterial roads and

to provide access to some properties. Collectors are designated as either major or minor collectors. Major collectors supplement the arterial system by emphasizing mobility over land access. However, because of their location, they are lower-volume roads than arterial routes. Minor collectors emphasize land access over mobility and provide connections to major collector and minor arterial routes. Richfield does not have any minor collectors. However, there are a few candidates for minor collectors that include 64th Street between Xerxes Avenue and I-35W, and 64th Street between Nicollet Avenue and Portland Avenue.

Local Streets

Local streets provide access to adjacent properties and neighborhoods. Local streets are generally low speed and designed to discourage through traffic. All of the remaining roadways in the City that were not listed under the previous functional classifications above fall under the local road designation.

FUTURE ROADWAY SYSTEM PLAN

Congestion is a growing issue for commuters throughout the Twin Cities metropolitan area. Users consider facilities congested when speeds are reduced significantly below posted speeds and/or long queues are evident at intersections. Congestion can lead to increases in crashes, diversion from desired roadways or use of local routes for regional movements, increases in travel times and vehicle emissions.

MnDOT defines congestion on freeway or highway facilities as traffic flowing at speeds less than or equal to 45 miles per hour (mph). According to MnDOT's annual Metropolitan Freeway System Congestion Report (2015), there are a number of segments along I-35W, I-494, TH 77 and TH 62

in Richfield that are congested during both the morning and afternoon peak periods, trending more during the afternoon peak periods. However, the 2040 Transportation Policy Plan (TPP) acknowledges that "congestion cannot be eliminated or greatly reduced. The region's mobility efforts will need to focus on managing congestion and working to provide alternatives. The majority of resources available between now and 2040 will be needed for preservation, management and operation of the existing highway system."

MnDOT has studied the I-494 and TH 62 corridors, from the MSP airport to Eden Prairie, and identified many needed improvements. These improvements include the interchange of I-494 at I-35W, MnPASS Express Lanes on I-494, along with auxiliary lanes and interchange improvements along both corridors. Funding has been identified for an initial phase of these improvements including a portion the major interchange at I-494 at I-35W along with the MnPASS Express Lanes on I-494. This initial phase of improvements will address significant congestion and reduce crashes along I-494. Improvements on TH 62 are a high priority for the City of Richfield. Future funding for the remaining items, including TH 62 improvements will restore a balance with regional traffic on the regional highways and less diversion onto local roads.

Existing and Anticipated Capacity Deficiencies

Typically, a capacity assessment has been prepared for the Comprehensive Plan to determine if any roadways are approaching or over their capacity, indicating congestion. In response to the 2040 TPP (see narrative above), an analysis of this nature may no longer be fruitful. Instead, the Comprehensive Plan has placed a greater focus on multimodal transportation needs and travel demand management strategies (see sidebar) to reduce and manage congestion. Richfield recognizes the importance of these

strategies as the region looks to reduce congestion through other means beyond expansion.

The City's urban footprint also presents challenges in expanding the system. Expanding roads (e.g., two-lanes to four-lanes) would require significant right-of-way acquisition and is not in the best interest of the community. The City's priorities are to manage and maintain the existing system, and enhance the multimodal system. Roadway improvements that have been programmed by the City, County or MnDOT are depicted in Table 7-4.

Richfield will monitor existing and anticipated capacity deficiencies through regional modeling efforts. As part of these efforts, Richfield has estimated existing and future population, employment, and households by Traffic Analysis Zones (TAZs) (see Table 7-5). The allocation of new growth by time horizons (2020, 2030 and 2040) are primarily reflected in the redevelopment areas (e.g., Penn Avenue north of 66th Street, the HUB, and the Cedar Avenue Corridor). This information was required to complete the traffic forecasting procedures used to estimate future traffic volumes by Hennepin County. Results (2040 Traffic Volumes) from the Hennepin County Activity Based Model are depicted in Figure 7-11. Based on these figures and the narrative above, the City has no right-of-way locations that need to be preserved at this time.

Roadway Jurisdiction Changes

There is one potential jurisdictional transfer within the City of Richfield. Richfield and Hennepin County are considering a potential jurisdiction change of 77th Street from a City Street to a Hennepin County Road. If this happens, Hennepin County could potentially turn back County Road 52 (Nicollet Avenue) to the City of Richfield as a City Street.

Functional Classification Changes

The functional classification system for roadways in the Richfield was reviewed to ensure appropriate network connectivity is maintained and for consistency with the functional classification criteria established by the Metropolitan Council. Based on this review, there is one recommended functional classification change to the minor arterial system within Richfield. This change is in response to the Cedar Avenue Master Plan.

There are also three changes proposed to the collector/local functional classifications.

- » 64th Street from Nicollet Avenue to Portland Avenue
- » 64th Street from Xerxes Avenue to I-35W
- » 70th Street from Xerxes Avenue to Penn Avenue

Each of these roadways is currently classified as a local street. However, they each function as "Minor Collectors", emphasizing land access over mobility and providing connections to major collector and arterial routes.

Table 7-4. Programmed Improvements

Road	Project	Source	Time frame
I-35W	Concrete pavement rehabilitation north of 76th Street to 66th Street.	MnDOT 10-Year Capital Highway Investment Plan (CHIP)	2020
I-494	Mill and overlay from 24th Avenue to France Avenue	MnDOT 10-Year Capital Highway Investment Plan (CHIP)	2025
Highway 62	Bituminous mill and overlay from Portland Avenue to 28th Street in Minneapolis, in addition to bridge 27521 Rehab and ADA improvements.	MnDOT 10-Year Capital Highway Investment Plan (CHIP)	2019
Highway 62	Construct parallel acceleration lane at EB entrance ramp from France Avenue in Edina, in addition to bridge rehab.	MnDOT 10-Year Capital Highway Investment Plan (CHIP)	2019
Highway 62	Reconstruction between Tracy Avenue to Penn Avenue	MnDOT 10-Year Capital Highway Investment Plan (CHIP)	2025
Highway 77	Medium bituminous overlay from I-494 to 63rd Street.	MnDOT 10-Year Capital Highway Investment Plan (CHIP)	2022
65th Street	Reconstruction of 65th Street between Nicollet Avenue and 66th Street. The project will include a public input process to identify the future streetscape and includes replacement of City utilities.	Richfield 2017 – 20201 CIP	2020
66th Street	Reconstruction of 66th Street (CR 53) from Xerxes Avenue east to 16th Avenue, including replacement of City utilities, undergrounding of parallel overhead utility lines, and improved bicycle and pedestrian accommodations. The City cost share includes 10% of road construction, 50% of storm sewer, 100% of water/sewer utility replacement, and any additional streetscape elements not cost shared by the County. Design was approved by the City Council in 2015, following a public input process.	Richfield 2017 – 2021 CIP Hennepin County 2017 - 2021CIP	2017 - 2019
Penn Avenue	This project consists of the reconstruction of Penn Avenue from 62nd Street south to 77th Street. The new roadway cross-section would be consistent with the recommended alternative identified in the 2009 Arterial Roads Study (3-lane section) with the exact design to be determined through a public input process. The project includes the replacement of City utilities.	Richfield 2017 – 2021 CIP Hennepin County 2017 - 2021CIP	2019
70th Street	Reconstruction of 70th Street between 2nd Avenue to 5th Avenue, including sidewalk and curb and gutter. The reconstruction will include replacement of City utilities including a 84" storm sewer pipe that will connect to the storm system installed with the Portland Ave project. Design of the roadway will include a public participation process.	Richfield 2017 – 2021 CIP	Beyond 2021
76th Street West	Reconstruction of 76th Street between Sheridan Avenue and Xerxes Avenue, including replacement of City utilities, undergrounding of overhead utilities, retaining wall and sidewalk replacement. The exact design of the roadway will be determined through a public input process. A mill & overlay will take place in 2016 to upgrade pavement condition until the full reconstruction can take place in 2022.	Richfield 2017 – 2021 CIP	Beyond 2021

