

Chapter 5 – Needs Analysis

5.1 Chapter Overview

5.1.1 Purpose—The purpose of this section is to identify specific bicycling needs and suggest action items needed to improve bicycling in Minneapolis. Below is an overview of some of the existing problems and recommendations that have been suggested to make the city more bicycle friendly. The comments in this chapter are based on existing conditions and support the goals, objectives, and benchmarks established in Chapter 4.



Above: Stone Arch Bridge

5.1.2 Highlights – Below are some suggestions for improving the bicycle program based on the needs outlined in this chapter.

- It is recommended that more attention be given to non-infrastructure projects and initiatives.
- Safe Routes to School curriculum needs to be expanded to include all private and charter schools.
- Minneapolis has one of the most developed trail systems in the United States, but the system still lacks sufficient off-street facilities in North Minneapolis, Northeast Minneapolis, and south of Minnehaha Creek. The bicycle plan needs to identify projects in these parts of the city in order to ensure geographic equity.
- Adding a variety of on-street and off-street routes in a reasonably spaced grid will help attract bicyclists of all ages and abilities.
- More innovative solutions may be needed to attract new bicyclists.
- Projects that close gaps, remove barriers, or complete networks should be given priority.
- Substandard bicycle facilities should be corrected or removed as soon as possible to address system gaps and discontinuities.
- Improve maintenance of the existing system.
- Projects should be environmentally responsible with consideration of impervious surfaces, erosion control, and maintaining wildlife habitat.
- Decisions should include all effected stakeholders and there should be no pre-determined outcomes.
- Try to take advantage of free media opportunities to promote bicycling.
- There is a need for better data to evaluate the success and progress of the bicycle program.
- Bicycle theft continues to be a problem in Minneapolis. Theft rates will likely be reduced by installing secure bicycle parking and through targeted enforcement.

5.1.2 Highlights - Continued

- An “opportunity fund” should be created to acquire and maintain property for trails from willing landowners when it becomes available. Eminent domain should be avoided.
- Consistent enforcement of laws is needed throughout the city precincts and between motorists and bicycles.
- Continue to build on past success. The 50/50 cost share is a good example of a successful initiative, which has helped allow the city to be a national leader in the number of bicycle parking spaces per capita.



Above: Bridge Square

5.1.3 Opportunities/Challenges - Below are a list of opportunities and challenges facing the bicycle program today. The comments below are generalizations made by city staff based on surveys, phone calls, and e-mails received by the public.

Opportunities:

- There is considerable support by elected officials to complete bicycle related projects. There is also willingness by the elected officials to try new and innovative things.
- Transit accommodations throughout the region are improving.
- Health and wellness partnerships bring additional promotion and funding.
- Environmental awareness has never been higher and there is a public appetite for bicycle facilities.
- The number of people who travel by bicycle is on the rise.
- Despite the fact that bicycling is on the rise, bicycle crash rates have remained steady in Minneapolis for the last decade.
- Funding opportunities for bicycle facility construction have increased and the city and MPRB have secured numerous grants for the bicycle program.
- Citizens, business owners, and neighborhoods play an active role in project development.
- Minneapolis has become a regional and national leader in bicycling and has the ability to influence other communities.
- There is a willingness by staff and elected officials to make constant improvements to the bike program.
- Despite the fact that resources are becoming scarce, there are still several federal and state funding sources available for bicycle related projects.

5.1.3 Opportunities/Challenges

Challenges:

- There is no clear vision or direction for the city to take with regard to bicycling due to the lack of a bicycle plan (not just a map).
- The demand for resources far outweighs available resources. There is also significantly more competition for regional funding.
- There are only a few easy projects left. The “low hanging fruit” is gone.
- Bicycles are still seen by many as a secondary transportation mode when compared to other modes.
- Right-of-way constraints rival complete streets policies against State and County standards. On many projects there is significant competition for space in the public right-of-way. It is often difficult to balance the needs of all stakeholders including bicyclists.
- There are often disagreements on how limited f

5.1.4 The 6 “E’s” – This section will examine the needs for each strategy; education, encouragement, enforcement, engineering, equity, and evaluation.



