



Existing Conditions, Analysis, and Summary of Issues to Address



This section summarizes the existing conditions of the walking and biking network in Robbinsdale. It also discusses the methods that were used to analyze the network and identify locations needing improvement. A summary of specific locations needing improvement is also presented.

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- 3.2 – Existing Conditions
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- 3.4 – Network Vision

3.1 - Introduction

This chapter summarizes key learnings from:

- Information collected from site visits,
- Issues received from city staff, and
- Issues received from Robbinsdale residents,

and combines it with modeling and analysis completed to:

- Understand underlying patterns of demand,
- Determine the suitability of existing facilities to address the walking and biking needs of Robbinsdale residents, even if they are not currently regular users of the walking and biking network, and
- Identify areas where attention should be focused to maximize connectivity gains and improve overall conditions for walking and biking in the city.

The end products of this chapter are:

- A list of issues, routes, locations and intersections to be addressed, and
- A set of guiding principles to guide recommendations for improvement.

This chapter is the starting point for the recommendations included in this Plan, which begin on Chapter 4 (the next chapter in the Plan).



On the Victory Memorial Parkway Trail.

3.2 - Existing Conditions

3.2.1 - Overview

Robbinsdale is a compact city with a gridded street network and a core downtown commercial area. Many residents identify Robbinsdale as having a “small-town feel.” These characteristics, combined with the existence of parks, schools, transit stops, commercial, and other destinations throughout the city, are significant assets for its walking and biking network.

Robbinsdale has a system of sidewalks that are present across the city. Off-road facilities exist offering connections at parks and under/over U.S. Highway 100, West Broadway Avenue, and Bottineau Boulevard. Paved shoulder facilities able to accommodate bicyclists are present along some city streets.

The city is within close proximity to regional destinations and walking and biking amenities such as the Victory Memorial Parkway and Theodore Wirth Parkway, as well as Downtown Minneapolis.

Several intersections and crossings, particularly at County Road facilities in Robbinsdale, present difficulties for pedestrian and bicyclist movement due to high motor-vehicle speeds and volumes, and wide crossing distances that accommodate multiple motor-vehicle travel lanes. These roadway intersections act as barriers for network connectivity.



At Broadway Avenue in Downtown Robbinsdale.

3.2.2 - Infrastructure

Sidewalks

An extensive network of sidewalks exists throughout Robbinsdale along residential streets and adjacent to commercial areas. City staff reports 70-80% sidewalk coverage on streets in Robbinsdale.

In some locations sidewalks are located on only one side of the street. Some areas of the city, particularly the northwest, northeast, south, and parts of the east side, do not include sidewalks. The absence of sidewalks in these locations was mentioned by engagement participants as a barrier to walking. The City of Robbinsdale is leading an ongoing effort to fill sidewalk gaps within the city when opportunities exist.

Surface Streets

Development in Robbinsdale generally follows a traditional street grid, providing a solid foundation for pedestrian and bicycle connectivity. A grid system allows for route choice so that pedestrians and bicyclists can choose alternate routes on calmer streets that run parallel to high-traffic arterials.

Legally, bicyclists are allowed to ride on all streets except for limited access highways. However a number of factors influence the level of comfort and sense of safety that bicyclists experience while utilizing surface streets, including (primarily) traffic speeds and volumes, and the availability of a designated space for bicyclists separated from automobile traffic.

There are paved shoulders on Lake Drive/North 45th Avenue/County Road 9. Hennepin County is undertaking improvements to this road east of Bottineau Boulevard in Robbinsdale. Approved plans call for the inclusion of on-street bicycle lanes. Final completion of this corridor is scheduled for 2016.

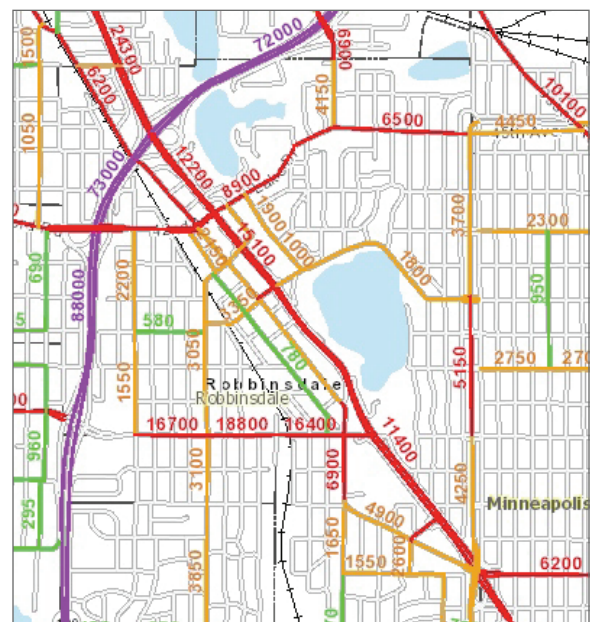
Additionally, 36th Avenue North contains paved shoulders for bicycles. No markings or signage indicating preferential use of the shoulders for bicycles exist, however. This road was recently reduced to a three-lane design.



A sidewalk along Shoreline Drive.



A paved shoulder facility on 36th Avenue North.



Arterial roadways and highways with high traffic volumes are clear barriers to east - west travel in Robbinsdale. Image courtesy MnDOT.