Road	Project	Source	Time frame
77th Street Underpass at Highway 77	The project would extend 77th Street under Highway 77 to connect to the 24th Avenue Interchange at I-494. Right-of-way acquisition is required to complete the project. The underpass would include bike and pedestrian accommodations.	Richfield 2017 – 2021 CIP	2019
Humboldt Avenue/ Lakeshore Drive	Reconstruction of Humboldt Avenue and Lake Shore Drive between 69th Street and 75th Street, including a public input process to identify the future road section and continuity. The reconstruction will include replacement of City utilities.	Richfield 2017 – 2021 CIP	Beyond 2021
Lyndale Avenue	Reconstruction of Lyndale Avenue between 64th Street and 76th Street excluding areas reconstructed with 66th Street. The new roadway cross-section would be consistent with the recommended alternative identified in the 2009 Arterial Roads Study (3-lane section) with the exact design to be determined through a public input process. The project includes the replacement of City utilities.	Richfield 2017 – 2021 CIP	2019
Nicollet Avenue	This project consists of the reconstruction of Nicollet Avenue from 62nd Street south to 77th Street. The new roadway cross-section would be consistent with the recommended alternative identified in the 2009 Arterial Roads Study (3-lane section) with the exact design to be determined through a public input process. The project includes the replacement of City utilities	Richfield 2017 – 2021 CIP Hennepin County 2017 - 2021CIP	2021

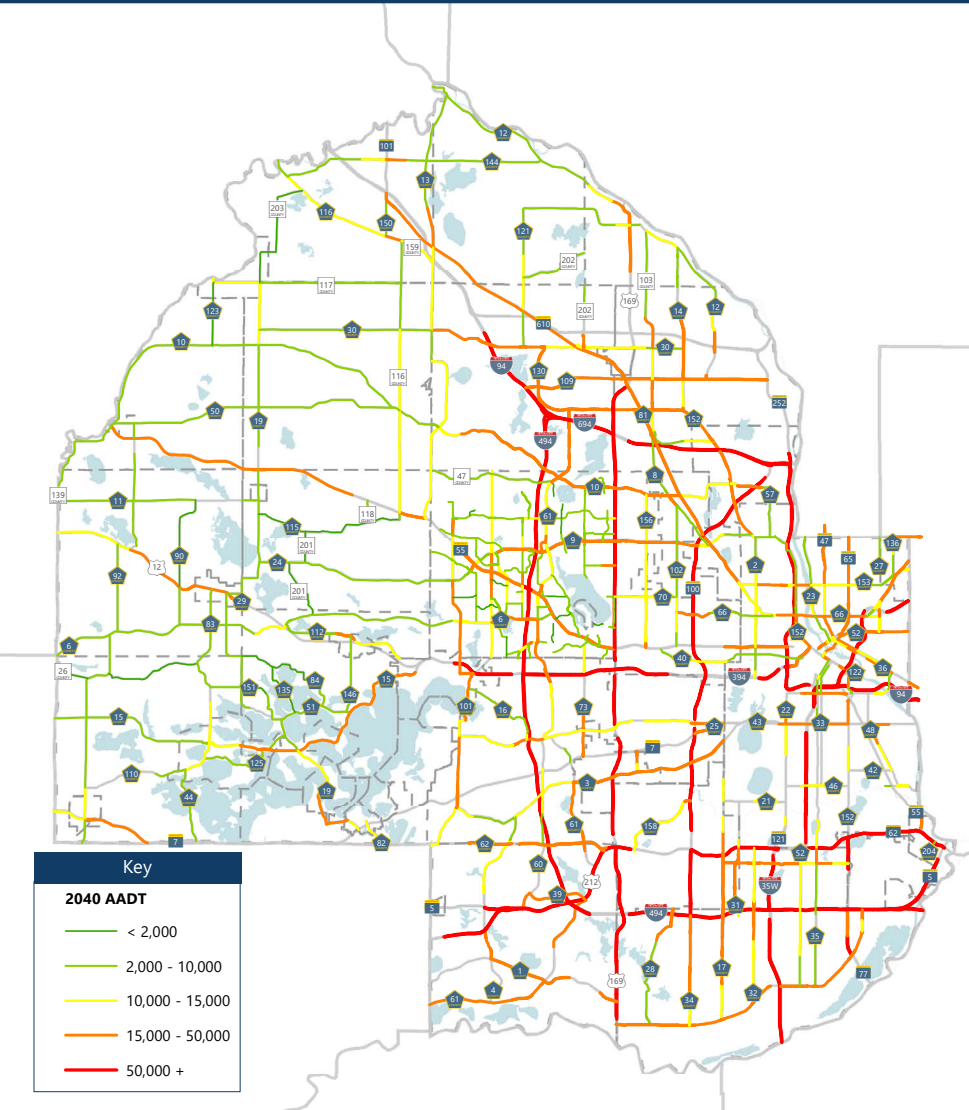
Table 7-5. Richfield Socioeconomic Forecasts by TAZ

