DRAFT REPORT
City of Hopkins
Pedestrian and Bicycle Plan - Recommendations

A community where walking and biking are safe, comfortable, convenient and fun everyday activities.

FINAL DRAFT
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Delivering sustainable, people-centered solutions, to mobility and place
community design group
212 3rd Avenue North, Suite 515, Minneapolis MN 55401
Phone: 612-354-2901 : Web: www.c-d-g.org

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Recommendations

This section includes recommendations for addressing the various systems that can help improve conditions for walking and cycling in Hopkins and bring the vision guiding this work closer to reality.

In this section

3.1 Introduction, visions and goals

Introduction

This Pedestrian and Bicycle Plan can help the City of Hopkins increase biking and walking opportunities for its residents. With the SW LRT entering preliminary engineering, and three stations within the boundaries of Hopkins, non-motorized mobility will become an even greater asset to the city. Transit riders' choice to walk or bike to their final destinations in the city will be directly influenced by the comfort, convenience and safety that the streets and built environment of Hopkins offer them.

Principles and framework

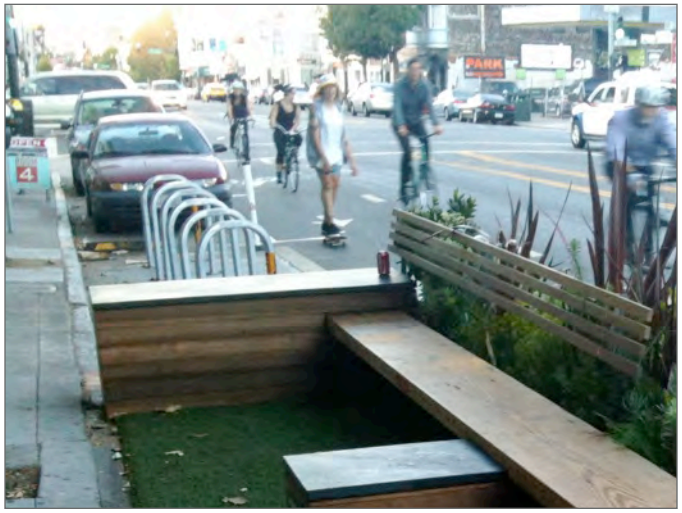
Effective planning of walkways and bikeways addresses the following four principles:

1) Provision of facilities on major roads;
2) Provision of additional facilities to develop a comprehensive network;
3) Maintenance of the entire pedestrian and bicycle environment; and,
4) Solving issues created by barriers within the built and natural environment.

Facilities on major roads

Provision of facilities for pedestrians and cyclists on arterial and major roads is essential because these facilities provide access to and from the vast majority of destinations within a city. They also allow for a network to provide effective and comprehensive connections to, from, and in between the different neighborhoods and business nodes within an area, as well as regional trails that link to other municipalities. If major bicycle and pedestrian routes are only provided on side streets and residential streets, people walking and cycling will not be able to conveniently access the important destinations in a city, and will be, in effect, marginalized because of their choice of mode. The concept of addressing the needs of all users on all streets is called "Complete Streets" (see more discussion of Complete Streets under Section 3.2). Complete Streets that seek to further goals of economic development, placemaking, human interaction and enhanced livability are called "Living Streets."

The future Hopkins will develop safe, comfortable and convenient routes and crossings for people. Image: Vancouver, BC, courtesy of David Niddrie, Momentum Magazine.



Even major roads, if they offer facilities for sitting, walking and cycling, can become places for people and offer opportunity for increased human interaction Image: San Francisco, CA.

Automobile drivers, even on major roads, adjust and respond to the street environment they encounter. Street reconfigurations that decrease the width or number of motor-vehicle travel lanes can improve safety without hindering performance for drivers and open up dedicated space for walking and biking. Numerous studies have demonstrated that lane narrowing (reducing lane widths to ten or eleven feet) provide no decrease in performance, safety or capacity for city roadway environments. Additionally, four-to-three lane conversions (road diets or "right-sizing") can help free up space to accommodate dedicated space for walking and biking (through widened sidewalks, boulevards, and/or bicycle lanes). Three lane roads can easily handle volumes of 20,000 to 23,000 vehicles per day while reducing crashes and moderating motor-vehicle speeds.