Shared-Use Paths and Trails

Robbinsdale has a network of off-road shared-use paths and trails in various city parks such as Lakeview Terrace Park, Sochacki Park, Lee Park, Kelly Park, Sanborn Park, and Manor Park. There is also a stretch of an off-road shared-use path at Hollingsworth Park on the north end of Crystal Lake. While these facilities provide connections within the larger bicycle transportation network, these trails often serve more recreational purposes.

The shared-use path system also offers important connections over/beneath prominent road barriers in Robbinsdale. This includes a pedestrian and bicycle bridge connecting 39th Avenue North over U.S. Highway 100, and off-road shared-use paths and tunnels connecting Regent Avenue North under West Broadway Avenue, Bottineau Boulevard, and U.S. Highway 100 to Twin Lake Beach Park and areas to the north.

Regional Connections

The Victory Memorial Parkway Trail runs between York Avenue North and Victory Memorial Drive on the eastern edge of Robbinsdale. This paved shared-use and off-road path facility is part of the Grand Rounds National Scenic Byway that is maintained by the Minneapolis Park and Recreation Board, providing connections to the Theodore Wirth Parkway and the Mississippi River.

The Twin Lakes Regional Trail connects to Robbinsdale under U.S. Highway 100 at Twin Lake, offering a paved pedestrian and bicycle connection from Robbinsdale northeast to Brooklyn Center.

The Basset Creek Regional Trail will eventually connect south of Robbinsdale to Theodore Wirth Park. A trail through Sochacki Park in Robbinsdale connects south to Golden Valley Road and the Theodore Wirth Parkway Trail. This trail will eventually connect to the Basset Creek Trail as well.

A segment of the Crystal Lake Regional Trail is scheduled to be completed through Robbinsdale in 2015, generally



An off-road shared-use path at Lakeview Terrace Park.



A pedestrian and bicycle bridge connects 39th Avenue North over U.S. Highway 100.



The Victory Memorial Parkway Trail runs along the eastern edge of Robbinsdale.

running parallel to Bottineau Boulevard. Eventually, the trail will connect from the Grand Rounds Byway northwest to Elm Creek Park Reserve.

Intersections and Trail Crossings

Sidewalks, quiet residential streets, and shared-use off-road paths offer comfortable facilities for walking and biking in Robbinsdale. The weak links in the current network are at trail crossings and intersections. Many of these locations are at crossings of the County Road facilities that run through Robbinsdale, in particular Bottineau Boulevard/County Road 81 and Lake Drive/45th Avenue North/County Road 9. These crossings are wide with numerous travel lanes, and the roads contain vehicles traveling at relatively high traffic speeds and volumes.

High visibility crosswalks are present at many locations, including along the West Broadway Avenue and the Bottineau Boulevard corridors. Recent improvements along Bottineau Boulevard/County Road 81 include user-activated pedestrian countdown timers, pedestrian medians, benches, and beautification elements.

Continuing to focus on making improvements at intersections will help to remove them as barriers to walking and biking, and ultimately result in the most continuous low-stress network for both pedestrians and bicyclists.

End of Trip and Ancillary Facilities

Bicycle parking (of the recommended inverted U-type) exists along West Broadway Avenue in Downtown Robbinsdale. Bicycle parking is also available at North Memorial Medical Center. Bicycle parking is also present at the Robbinsdale Transit Center on Hubbard Avenue. Outside of downtown, there is a need for additional bicycle parking facilities, especially at key commercial and employment destinations along Bottineau Boulevard. Bicycle parking, and pedestrian amenities such as benches and water fountains should be provided at key recreation destinations.



A pedestrian walking across Bottineau Boulevard.