Above: A bicyclist on West River Parkway

5.2 Education

5.2.1 Education Needs—Whether it’s understanding the rules of the road or discovering the best places to ride, education is a fundamental component of the Minneapolis Bicycle Plan. The comments below will strive to support the two primary educational objectives, which are to improve safety and increase the number of bicyclists.

There are several audiences that should be considered for targeted education. The following programmatic needs should be addressed to further education efforts:

Bicycle education for children: It is beneficial for children to be exposed to bicycle safety education at an early age. Minneapolis Safe Routes to School needs to be expanded to include a uniform curriculum for all students, including students attending private and charter schools.

Education for adult drivers: The general public needs more exposure to bicycling laws. Working with the Department of Public Safety to add more bicycling questions to driver education exams would be a good start, however this does not target those who have had a driver’s license for years. A public bicycle safety campaign on at least a yearly basis is required to keep motorists and bicyclists from forgetting the rules of the road.

Education for professional drivers: Identify outside funding to educate professional drivers including bus drivers, taxi drivers, truck drivers, and emergency services personnel about their role in keeping the street safe for bicyclists.

Education for adult bicyclists: All bicyclists should be encouraged to take bicycle safety courses. Special events for bicyclists are also good opportunities to distribute educational materials.

Education for adults with special needs: Support programs that help adults with special needs get around by bicycle.

Education for Senior Citizens: Support programs that help senior citizens make short trips by bicycle.



Above: Students from a Minneapolis school take a field trip by bike.

5.3 Encouragement

5.3.1 Encouragement Needs—Many bicyclists don't need much of an incentive to bike, however others require more encouragement. Getting information to the general public that sends a positive message is critical to attracting new bicyclists.

On the front line of this effort are the Minneapolis Bicycle Ambassadors. This group of Minneapolis staff members is funded by a 3-year federal grant program that ends in 2011. The Minneapolis Bicycle Ambassadors have helped hundreds of businesses, non-profit groups, schools, neighborhoods, and families learn about the benefits of biking and helping to remove barriers for those who are not comfortable riding a bicycle.

The following programmatic needs should be addressed to further encouragement efforts:

Encouragement for Minorities: An increase in targeted marketing toward communities of color and immigrant groups including those who speak English as a second language.

Encouragement for Seniors: Expanding involvement with seniors.

Encouragement for Youth: Intensifying the youth ambassador program particularly within the public schools, at recreation centers, and at charter schools. Create regional community training centers where people can go to learn basic bicycling skills. This should include an obstacle course for children and a classroom for adult curriculum. This concept could also include a bicycle shop for learning bicycle maintenance. This could be sited at existing schools or community centers at minimal cost.

Encouragement for Business: Corporations and small businesses continue to need assistance with providing information for its employees. Encouraging bicycling as a transportation option helps to improve congestion and alleviate parking demand in addition to health and environmental benefits. More resources are needed to help groups like the Minneapolis TMO keep up with the demand for commuter fairs, printed materials, and customer service requests.



Above: Mayor Rybak with the Bicycle and Pedestrian Ambassadors.



Above: Bike Walk to Work Day activities.