TAZ	Population				Households				Employment			
	2010	2020	2030	2040	2010	2020	2030	2040	2010	2020	2030	2040
1560	359	300	310	310	118	120	130	140	322	400	430	460
1561	1,391	1,390	1,390	1,410	509	530	540	550	631	500	530	550
1562	174	140	140	140	46	50	50	50	527	510	540	560
1563	267	230	230	230	110	110	110	120	322	380	380	380
1564	0	0	0	0	0	0	0	0	1,747	2,270	2,270	2,260
1565	1,363	1,410	1,390	1,380	597	610	620	620	266	190	200	200
1566	1,637	1,860	1,820	1,810	889	910	910	910	335	340	340	340
1567	1,281	1,265	1,160	1,140	485	500	490	490	12	20	20	20
1568	1,245	1,180	1,160	1,140	471	490	490	490	7	20	20	20
1569	2,386	2,380	2,450	2,470	797	840	850	870	144	130	160	180
1570	599	570	560	560	217	220	220	230	21	50	50	50
1571	987	960	950	940	375	390	390	390	214	140	160	180
1572	1,305	1,300	1,300	1,300	476	490	490	500	52	50	50	60
1573	616	500	490	490	225	230	240	240	435	190	260	330
1574	1,041	1,110	1,150	1,180	596	640	660	680	133	130	130	130
1575	1,045	1,200	1,220	1,260	541	560	580	600	1,004	760	770	770
1576	1,297	1,300	1,290	1,290	503	520	520	520	716	470	510	550
1577	1,538	1,520	1,500	1,500	603	620	620	630	57	40	40	40
1578	1,474	1,970	2,000	2,020	481	800	810	820	296	260	260	260
1579	1,243	1,320	1,320	1,320	454	490	560	580	898	830	840	830
1580	1,026	1,025	1,050	1,060	409	420	430	430	409	360	360	360
1581	1,180	1,450	1,500	1,530	539	640	640	640	1,395	930	1,000	1,070
1582	1,176	1,200	1,280	1,390	676	730	790	860	382	480	480	480
1583	1,506	1,580	1,500	1,450	668	690	690	700	265	300	300	300
1584	1,032	1,330	1,630	1,900	488	620	810	980	1,214	1,070	1,110	1,130
1589	1,490	1,690	1,690	1,690	677	690	680	680	284	450	460	450
1590	2,172	2,290	2,290	2,290	918	940	940	940	504	340	360	390
1591	1,052	1,090	1,070	1,070	464	490	490	490	201	340	350	360

TAZ	Population				Households				Employment			
	2010	2020	2030	2040	2010	2020	2030	2040	2010	2020	2030	2040
1592	1,340	1,330	1,310	1,310	556	580	580	580	63	50	50	60
1597	1,586	1,800	1,750	1,720	757	800	790	790	16	2,630	2,640	2,630
1598	420	410	400	400	173	180	180	180	2,732	1,970	2,030	2,100
Total:	35,228	37,100	37,300	37,700	14,818	15,900	16,300	16,700	15,604	16,600	17,100	17,500

Figure 7-11. 2040 Forecasted Traffic Volumes (Hennepin County Activity Based Model) & 2040 Deficient Roadway Segments

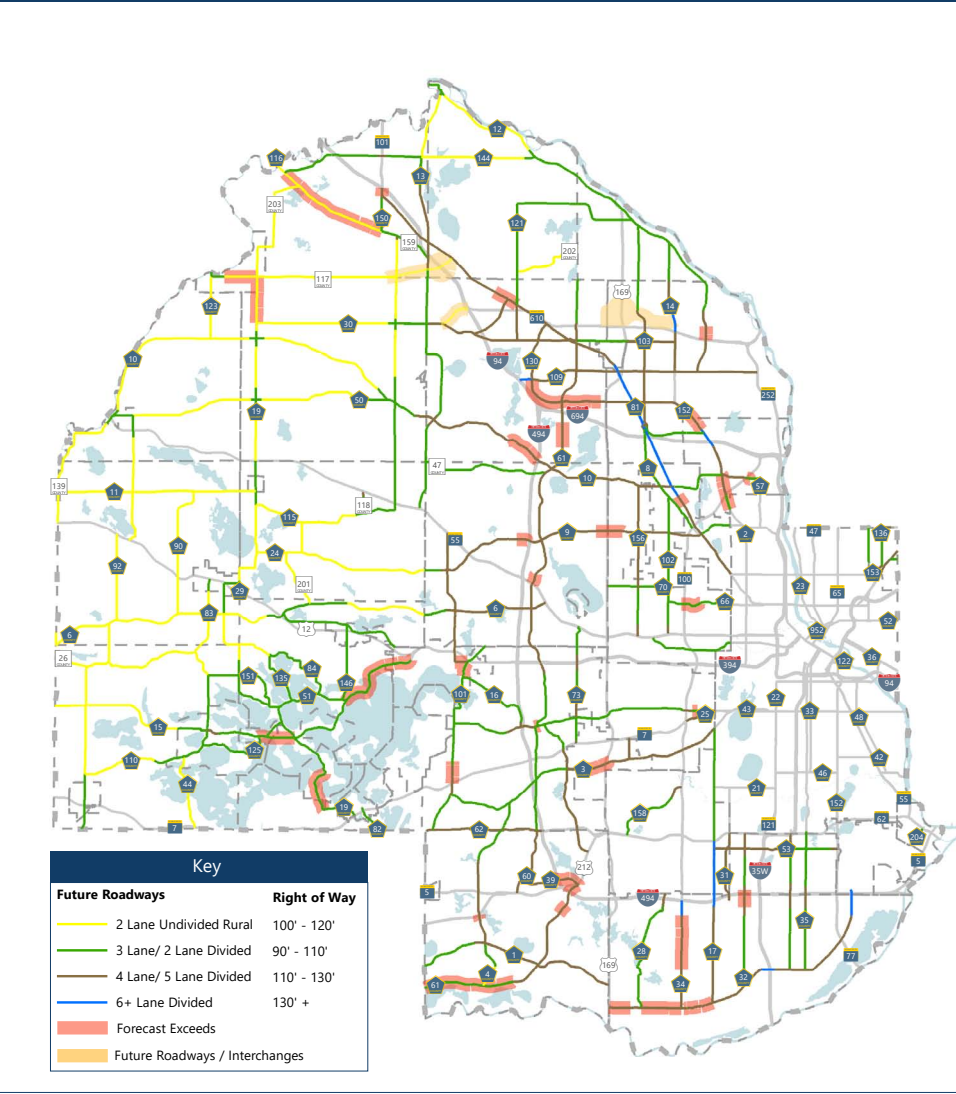
Forecasted Year 2040 Average Annual Daily Traffic (AADT) HENNEPIN COUNTY MINNESOTA
Figure 4-13 | Public Works



Disclaimer: This map (i) is furnished "AS IS" with no representation as to completeness or accuracy; (ii) is furnished with no warranty of any kind; and (iii) is not suitable for legal, engineering or surveying purposes. Hennepin County shall not be liable for any damage, injury or loss resulting from this map.