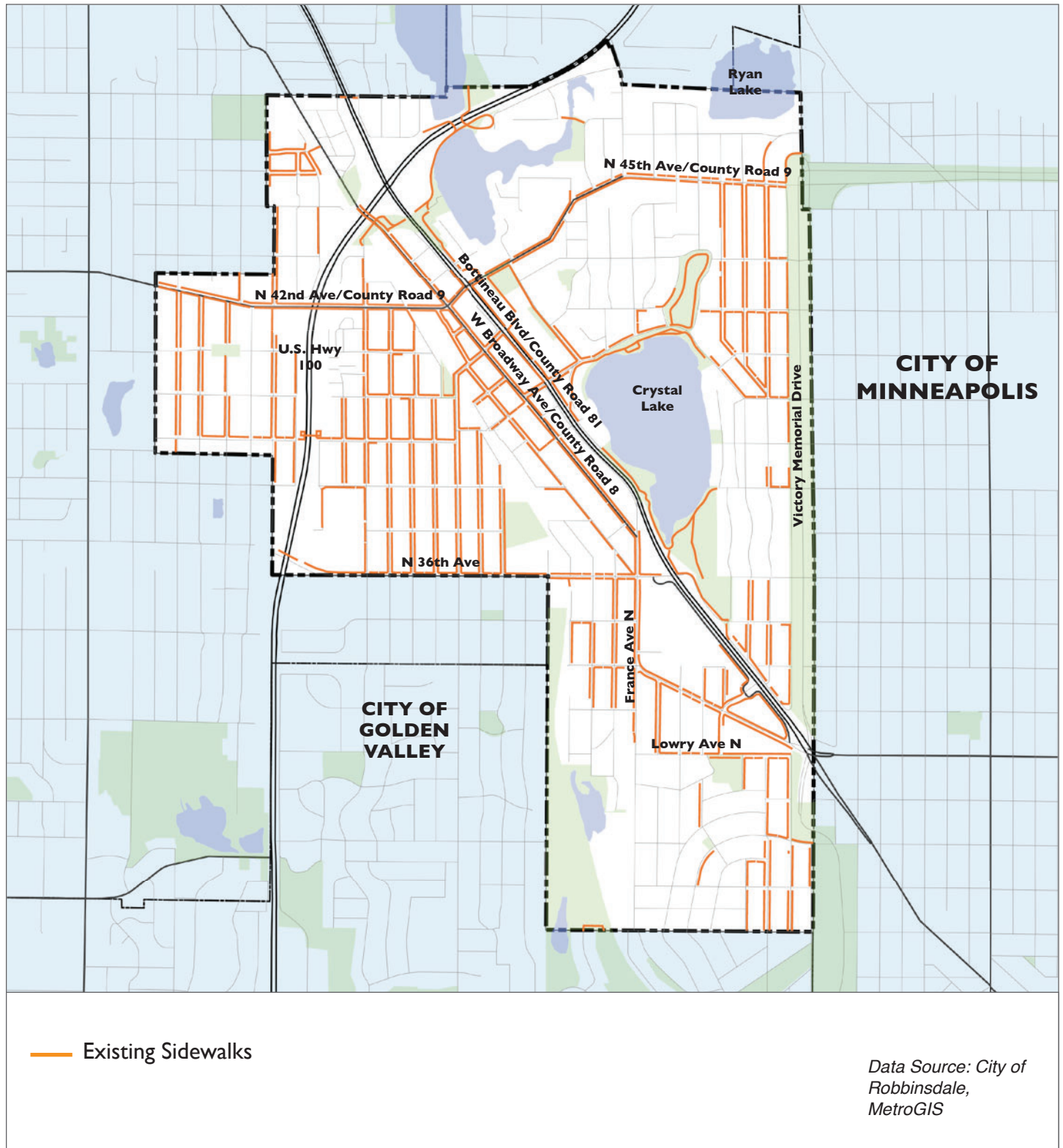


A crossing of Shoreline Drive north of Crystal Lake.

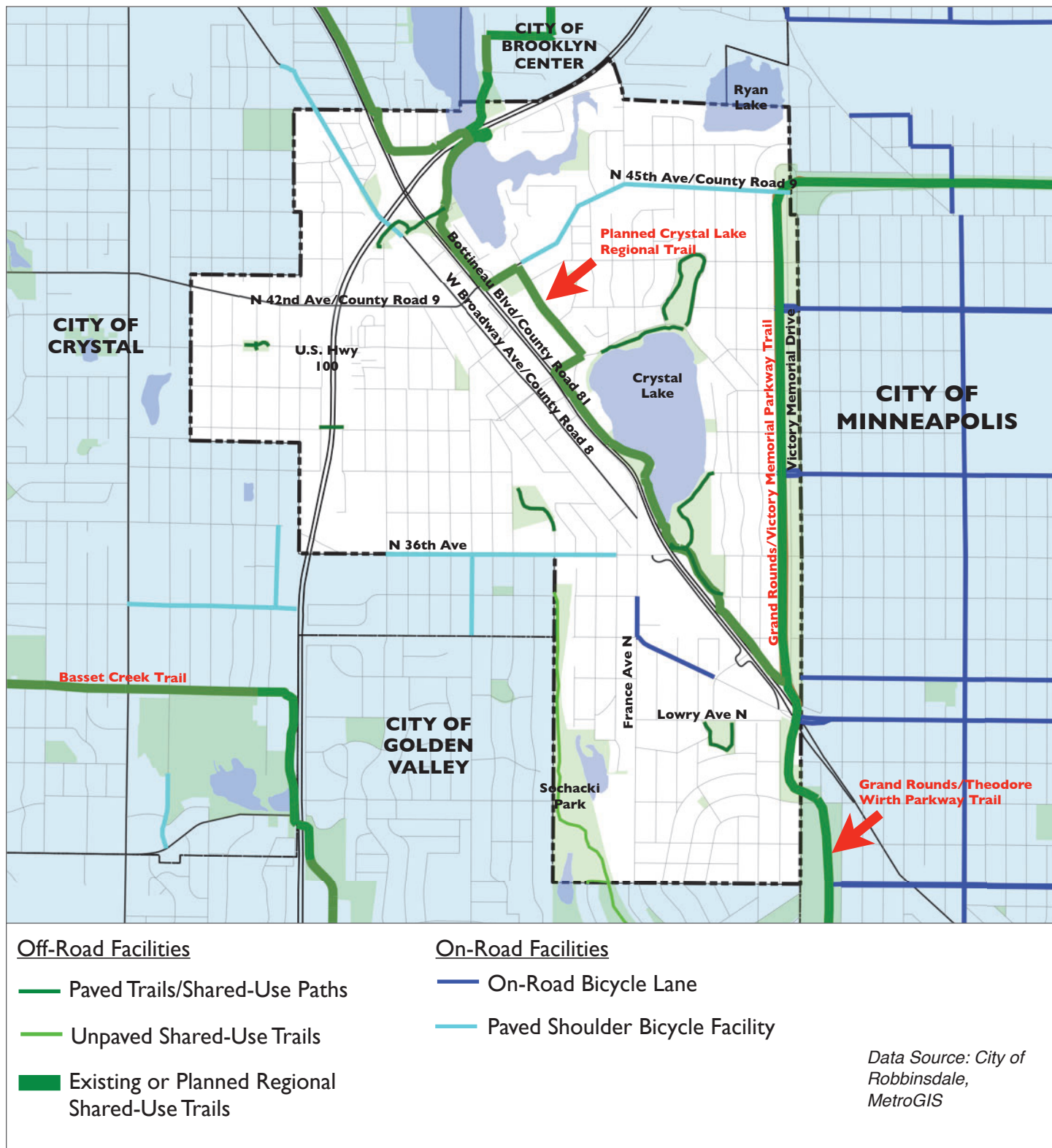


Inverted-U bicycle parking in Downtown Robbinsdale.