Hopkins has a good structure for pedestrian and bicycle mobility, with many short blocks and two-lane roads. Within the city, roads to consider for improved facilities include Mainstreet, 8th Avenue, Shady Oak Road, 11th Avenue, 17th Avenue / Hopkins Crossroad, Blake Road, and Oakridge Road. Emphasis should be given to the roads that directly connect into the planned SW LRT stations: 8th Avenue, Blake Road, and Shady Oak and the 17th Avenue extension south of Excelsior Boulevard.

Developing a network

Other facilities must be provided as well in order to create a network that is effective and attractive to users. For bikeways this means the inclusion of amenities such as bike racks and other end of trip facilities, wayfinding signage, and appropriate pavement markings. For walkways, this means adequate lighting, amenities such as planted strips for aesthetics and comfort, safe and comfortable access to existing and planned public transit, and additional crossing facilities. For both modes, adequate facilities should be provided to connect to schools, local parks, and other important destinations that may not be found on major collectors or arterials. The areas around Hopkins' schools should be prioritized. Additionally, routes linking regional trails within Hopkins should provide clear and concise wayfinding facilities.

A network that is both comprehensive and effective must be deeply integrated into its context. This means using the existing street network for bikeways and walkways as

A comprehensive street network includes facilities for all users (Portland, OR, pictured above).

A robust network connects bicyclists and pedestrians directly to destinations. Here, the network ends when the crosswalk meets a parking stall at Eisenhower Elementary School.

much as possible in order to give cyclists and pedestrians access to the same convenient connections to destinations as motorists. The coming SW LRT in Hopkins should be a priority consideration in the design of pedestrian and bicycle facilities, as well as any existing or future bus routes.

Maintenance of pedestrian and bicycle environment

Proper maintenance is a crucial component for the usefulness and safety of bikeways and walkways. Maintenance considerations include ensuring that debris and snow are cleared, as well as maintaining the quality of the path and roadway surfaces where cyclists and pedestrians travel, including making sure the surfaces are free of potholes or other surface irregularities. Markings on roadway surfaces require regular maintenance and repair due to frequent wear from motor vehicle use. Inlaid thermoplastic application is recommended for increased durability (see more discussion about maintenance in Section 3.8).

Addressing barriers

Barriers for cyclists and pedestrians come in many forms and require a variety of solutions. Although Hopkins has a relatively flat topography and does not have any major bodies of water, several barriers exist within its built environment in the form of intersections, wide roads and highways, and right-of-way features such as storm sewer grates and railroad crossings. Other barriers for pedestrians and cyclists include an incomplete pedestrian and bicycle network, inconsistent sidewalk and bicycle facilities, and missing or confusing wayfinding for regional trail users. Solutions for addressing these barriers vary on a case to case basis, but can be found in the best practices for pedestrian and bicycle design included as part of this report.

Intersections with significant barriers within Hopkins include Excelsior Boulevard and 8th Avenue, Shady Oak Road and Blake Road, as well as crossing points along Highway 7 and portions of Mainstreet.

Highway 7 is difficult to cross when not in a motorized vehicle due to long wait times and the distance required to cross the street.

Excelsior Boulevard acts as a barrier for pedestrian crossings. A very wide center turn lane with no crossing provisions compounds this issue near the Blake School.

3.2 General recommendations

These recommendations should be kept in mind when considering potential policy changes to better address the needs of pedestrians and cyclists in Hopkins:

Adopt a "Complete Streets" policy

"Complete Streets" is a design philosophy that considers the needs of all present and potential users of a community's transportation network.

Complete Streets laws and policies ensure that a community's roads and streets are routinely designed and operated to provide safe space and access for all users, including pedestrians, bicyclists, motorists and transit riders, and to ensure that they work for people of all ages and abilities, including older people, children, and people with disabilities.

Adopting a Complete Streets design policy will help ensure that all street construction and street improvement projects in Hopkins anticipate and address the needs of pedestrians, cyclists and other users. Over the long run, embedding this Complete Streets approach into the City's normal operating procedures may do more for pedestrians and cyclists and than any one specific plan could.