Above: A community event to promote bicycling



Above: The Bike and Pedestrian Ambassadors help children with their bikes

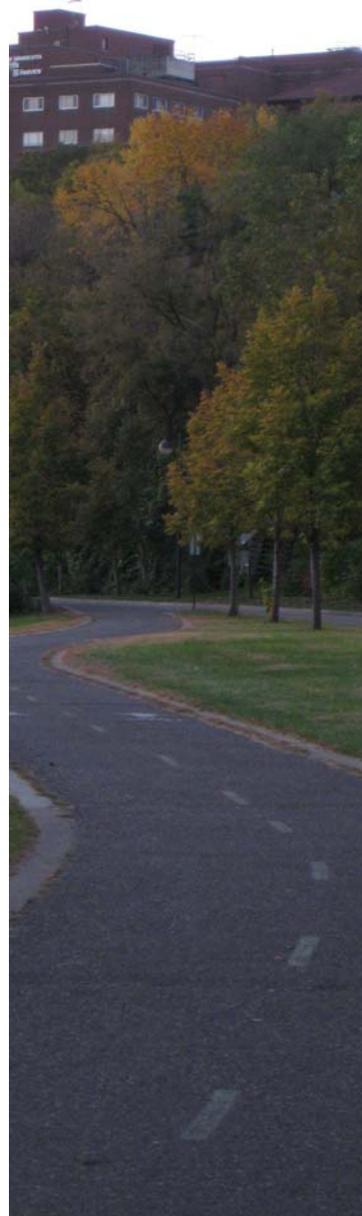
5.3.1 Encouragement Needs - Continued

Encouragement for Tourists: Minnesota is a tourist magnet for those who enjoy the outdoors. The bicycle tourism market needs to be further exploited by marketing Minneapolis as a premier bicycle riding destination. The local economy could benefit significantly if Minneapolis bicycling was better marketed nationally and internationally.

Encouragement for Women: Recent census statistics show that men outnumber the number of women who bike 2 to 1. Existing bicycle clubs, bicycle advocacy groups, non-profit groups, and government agencies need to take note. There are clearly barriers that keep many women from biking that don't pertain to men. Realizing and mitigating those barriers are key to a higher bicycle mode share in Minneapolis. A survey geared toward women would be a good first step in determining those barriers.

Encouragement for the Inactive: According to the Center for Disease Control, heart disease is the number #1 cause of death for Americans. Obesity has reached epidemic proportions with over 24% of Minnesotans now considered obese. Approximately two thirds of U.S. adults and one fifth of U.S. children are now obese or overweight. Active living initiatives that encourage activities such as bicycling are critical in reversing this trend and must be expanded.

The role of implementing encouragement initiatives requires further discussion. Non-profit groups and volunteer organizations may be better situated to take on implementation roles, and in some cases encouragement is best accomplished through incentives sponsored by businesses.



Above: West River Parkway



Above: A bicycle near Lowry Ave



Above: Bicyclists near Minnehaha Avenue

5.4 Enforcement

5.4.1 Enforcement Needs—Keeping our streets safe through enforcement is often overlooked when developing a bicycle plan, but it is an important element that can not be omitted. Police officers not only keep the peace but also help deter poor behavior. Enforcing laws pertaining to bicycling is a high priority for Minneapolis, which requires commitment and resources. The following comments reflect the need to improve enforcement in Minneapolis:



Above: A delivery truck in a bike lane

Need for Targeted Enforcement: Additional resources are needed to oversee targeted enforcement. Targeted enforcement may include speed management along a specific bike route, ensuring that the 3-foot passing law is respected, and making sure that motorists are not parking in a bike lane. Targeted enforcement may also include issuing citations to bicyclists for not stopping for signals or stop signs, riding at night without a light, and traveling the wrong way on one-way streets.

Need for Collaboration/Need for Improved Design: Public Works needs to better inform the Police Department about infrastructure improvements. Police officers should also have input into the design of a trail. Better collaboration between the two departments may also be useful in reducing crashes through targeted enforcement, public education, and better engineering. Project engineers need to think about how to prevent crime as part of a project. Will a new trail project create hiding spaces? Will a new trail be adequately lit? How can an emergency vehicle access a non-motorized facility? What components of a project could be used as a weapon? Crime (and perceived crime) continues to be a barrier for bicyclists.

Need to Reduce Theft: More emphasis needs to be placed on preventing bicycle theft through targeted enforcement and through by adding more secure bicycle parking. Education is needed, especially with youth to use u-locks instead of chains.

Need for Better Information: A clear map of where you can and can't ride a bike on a sidewalk needs to be developed. Detailed crash reports for bicycle crashes are needed. Some bicycle crash reports are well documented and easy to comprehend; others are not. Crash diagrams are an essential tool in determining whether engineering countermeasures are required.

Need for Improved Policies: Ordinances pertaining to bicycling need to be re-evaluated on a regular basis. This pertains to zoning ordinances in addition to ordinances pertaining to moving vehicles. A citywide trail use ordinance is needed to define rules and regulations including hours of use (24/7 in most cases), types of users permitted, and a pet policy.