3.2.3 - Existing Network of Sidewalks



3.2.4 - Existing Network of On-Street Bike and Off-Road Shared-Use Facilities



3.2.5 - Destinations

Downtown Robbinsdale

Downtown Robbinsdale is a prominent destination for Robbinsdale residents and visitors alike with its unique collection of retail shops, restaurants, and historic elements. Downtown Robbinsdale generally runs along West Broadway Avenue from 42nd Avenue North to 40th Avenue North. Much of the City of Robbinsdale is within comfortable walking and biking distance from the Downtown Robbinsdale commercial core, making it a prominent destination and hub of activity. Downtown has been identified as a key destination in the Bottineau LRT Transitway Station Area Pre-Planning Study, especially since it is the only “Main Street” station on the future line.



Downtown Robbinsdale is the preeminent destination for walking and biking trips in Robbinsdale.

Schools, Parks, and Recreation Areas

Parks and recreation areas exist throughout the city. Large parks such as Lakeview Terrace Park serve city-wide functions, while smaller parks such as Manor Park serve more local neighborhood needs. Several private and public schools also draw students walking and biking throughout Robbinsdale. Schools, parks, and recreation areas, in particular, should be thought of as priority destinations for walking and biking trips among children and less experienced users.



The Robbinsdale Transit Center (site of the future Bottineau LRT Station) is a key destination for pedestrians and bicyclists.

Robbinsdale Transit Center and Future LRT Station

The current Robbinsdale Transit Center on Hubbard Avenue North includes a waiting area for transit users and bicycle parking. The future Bottineau LRT station will draw additional walking and biking trips, and create a significant opportunity to further enhance biking and walking trips to downtown Robbinsdale.

North Memorial Medical Center

North Memorial Medical Center is the primary employer in the City of Robbinsdale, and is located at the intersection of Oakdale Avenue North and Bottineau Boulevard on the city’s south side.

How Will Riders Access the Future LRT Station?

According to the Bottineau Boulevard Transitway Station Area Pre-Planning Study:

“Riders will access the transit station primarily by walking and biking, but bus and even auto may be important modes for these stations.”

3.3 - Network Analysis: Understanding the Existing Walking and Biking Network and How Users Interact With It

Several strategies were employed to understand various components of how the walking and biking network serves the needs of those wishing to walk and bike in Robbinsdale.

These components include:

- Where generators and attractors (i.e. destinations) exist for walking and biking trips (where to focus the most attention for walking and biking improvements); and
- How city staff and the general public perceive and experience the existing walking and biking network (where are the existing assets, destinations, and problem locations needing improvement).

The following methods and strategies were used to develop an understanding of these components:

- Site visits;
- Engagement with city staff;
- Engagement with the public; and
- Pedestrian and bicycle demand modeling.

These methods and the results of them are discussed in more detail below. This comprehensive understanding helps form the basis for recommendations included in Chapter 4.



**A shared-use path connection under W
Broadway Ave.**

3.3.1 - Pedestrian and Bicycle Demand Modeling

Proximity to walking and biking destinations (attractors) was modeled to understand where walking and biking trips are expected to happen and determine where improving conditions for pedestrians and bicyclists may be most beneficial.

Areas with high concentrations of destinations in close proximity to residential concentrations are assumed to have the greatest potential for transportation-oriented (and recreational) walking and bicycling trips. Removing barriers to walking and bicycling in locations that have a high concentration of trip origins and trip destinations will have the greatest potential for increasing the number of people walking and biking, and for benefitting the greatest number of individual trips.

Principal Destinations for Walking

Destinations referenced are the result of guidance from the project team, from engagement with Robbinsdale residents, and from site visits.

Destination zones include the following areas:

- Downtown Robbinsdale core;
- Robbinsdale City Hall;
- Lakeview Terrace Park;
- Robbinsdale Transit Center;
- North Memorial Medical Center; and
- Schools in Robbinsdale.

Quarter-mile boundaries (about a 5 minute walk) were drawn to understand the relative concentration of walking attractors in Robbinsdale.

3.3.2 depicts locations with the highest concentration of key walking destinations - darker areas indicate locations with higher number of destinations within a quarter mile.

Bicycling Supply and Demand Analysis

Supply and demand for bicycling in Robbinsdale was determined. The following outlines the process.