Decrease the width of automobile lanes

Decreasing the width of automobile travel lanes can help calm traffic while freeing up valuable road space for pedestrian shoulders or bicycle lanes. The Institute of Transportation Engineers (ITE), in Context Sensitive Solutions in Designing Major Urban Thoroughfares for Walkable Communities, a study sponsored by the Federal Highway Administration (FHWA), recommends using a roadway's target (or desired) speed as guidance for the width of travel lanes provided. In general (and consistent with AASHTO guidance), the study finds that ten-foot travel lanes are suitable for local and collector streets with operating speeds to 30 mph, while lane widths from ten to

Addressing and providing access across barriers created by other transportation infrastructure is an important component of Complete Streets.

The 20-minute neighborhood

By making walking and biking more attractive for short distances, Hopkins can become a place where residents can meet most of their daily needs within a 20-minute journey on foot (even less time on a bike). As this concept relates to this Plan, all of the necessary and enjoyable things that make life great —including access to schools, parks, workplaces, libraries, and, of course, access to the SW LRT station areas and the rest of the region—could be comfortably and safely accessed within a short walk from every Hopkins residents' home. And one can easily walk a whole mile in 20 minutes!

eleven feet are suitable for use in arterials with operating speeds to 35 mph (and as safe as twelve-foot lanes up to 45 mph).

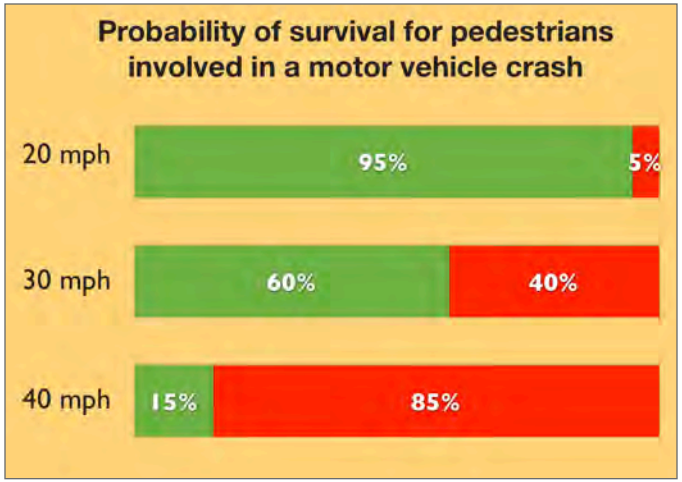
Decrease automobile travel speeds

One of the factors that most heavily influences pedestrians' and cyclists' perceptions of the relative safety of a street is the speed at which automobiles travel. Streets with high speed limits are less welcoming to pedestrians and cyclists. Several streets which could serve as important pedestrian and bicycle routes in Hopkins are made less inviting by high speed limits currently in place. Typically, 35 mph is considered the upper limit for safely and comfortably accommodating pedestrians and cyclists along roads; lower speeds create much more hospitable conditions for their travel.

Minnesota statutes currently allow cities and other jurisdictions to lower speed limits to 25 miles per hour without need of any additional engineering or traffic study if a bicycle lane is provided. According to Minnesota Statute 160.263 Bicycle lanes and ways, Subdivision 4: "Speed on street with bicycle lane"

"Notwithstanding section 169.14, subdivision 5 , the governing body of any political subdivision, by resolution or ordinance and without an engineering or traffic investigation, may designate a safe speed for any street or highway under its authority upon which it has established a bicycle lane; provided that such safe speed shall not be lower than 25 miles per hour. The ordinance or resolution designating a safe speed is effective when appropriate signs designating the speed are erected along the street or highway, as provided by the governing body."

At present, there are statewide efforts to reduce speed limits to 25 mph for local and collector streets. In the meantime, motor-vehicle speed limits for all the routes identified in this Plan can be lowered to 25 mph as allowed by the Minnesota Statute cited above. For streets not under Hopkins' jurisdiction, work should be initiated with Hennepin County to lower speed limits in order to decrease barriers and create more favorable conditions for pedestrians and cyclists. Traffic calming and other measures can be deployed to reduce motor-vehicle speeds to 20-25 mph along bicycle boulevards and other residential streets.