Publication date: 5/30/2018 Data Source: SRF Consulting

2040 Deficient Roadway Segments HENNEPIN COUNTY MINNESOTA
Figure 4-14 | Public Works



Disclaimer: This map (i) is furnished "AS IS" with no representation as to completeness or accuracy; (ii) is furnished with no warranty of any kind; and (iii) is not suitable for legal, engineering or surveying purposes. Hennepin County shall not be liable for any damage, injury or loss resulting from this map.

Publication date: 5/30/2018 Data Sources: SRF Consulting

FREIGHT

A major component of Richfield's freight system is the roadway network. Key freight corridors within Richfield include I-494 and I-35W, and non-interstate highway corridors, including TH 62 and TH 77 (see Figure 7-13). These corridors provide limited access for uninterrupted traffic flows with a relatively high level of service. In that respect, there are no known roadway issues or problem areas which may affect the efficient movement of freight.

The County State Aid Highway (CSAH) System connects to heavy freight corridors and provides first- and last-mile connections to local customers and businesses. CSAH routes that parallel interstates/highways or connect to industrial and commercial centers significantly support the transportation of freight within Richfield. The only east-west CSAH route includes CSAH 53 (66th Street), which parallels TH 62. The north-south CSAH routes include CSAH 32 (Portland Avenue), CSAH 35 (Portland Avenue) and CSAH 52 (Nicollet Avenue), which parallels I-35W and TH 77, connecting I-494 and TH 62. Other significant routes include city streets, such as 77th Street, Richfield Parkway, and Xerxes Avenue.

Local Freight

There is one branch line of rail service running north and south through the middle of Richfield in the Pleasant Avenue corridor. The line terminates in south Minneapolis, just north of TH 62. There are no businesses in Richfield that use the rail service. However, the line does provide freight service to two rail shippers in south Minneapolis, Cemstone, a concrete manufacturer and LaJeune Steel, a steel fabricator.

Service on the rail line, once known as the "Dan Patch" line after a famous race horse, is based on calls for service by the two Minneapolis shippers. This usually results in one train running north in the morning and one running south

in the afternoon on weekdays. The operating speed on the line is 10 miles per hour based on the poor condition of the track. However, Progressive Rail has leased the line from Canadian Pacific and has been repairing the track.

Richfield is exploring the possibility of using the rail corridor as a bicycle and pedestrian trail to connect Richfield to the Grand Rounds park system in Minneapolis. However, Progressive Rail is actively promoting its rail service. Plans for a pedestrian/bike trail will be delayed until such time that rail service is terminated and the rail line abandoned. In the interim, the City should explore working with Progressive Rail in a cooperative manner to establish a limited pedestrian/ bike trail on portions of the railroad right of way.



Regional Freight

Figure 7-12 and Figure 7-13 illustrate the location of freight generators, which include major economic centers. Existing (2013) heavy commercial annual average daily traffic (HCAADT) volumes are depicted in Figure 7-9. Of these economic centers, portions of the I-494, TH 62 and Cedar Avenue (TH 77) Corridor are significant to the region's freight network as it provides access to regional shopping centers, employment hubs (e.g., Best Buy Headquarters) and the Minneapolis-St. Paul (MSP) International Airport. These areas were also identified as freight intensive clusters in the 2016 Hennepin County Freight Study. Freight intensive clusters generate large amount of truck, rail, or intermodal activity.¹

Photo Credit: MnDOT I-494/TH 62 Congestion Relief Study

¹ Hennepin County Freight Study Task 1: Infrastructure and Network Use. 2016.