Demand Analysis:

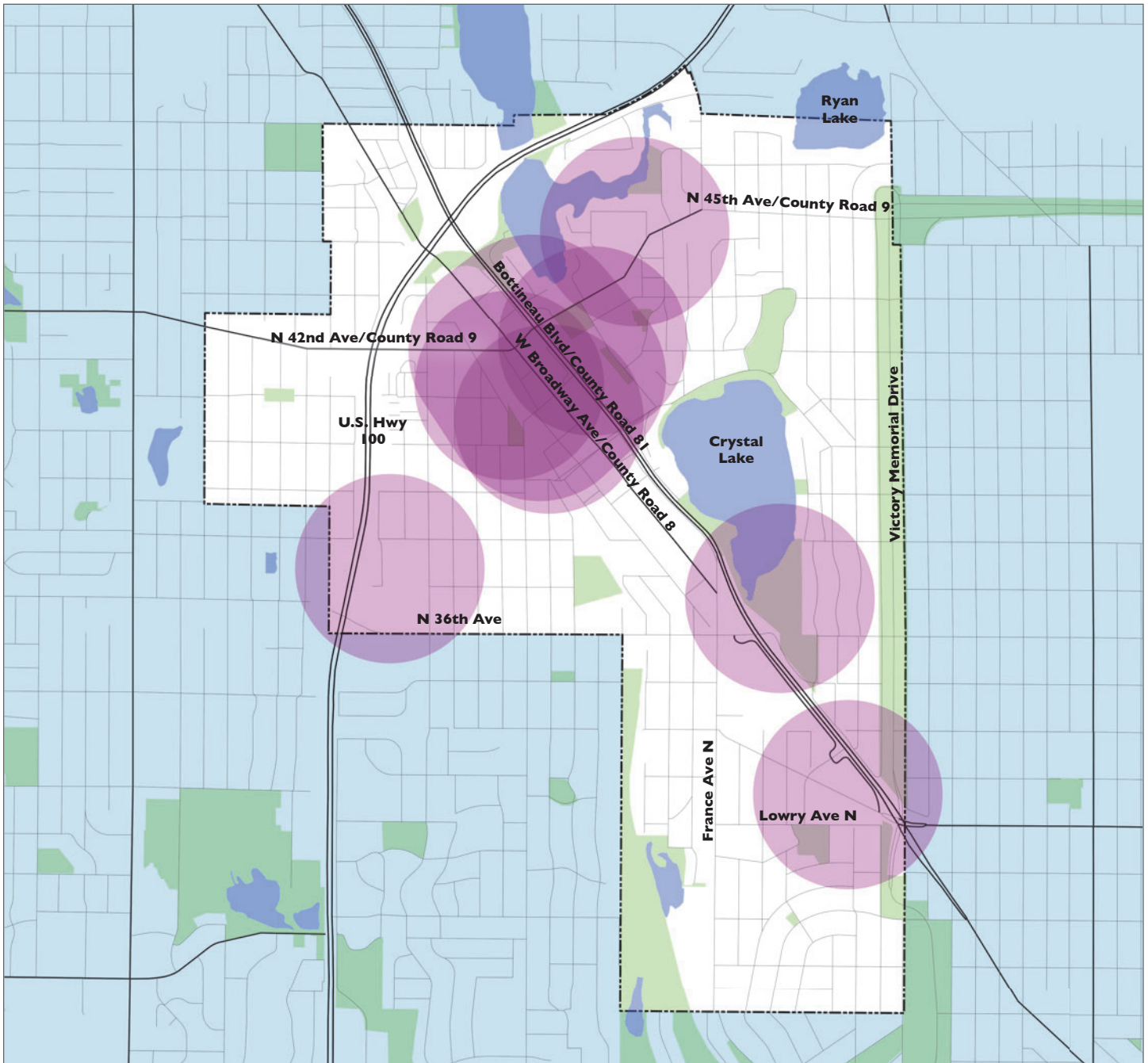
- Data sources: 2010 census block data, or 2008-2012 5 year ACS data when available, is used in conjunction with other local data for the BPSI;
- Live demand is calculated using population density, percent of bicycle or pedestrian commuters, and percent of households without a vehicle;
- Work demand is calculated using job density;
- Play demand is determined using retail, arts, entertainment, and recreation job density, as well as open spaces and schools;
- Transit demand is calculated using the bus stops in Robbinsdale; and
- The composite demand BPSI is a product of combining all demand layers.

Supply (Roadway) Analysis:

- Cycling comfort scores were assigned based on roadway classification, which was derived from standard TIGER Line files; and
- Roads were scored based on roadway and intersection type (e.g., local/local, or primary/local). Roadways were assigned the higher score. For example a local roadway that crosses a primary road would be assigned the intersection score, because that is the least comfortable part of the ride.

3.3.3 depicts the composite supply and demand analysis for biking in Robbinsdale.