Speed is a determinant factor in the severity of injuries from crashes. Survival rate is shown in green. Source: Durkin & Pheby; Traffic Management and Road Safety, London, 1992.

Resources

Complete Streets

- Minnesota Complete Streets Coalition
- National Complete Streets Coalition

Decreasing speeds

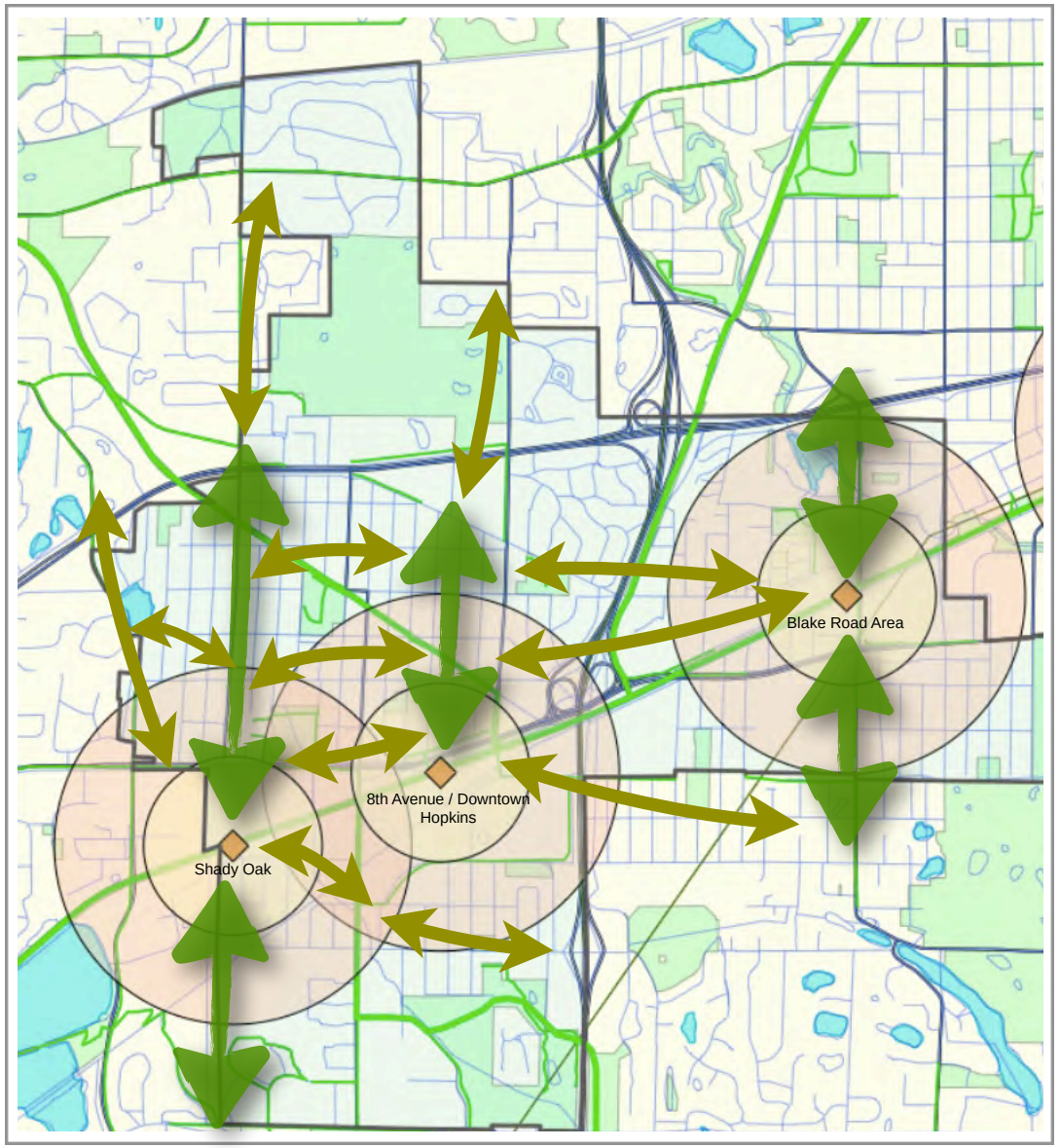
- 20's Plenty Campaign - Pilot project in NYC residential areas
- Minnesota Statute 160.263 Bicycle Lanes and Ways

3.3 The Organizing Idea for this Plan

The map to the right presents a framework for the recommendations for making walking and biking in Hopkins more convenient, comfortable and inviting.