5.4.1 Enforcement Needs - Continued

Need for constancy: With regard to bicycle laws, consistent enforcement approaches by the Minneapolis Police Department, U of M Police, MPRB Police, and Metro Transit Police are needed. A bicycle training program should be offered to all officers in all four departments. It is important that officers keep up to date on statute changes and know all of the rules of the road. A sworn Police officer should be invited to attend Bicycle Advisory Committee meetings. Finally, Police officers need to lead by example. In many corridors it is common to see squad cars parked in bike lanes. Some bicyclists have also complained about misinformed officers reprimanding bicyclists for breaking laws that were not really being broken.



Above: West River Parkway Trail at the I-35W Bridge

5.5 Engineering

5.5.1 Engineering Needs—Engineering relates to the design, operation, and maintenance of infrastructure and includes all bicycle facilities including trails, bike lanes, bicycle parking, and support facilities. Infrastructure needs can be sorted into three categories; corridor improvements, system-wide improvements, and spot improvements. Improvement types are described below:

Corridor Improvement Needs: These needs are based on a number of factors including existing bikeway gaps and discontinuities, bikeway spacing, adjacent land use, available right-of-way, potential use, topography, and minimizing conflicts with other modes. The Bikeways Master Plan Map is the result of considerable public input and includes guidance for specific corridor improvement needs. The map includes suggestions for both off-street and on-street facilities throughout the city and should be referenced to determine corridor improvement needs.

System-wide Needs: These improvements resolve citywide problems that are not specific to one location or corridor and can be approached more holistically. There is a need to retrofit many of the actuated signals in the city so that they can detect bicycles. There are a number of outdated signs and pavement markings within the system that still need to be upgraded. There is also a need to improve the quality of pavement along many bike routes within the city.

Spot Improvement Needs: Spot improvements are specific to a given intersection or roadway segment. Most of the spot improvements are needed to address safety concerns at a given intersection or segment of roadway. There are also a number of small gaps and discontinuities within the bikeway system.



Above: Warning signage near Camden Bridge



Above: Signage near Camden Bridge

5.6 Equity

5.6.1 Equity Needs—The Minneapolis Bicycle Program must be fair and present opportunities for all. There are three areas of emphasis with regard to equity; geographic, demographic, and modal equity.

Need for Geographic Equity: Geographic equity ensures that all parts of the city will see the same types of facilities at the same density and quality.

Need for Demographic Equity: Demographic equity ensures that people of all age, race, ethnicity, and gender are treated equally.

Need for Modal Equity: Modal equity is achieved when bicycling is treated as an equal mode of transportation alongside autos, trucks, motorcycles, buses, and pedestrians.



Above: Nicollet Mall bicyclist



Above: Bicyclist near St. Thomas campus.

5.7 Evaluation

5.7.1 Evaluation Needs—Evaluation is all about measuring success. By creating and tracking evaluation measures, limited resources can best be directed to projects and initiatives that work. There are four target areas that pertain to evaluation; safety, bicycle counts, public involvement, and research.



Above: Midtown Greenway Counter

Safety Needs: Evaluating safety on a regular basis needs to be a high priority. Over 200 bicyclists each year are involved in a bicycle crash, with 90% of reported crashes involving an injury. Crash statistic reports need to be done yearly, with statistics checked on a monthly basis. If negative trends are recognized, appropriate countermeasures may be pursued to help curb the number or type of crashes occurring.

Need for Better Count Data: Conducting bicycle counts is a necessary and valuable way to evaluate bicycle use. Bicycle count information can be helpful in determining project needs and can also be used to prioritize resources. 12-hour bike counts are needed during all 4 seasons. 50 locations need to be counted on a regular basis to maintain a good sample of system-wide bicycle use.

Need to better engage the public: Involving the public by reporting results helps to achieve bicycling goals.

Need to Participate in Research Initiatives: Research can result in new and exciting improvements for bicyclists.



Above: Bicyclists riding on a downtown sidewalk