Figure 7-12. Freight Network

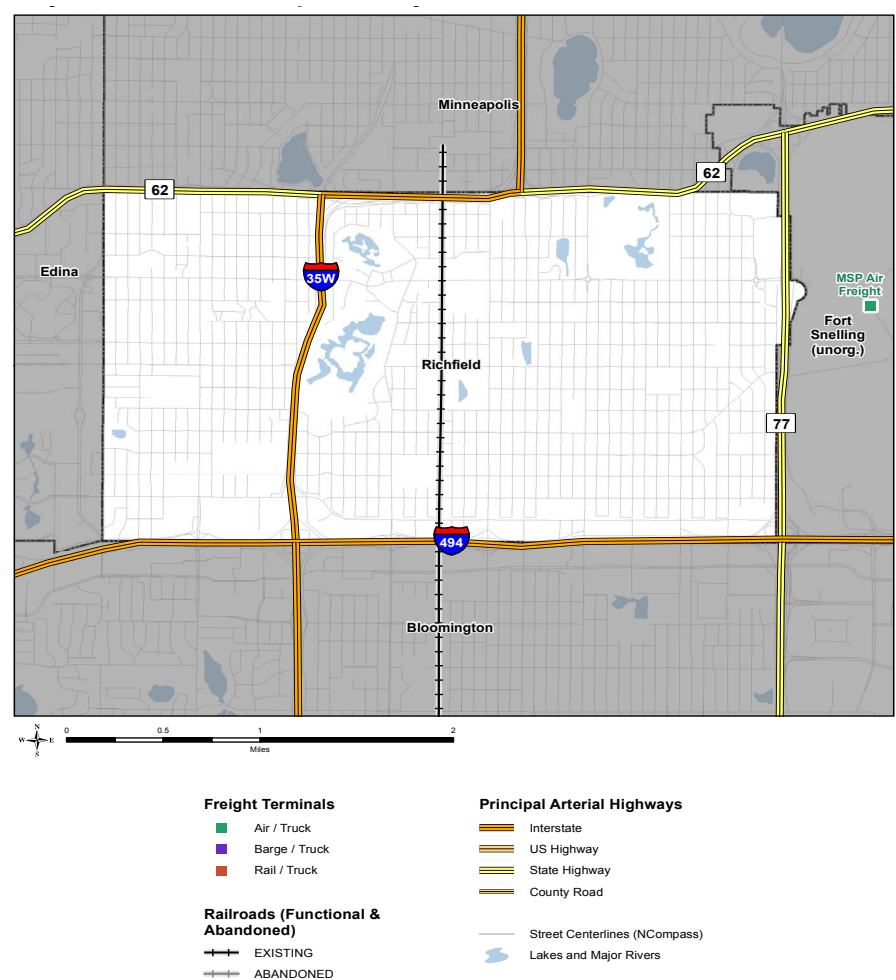
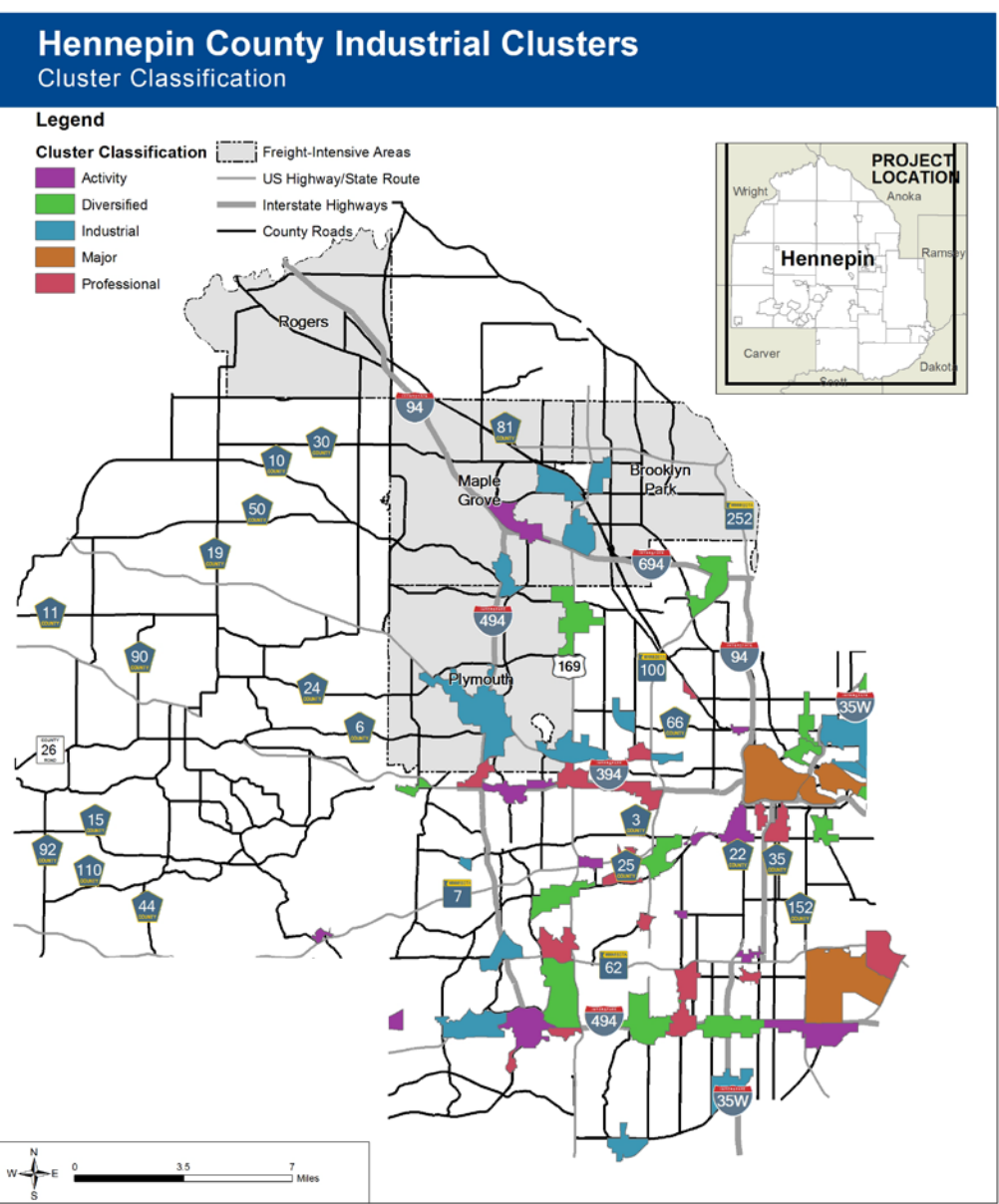


Figure 7-13. Freight Industrial Clusters



Hennepin County Freight Study
Map version date: (06/21/2016)

Hennepin County Public Works

This map (i) is furnished "AS IS" with no representation as to completeness or accuracy; (ii) is furnished with no warranty of any kind; and (iii) is not suitable for legal, engineering or surveying purposes. Hennepin County shall not be liable for any damage, injury or loss resulting from this map.

Hennepin County Public Works





AVIATION

Richfield is located adjacent to the Minneapolis-St. Paul International Airport (MSP), which is a commercial service airport owned and operated by the Metropolitan Airports Commission (MAC). The airport connects the region to 131 domestic and 28 international destinations. Over 38 million passengers were served by MSP in 2017, placing it 17th in the US in annual passengers served. A 2017 economic impact study found that MSP creates over \$15.9 billion in annual economic output and supports 87,000 jobs. Moreover, those coming through the airport spend \$2.5 billion in visitor spending within the community.

MSP's airfield consists of four runways, a network of taxiways, and deicing pads. The parallel runways, Runways 12L/30R and 12R/30L are 8,200 and 10,000 feet long, respectively. The north south runway, Runway 17/35, is 8,000 feet long and the crosswind runway, Runway 4/22, is 11,006 feet long. Each runway has at least one associated full length taxiway. Additional taxiways, aprons and gates provide access to and from the terminals. Service roads

provide access to the all aspects of the airfield. The parallel runways have deicing pads at each end. Runway 17/35 has a deicing pad at the north end.

The MAC will prepare a 2040 MSP Long-Term Comprehensive Plan to serve as a road map to guide both its short and long-term development. Over the next 20 years, the MAC expects the number of aircraft operations (arrivals and departures) to remain below historical peak levels while passenger activity continues to increase as a result of up-gauging in the airline fleet mix at MSP. Therefore, the MAC anticipates that the current airfield will meet projected demand. The primary areas of focus for the MAC's long-term planning will be related to landside and terminal processing capabilities and facilities. Richfield should be involved in these processes to ensure local input to the aviation planning process.

As a neighbor to the Airport, Richfield is affected both positively and negatively by the airport. Part of the City's challenge is to maximize the benefits of its convenient location, while minimizing the aircraft noise effects. Aircraft

noise is a nuisance to many people and the amount of noise in certain areas affects how the land can be used and how buildings need to be constructed to minimize negative impacts.