3.3.2 - Primary Walking Trip Attraction Areas

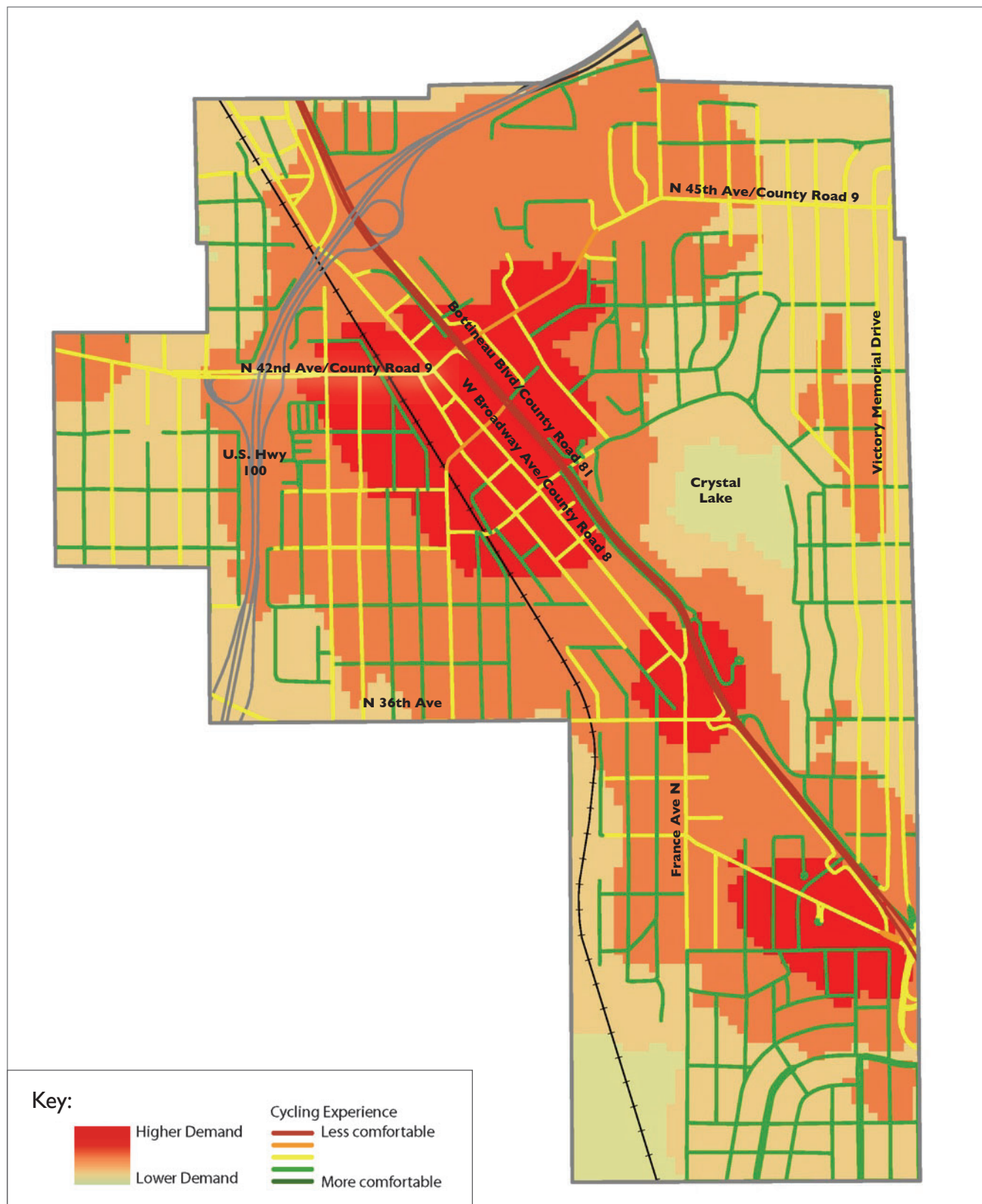


1/4 Mile Buffer Around Key Destinations

Note: 1/4 mile buffers are approximate estimations of a 5 minute walk "as the crow flies." Actual walking times and distances will vary based on routes and facilities.

Data Source: City of Robbinsdale, MetroGIS

3.3.3 - Composite Demand and Bicycling Experience



3.3.4 - Site Visits

Several site visits throughout the investigation and planning process helped inform and confirm understanding of the existing network conditions and identification of locations in need of improvement.