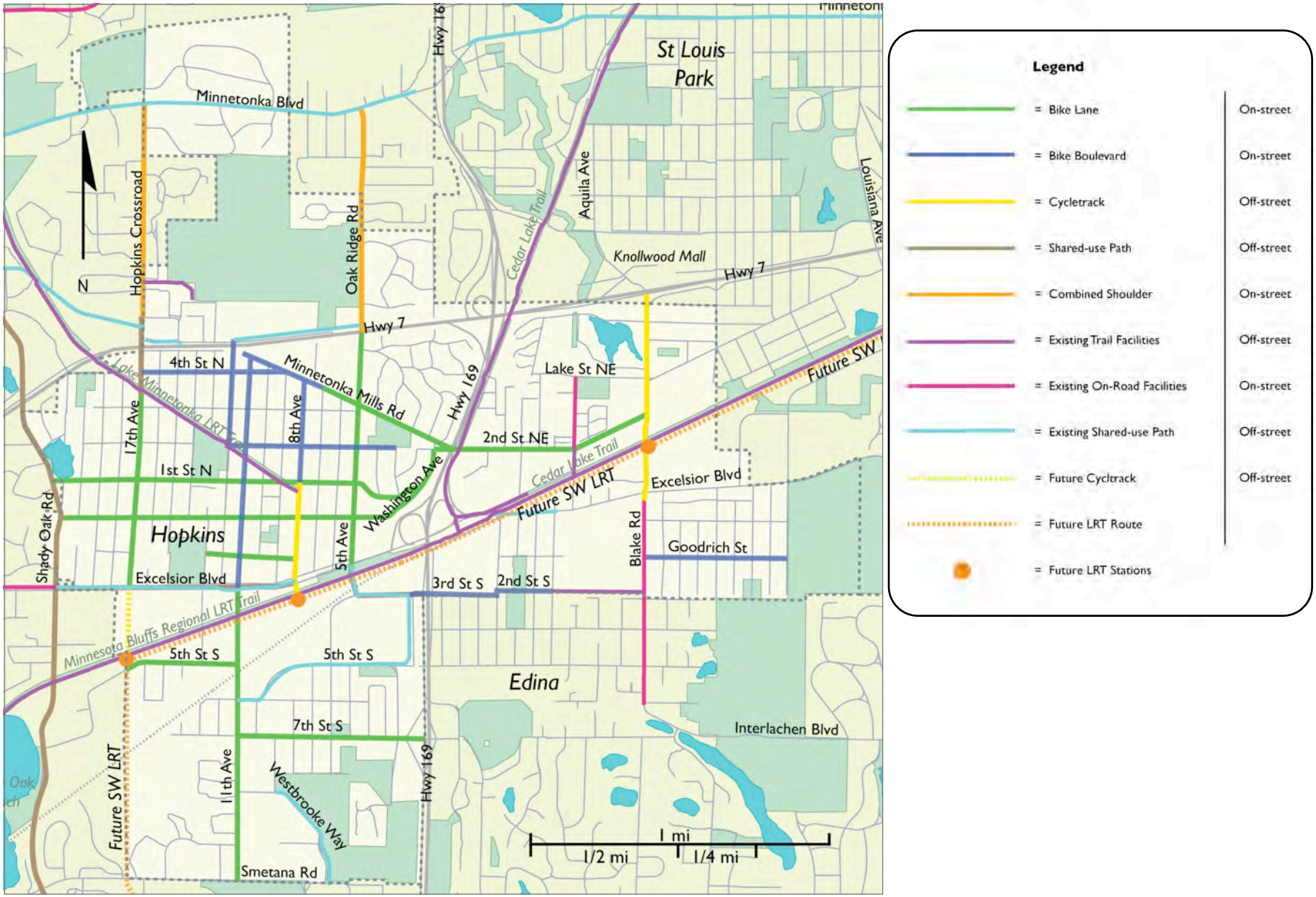
With the upcoming construction of the Southwest LRT, Hopkins has a once-in-a-lifetime opportunity to leverage this significant regional investment and set the stage for improved non-motorized connectivity, inviting and human-scaled residential and commercial development, and prosperity. When future LRT-riders detrain, they will immediately become pedestrians and will rely on walking or biking to transport themselves as far as they feel comfortable and invited to do so.