Airspace Protection

There are no existing or planned aviation facilities within City limits. However, according to both Federal Aviation Administration (FAA) and Mn/DOT Aeronautics safety standards, any applicant who proposes to construct a structure 200 feet above the ground level or that penetrates a 100:1 slope for a horizontal distance of 20,000 feet from the nearest runway must get appropriate approval. The Federal Aviation Administration (FAA) requires that Form 7460-1 "Notice of Proposed Construction or Alteration", under code of federal regulations CFR-Part 77, be filed for any proposed structure or alteration that exceeds 200 feet. FAA Form 7460-1 can be obtained from FAA headquarters and regional offices, or online at the FAA's Obstruction Evaluation/Airport Airspace Analysis website (link to <https://oeaaa.faa.gov>).

These forms must be submitted 45 days before alteration/ construction begins or the construction permit is filed, whichever is earlier. Mn/DOT must also be notified (see Mn/DOT Rules Chapter 8800). The MSP airport/community zoning board's land use safety zoning ordinance should also be considered when reviewing construction in the city that raises potential aviation conflicts. Richfield will monitor any construction or alteration of a structure affecting navigable airspaces through its development review process.

Airport/Aircraft Impacts Land Use

Different types of land uses have varying degrees of sensitivity to aircraft noise. For example, commercial and industrial uses are more compatible with aircraft noise than uses such as residential, schools and churches. Noise sensitivity also varies among residential uses. Single- family homes have more exposed exterior walls and roof areas and rely more on the outdoor yard areas than most multi-family residential housing. As such, single-family homes are generally more affected by aircraft noise than multi-family housing.

The eastern portions of Richfield are particularly affected by aircraft noise (see Figure 7-14 for location of the 2016 noise exposure areas). To avoid additional conflicts the City will look to redevelop the eastern border of the City as guided for in the Cedar Avenue Corridor Redevelopment Plan. The plan does not recommend new single-family homes within the Cedar Avenue Corridor. Construction of multi-family developments is allowed but they must be constructed to provide adequate sound insulation to provide a quiet indoor environment. Redevelopment in the Cedar Avenue Corridor should address low frequency noise mitigation in any new or rehabbed development.

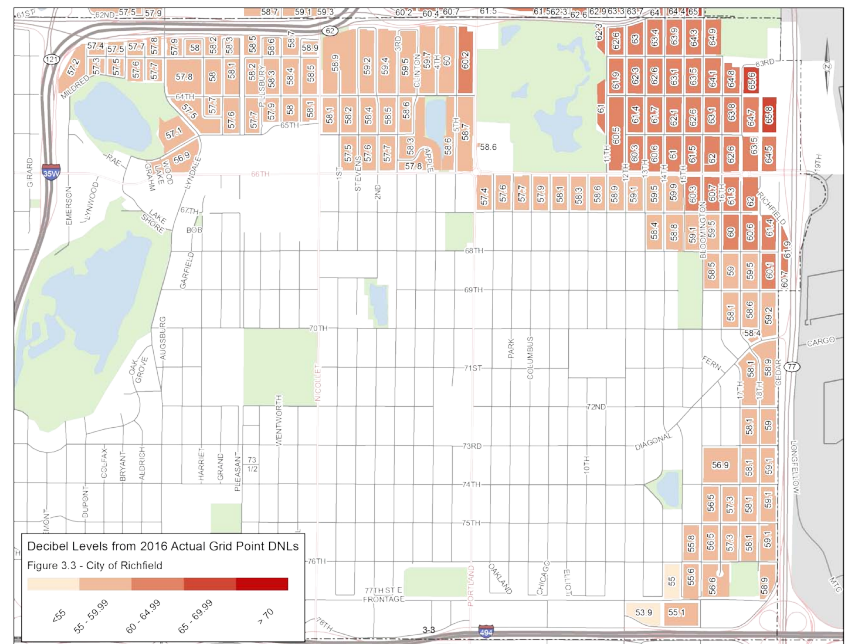
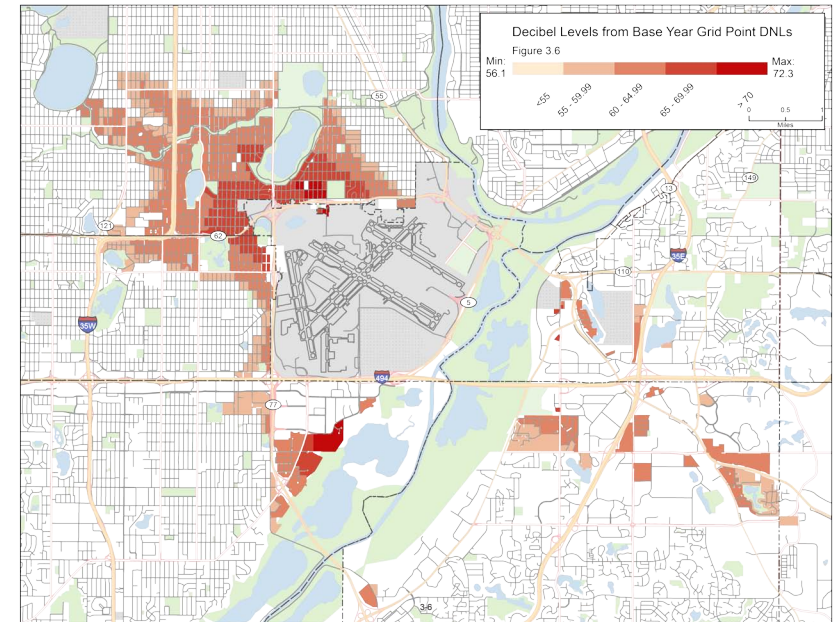
Noise Exposure and Noise Mitigation

Because of Richfield's proximity to the MSP International Airport, noise levels for residents are a concern. The Metropolitan Council's Land Use Compatibility Guidelines for Aircraft Noise indicates a Day-Night Sound Level (DNL) of 65 dBA represents the threshold of significant impact for noise-sensitive land uses. The Metropolitan Council also considers noise-sensitive land uses in the DNL 60-65 dBA contour as potentially incompatible with aircraft noise. 2016 Noise Policy Area map for Richfield is shown in Figure 7-15.

Safety Zones

Safety zones are established around the airport to ensure an unobstructed flight path for departing and arriving aircraft. The safety zones extend off the ends of each runway. Due to the distance between the runways and the municipal border of Richfield, the safety zones have a significant impact for the eastern half of the city. The main concern is that structures within the safety zones must comply with MSP's Safety and Airspace Construction height maps must comply with MSP's Safety and Airspace

Figure 7-14. Decibel Level Maps (Source: MSP 2016 Annual Noise Contour Report



Airport Land Area Development

The MAC is currently in the process of developing an airport land area development strategy for its six reliever airports and MSP. This strategy will review MAC's land holdings and include engaging adjacent communities and businesses to develop new partnership opportunities. Richfield should be involved in these discussions. See Figure 7-16 for a map depicting MSP's existing and proposed facilities.