3.3.5 - Engagement with the Public and City Staff

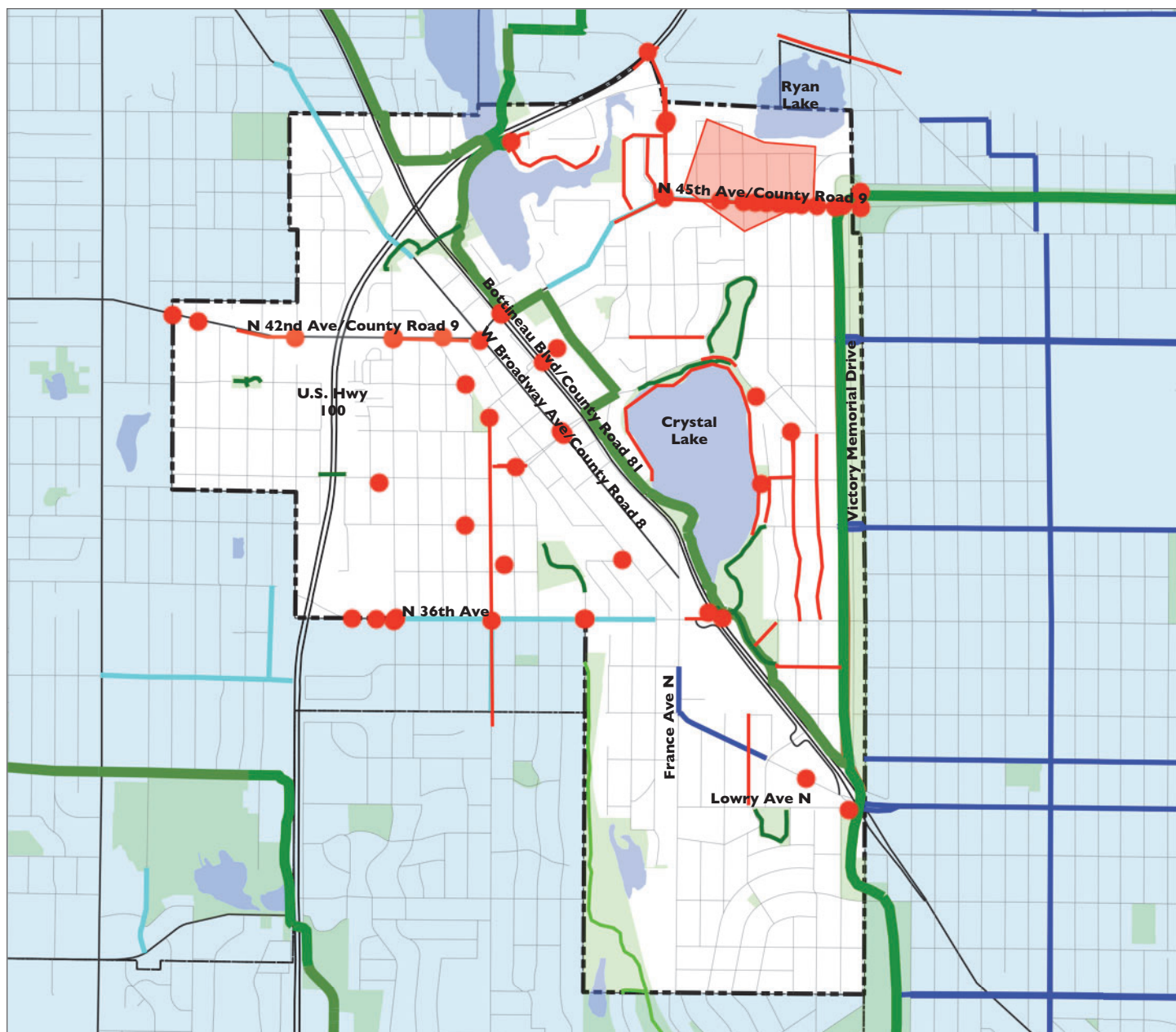
A key component to understanding where improvements are necessary, and a primary foundation for recommendations, were the comments and recommendations received from engagement with Robbinsdale city staff and residents. Comments were received through in-person meetings, and an on-line interactive mapping tool.

Comments received were combined with problem locations identified through other analysis to form a complete list. A documentation of areas needing improvement is included in **3.3.6 - Walking/Biking Problem Locations as Identified by City Staff and the Public** and **3.3.7 - Summary of Identified Problem Locations** on the following pages.



Biking near York Avenue North in Robbinsdale.

3.3.6 - Walking/Biking Problem Locations as Identified by City Staff and the Public



Off-Road Facilities

- Paved Trails/Shared-Use Paths
- Unpaved Shared-Use Trails
- Existing or Planned Regional Shared-Use Trails

On-Road Facilities

- On-Road Bicycle Lane
- Paved Shoulder Bicycle Facility

Identified Issues

- Walking/Biking Problem
- Locations Identified

Data Source: City of Robbinsdale, MetroGIS

3.3.7 - Summary of Identified Problem Locations

Location Identified
36th Avenue N / June Avenue N
36th Avenue N / Bottineau Boulevard (County Road 81)
36th Avenue N / Regent Avenue N
42nd Avenue N (County Road 9) / Regent Avenue N
45th Avenue N (County Road 9) / Victory Memorial Trail
Lowry Avenue N / Victory Memorial Trail
Victory Memorial Trail / Victory Memorial Drive / Oakdale Avenue N
40th Avenue N / Bottineau Boulevard (County Road 81)
42nd Avenue N (County Road 9) / Bottineau Boulevard (County Road 81)
42nd Avenue N (County Road 9) / West Broadway Avenue (County Road 8)
Abbot Avenue N
Crystal Lake Loop Trail
Chowen Avenue N
France Avenue N
Noble Avenue N
35th Avenue N
Halifax Avenue N
46th Avenue N
France Avenue N to shared-use trail connection
Bottineau Boulevard (County Road 81)
County Road 9

Note: Locations needing improvement identified by the consultant team through network analysis and site visits are combined with those identified by city staff and the public in this table. This table is a summary of prominent locations identified and mentioned.

3.4 - Network Vision

Following from the investigation of existing walking and biking conditions and analysis of the existing network, a conceptual connectivity framework and set of guiding principles were developed to provide a foundation for the network recommendations found in Chapter 4.

3.4.1. - Conceptual Connectivity Framework

A map of destinations and needed connections was developed as a first step to develop a walking and biking network for the city. Please note that several connections are already in place, and that specific locations or facilities are not described at this stage - the conceptual network forms a basis for thinking about overall network connectivity and what it should achieve.

3.4.2 - Conceptual Pedestrian and Bicycle Connectivity is the result of this work. Links across the network are provided as follows:

Regional Route Connections

Regional route connections (shown in dark blue) are those that provide connections through Robbinsdale and from the city to destinations in adjacent communities. The Victory Memorial Trail, proposed Crystal Lake Regional Trail, and the Sochacki Park Trail (which feeds into the Theodore Wirth Parkway Trail) serve this function in the city. Providing connections to these trails is critical for those who wish to travel to broader destinations, including commuters.