Zoning Controls

The City's Zoning Code includes an "Airport Impact Overlay District (Section 541)". This code can be found in the sidebar. The airport impact overlay districts are established to protect the public health, safety, order, convenience, prosperity and general welfare and to promote the appropriate use of land in the vicinity of the MSP Airport.

Intergovernmental Relations

The following includes some of the intergovernmental agencies Richfield coordinates with on airport matters.

Noise Oversight Committee: The MSP Noise Oversight Committee (NOC) was established in 2002. The MAC Noise Program Office works closely with the NOC and is dedicated to collecting, analyzing and reporting aircraft operations data for the purpose of working with the communities surrounding the MAC's system of airports on aircraft noise issues.

The cities of Minneapolis, Richfield, Edina, Bloomington, Eagan and Mendota Heights each have a representative on the committee. The cities of Burnsville, Inver Grove Heights, St. Paul, St. Louis Park and Apple Valley are represented through an at-large membership. The at-large members rotate representation duties on an annual basis. The at-large communities appoint a primary At-Large Community member to serve for two years.

Richfield's Airport Impact Overlay District (Section 541)

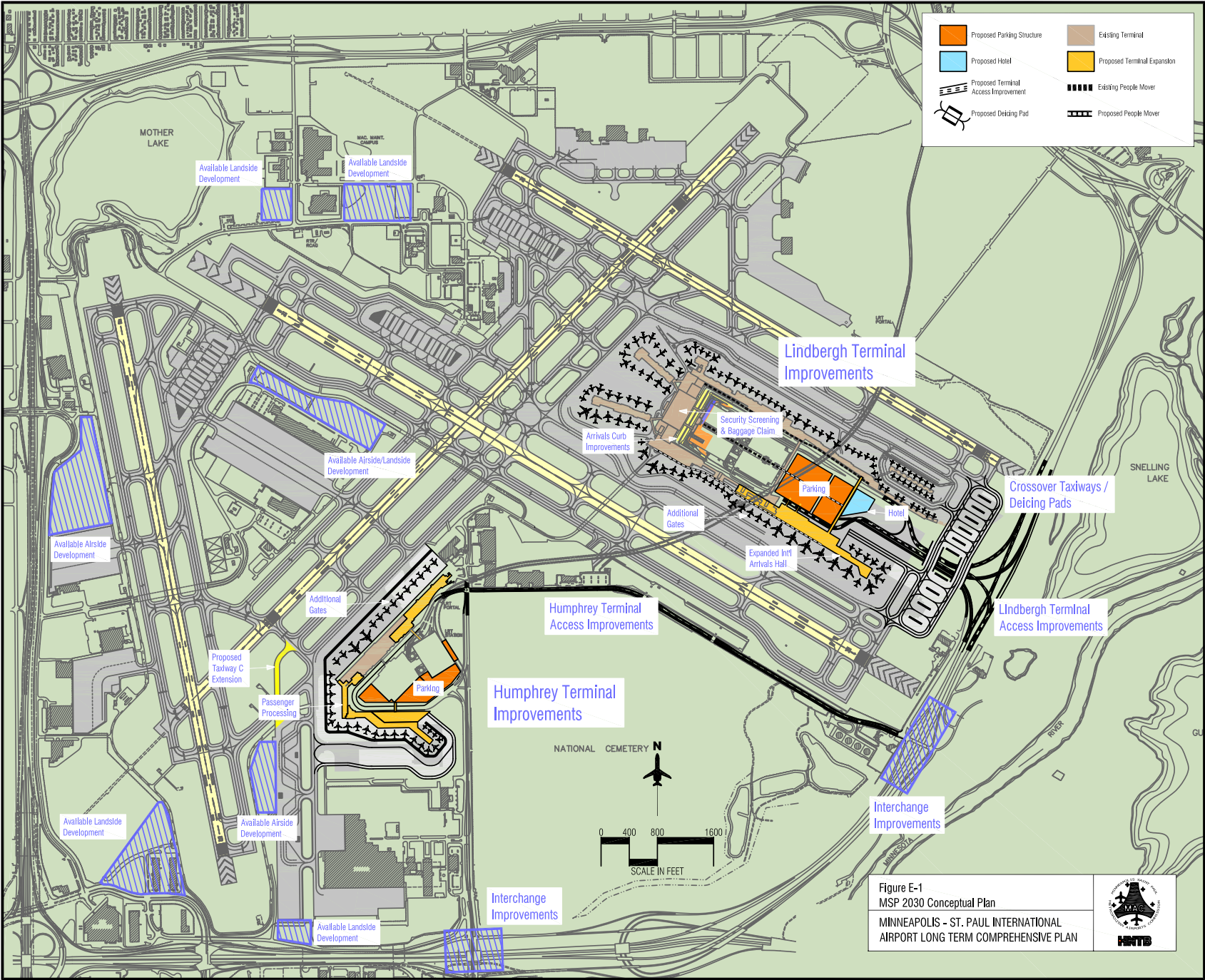
Excerpts from Richfield's Airport Impact Overlay District are listed below. Please reference the City's Zoning Ordinance (Section 541) for more information and a complete version of the Airport Impact Overlay District.

- » The Airport Impact Overlay District I (Safety) shall apply to all land within the City of Richfield designated as Safety Zone B and Safety Zone C in the 2004 MSP Zoning Ordinance.
- » All permitted, accessory, conditional and interim uses allowed in the underlying zoning district are allowed in the Airport Impact Overlay District with the exception of the following prohibited uses: a) Within the portion of the AIO-I District designated as Safety Zone B as contained in Section V Land Use Safety Zoning of the 2004 MSP Zoning Ordinance and shown on MSP Zoning Map Safety Zones - Plate SZ-20, the following uses are prohibited unless a variance permitting the use is granted by the Board of Adjustment established by the 2004 MSP Zoning Ordinance: (1) Amphitheaters; (2) Campgrounds; (3) Churches; (4) Fuel storage tank farms; (5) Above-ground fuel tanks; (6) Gasoline stations; (7) Hospitals; (8) Nursing homes; (9) Residential uses (including low, medium and high density residential uses); (10) Schools; (11) Stadiums; (12) Theaters; (13) Trailer courts; (14) Ponds or other uses that might attract waterfowl or other birds such as putrescible waste disposal operations, wastewater treatment facilities and associated settling ponds, and dredge spoil containment areas; provided, however, the prohibition on ponds or other uses that might attract waterfowl or other birds shall not apply to acres below an elevation of 800 feet above mean sea level along the Bluff of the Minnesota River. b) Within the portion of the AIO-I District designated as Safety Zone C as contained in Section V Land Use Safety Zoning of the 2004 MSP Zoning Ordinance and shown on MSP Zoning Map Safety Zones - Plates SZ-13, SZ-14, SZ-15 and SZ-20 no land use shall violate the height restrictions imposed by the 2004 MSP Zoning Ordinance and described in Subsection 512.13 Subd. 4 of this Code.
- » 541.11. - Height: Except as necessary and incidental to Airport operations, no new structure shall be constructed or established; no existing structure shall be altered, changed, rebuilt, repaired or replaced; and no tree shall be allowed to grow or be altered, repaired, replaced or replanted in any way so as to project above any Airspace Surface as shown on MSP Zoning Map Airspace Zones - Plates A-13, A-14, A-15, A-19 and A-20.