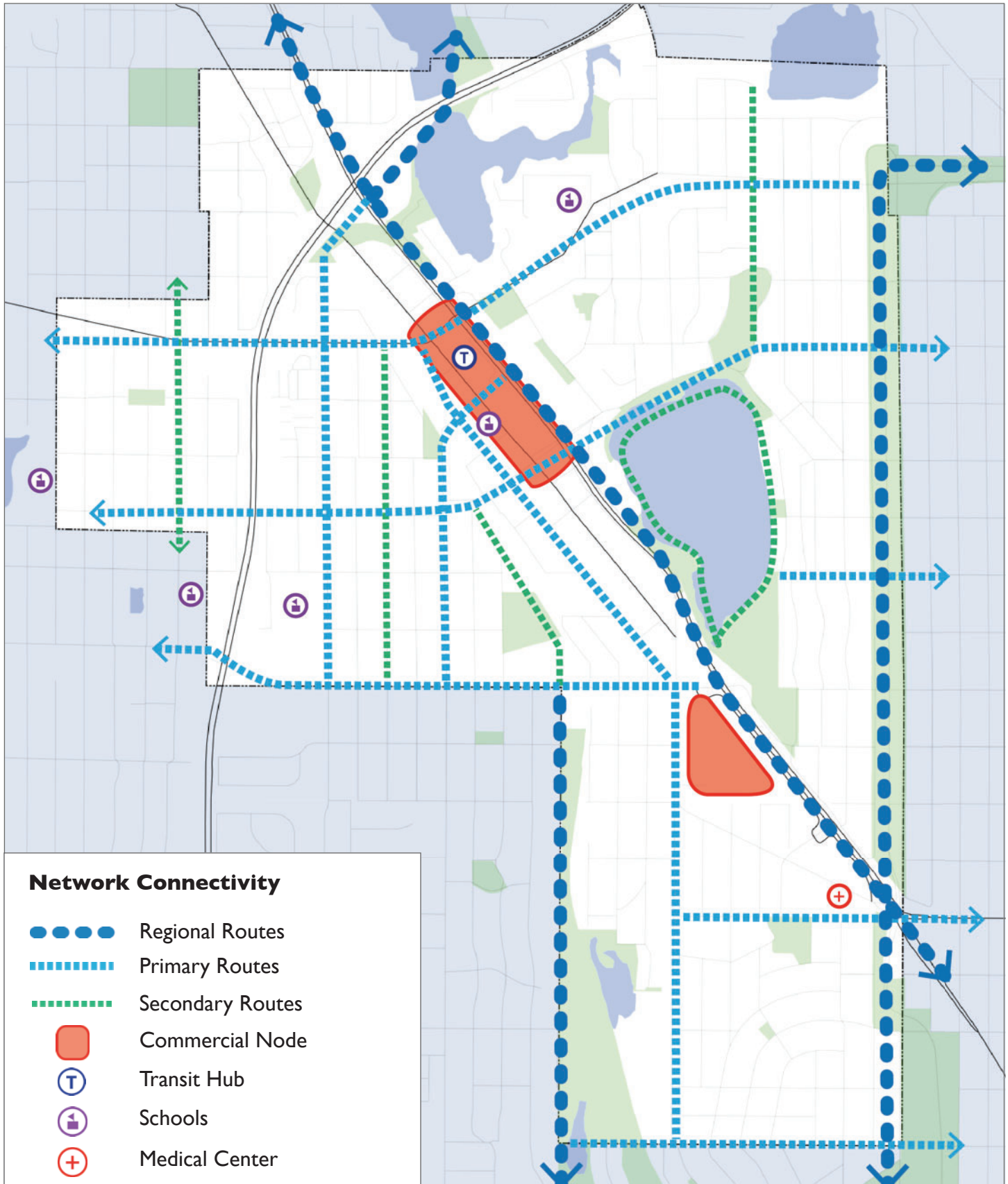
Primary Route Connections

Primary route connections (shown in light blue) are those that provide connections to key city destinations like the employment centers. Primary routes mimic the city’s arterial road system.

Secondary Route Connections

Secondary route connections (shown in green) provide connections on a small scale within neighborhoods and from neighborhoods to primary routes.

3.4.2 - Conceptual Pedestrian and Bicycle Connectivity



3.4.3 - Guiding Principles

Several overall principles guide the recommendations for routes and infrastructure treatments presented in this plan. These principles are derived from work with city staff, comments from the public, and analysis of the Robbinsdale walking and biking network.

The guiding principles are:

- 1) Leverage the assets within the existing network to increase connectivity and comfort of Robbinsdale's pedestrian and bicycle network to facilitate non-motorized transportation and encourage active living among residents of all ages and abilities;
- 2) Prioritize the creation of comfortable and convenient routes and connections for youth to access schools, libraries, parks, and community facilities, and for all residents and visitors to access commercial, employment, and transit destinations with special attention to Downtown Robbinsdale and the Robbinsdale Transit Center;
- 3) Provide low-stress walking and biking options for residents to connect through and between neighborhoods, and to parks, trails, and community facilities;
- 4) Provide safe and convenient connections to neighboring communities and destinations outside of Robbinsdale, particularly the City of Minneapolis and regional trails;
- 5) Facilitate recreational walking and biking in and around Robbinsdale to and around recreation and community destinations;
- 6) Recommend practical infrastructure treatments at priority intersections/crossings to increase the comfort and accessibility of the walking and biking network;
- 7) Recommend route connections and practical infrastructure treatments to enhance the connectivity overall route network;
- 8) Recommend additional infrastructure and policy/programming recommendations to further improve conditions and to integrate walking and biking improvements into the overall culture and policy systems of the city.