108



Figure 7-16. MSP Existing and Proposed Facilities



Metropolitan Council: The Metropolitan Council is the regional planning agency that has the legislative authority of approving certain capital projects in MAC's Capital Improvements Program under qualifying provisions found in Minnesota Statutes 473.621 (6) (7). The Metropolitan Council's role in the evaluation of noise is to publish guidelines for the compatible use and development of land in communities surrounding the airport.

Other Agencies: In addition to the specific committee's and agencies listed above, several other agencies are involved with the MAC in either a cooperative and/or regulatory capacity. These include: Mn/DOT, the Minnesota Pollution Control Agency (MPCA), and the Minnesota Environmental Quality Board (EQB).

IMPLEMENTATION

This section of the Plan provides valuable strategies, tools and practices that can assist Richfield to implement the Transportation Plan's recommendations and make wise long term decisions.

Right-of-Way Preservation

Right-of-way (ROW) is a valuable public asset. Therefore, it needs to be protected and managed in a way that respects the roadway's intended function, while serving the greatest public good. Richfield may need to reconstruct, widen, and construct new roadway segments to meet future transportation needs. Such improvements will require adequate ROW be maintained or secured. The City will coordinate with MnDOT and Hennepin County for ROW acquisition along county or state routes if and when those needs are required

When future expansion or realignment of a roadway is proposed, but not immediately programmed, the City will consider ROW preservation strategies to reduce costs

and maintain the feasibility of the proposed improvement. Several different strategies may be used to preserve ROW for future construction, including advanced purchase, zoning and subdivision dedication techniques, official mapping, and corridor signing. Before implementing any ROW preservation programs, local agencies should weigh the risks of proceeding with ROW preservation without environmental documentation. (Note: Mn/DOT policy requires environmental documentation prior to purchase.) If environmental documentation has not been completed, agencies risk preserving a corridor or parcel that has associated environmental issues.

Direct Purchase

One of the best ways to preserve ROW is to purchase it. Unfortunately, agencies rarely have the necessary funds to purchase ROW in advance, and the public benefit of purchasing ROW is not realized until a roadway or transportation facility is built. Most typically, local jurisdictions utilize various corridor preservation methods prior to roadway construction and then purchase the ROW if it is not dedicated, at the time of design and construction.

Planning and Zoning Authority

Richfield may use the following to regulate existing and future land use. Under this authority, agencies have a number of tools for preserving right-of-way for transportation projects. These tools include:

- » **Zoning:** If the property has a very low-density zoning classification, the City may try to maintain its existing zoning classification (i.e. do not rezone it). A low zoning classification limits the risk for significant development, and can help preserve land for potential ROW, until funding becomes available for roadway construction.
- » **Platting and Subdivision Regulations:** Platting and subdivision regulations give the city authority to consider future roadway alignments during the platting

process because most land must be platted before it is developed. The city may use their authority to regulate land development to influence plat configuration and the location of proposed roadways. In most instances, planning and engineering staff work with developers to formulate a plat that meets development objectives and that conforms to a long-term community vision and/or plans. Richfield does require ROW dedication as part of the platting and subdivision process.

- » **Official Mapping:** A final strategy to preserve ROW is to adopt an Official Map. An Official Map is developed by the city and identifies the centerline and ROW needed for a future roadway. The city then holds a public hearing showing the location of the future roadway and incorporates the official map into its thoroughfare or community facilities plan. The official mapping process allows the city to control proposed development within an identified area, and to influence development on adjacent parcels. However, if a directly affected property owner requests to develop his/her property, the city has six months to initiate acquisition and purchase of the property to prevent its development. If the property is not purchased, the owner is allowed to develop it in conformance with current zoning and subdivision regulations. As a result, the official mapping process should only be used for preserving key corridors in areas with significant growth pressures.

Access Management

Access management is an important aspect of providing a safe and efficient roadway network. Access management measures include:

- » Providing adequate spacing between access points and intersecting streets to separate and reduce conflicts.
- » Limiting the number of driveway access points to reduce conflicts.

- » Aligning access with other existing access points.
- » Sharing access points, through internal connectivity between property owners.
- » Encouraging indirect access rather than direct access to high volume arterial roads.
- » Constructing parallel roads and backage or frontage roads.
- » Implementing sight distance guidelines to improve safety.
- » Using channelization to manage and control turning movements.

Access review is a major aspect of the City's development review process. The goal is to maintain the safety and capacity of the City's roadways, while providing adequate land access.

Access management also involves balancing the access and mobility functions of roadways. Access refers to providing roadway access to properties and is needed at both ends of a trip. Mobility is the ability to get from one

place to another freely or easily. Most roadways serve both functions to some degree, based on their functional classification. The four levels of functional classification and their corresponding mobility and access traits are as follows:

- » Principal Arterials have the highest mobility with no direct land access.
- » Minor Arterials have a high mobility with limited land access.
- » Collector Streets have moderate mobility with some land access.
- » Local Streets have low mobility with unrestricted land access.

Richfield will continue to support MnDOT and Hennepin County's Access Management guidelines on the Principal and Minor Arterial roadway network in the City through the measures listed above. In addition, the City uses Hennepin County's access spacing guidelines to guide access decisions on the City's roadway network (see Appendix E).

Coordination with Other Jurisdictions

Richfield should coordinate with adjacent jurisdictions (i.e., Bloomington, Edina and Minneapolis) as well as Hennepin County, the MAC and Mn/DOT when planning future improvements. Coordination among jurisdictions may provide opportunities for collaboration that could benefit all agencies and the public. This may result in financial and time savings through economies of scale as well as potentially reducing construction impacts to residents through the coordination of projects.



This page intentionally left blank