Using the three proposed LRT stops in Hopkins as primary nodes, a series of connections to schools, parks and areas of commerce and residence can be made to ensure a vibrant and cohesive transportation network. The inner concentric circle represents a quarter-mile radius; the outer concentric circle represents a half-mile radius from each SW LRT station (and it only takes ten minutes to walk a half-mile; that's only three minutes on a bike!).



3.4 Map of recommended treatments

A map showing the recommended walking and biking routes is provided below:



3.5 Toolbox of treatments

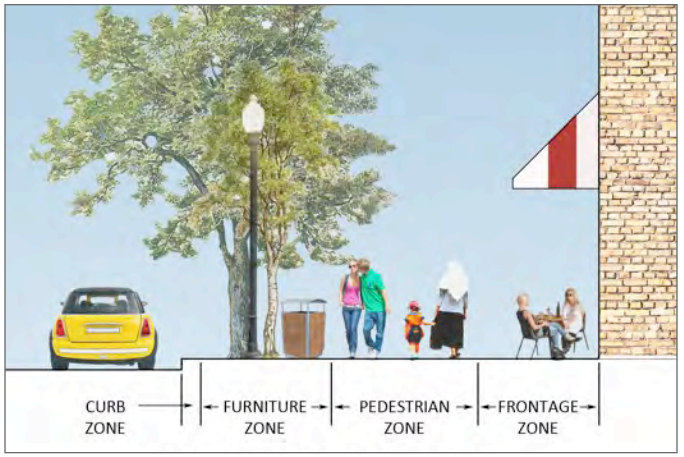
A variety of tools and treatments will be useful to address and improve conditions for pedestrians and cyclists in Hopkins. A brief overview of several options that are recommended for application in Hopkins is provided here. Additional measures and information are provided in the Appendix.

For Hopkins' walking network

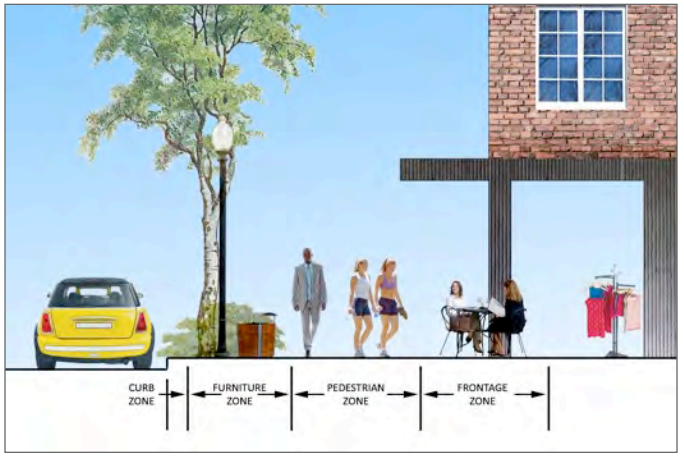
Sidewalks

Sidewalks designate space for the exclusive use of pedestrians, and are a foundational element for a system of pedestrian mobility. They are also a vital component of healthy commercial districts, providing access to businesses, space for street furniture and plantings, and for the casual interactions that support community interpersonal connections. Well-designed sidewalks provide four distinct "zones" that allow them to function in different contexts, with dimensions that respond to the the land uses and locations they serve. The four zones are:

1) **The pedestrian zone** is the zone where people walk. This zone should accommodate people with varying mobility and allow them to navigate the city or district safely and comfortably. Width for a main street / commercial district should be between 6 to 8 ft. Width for a residential district should be at least 5 ft. The maximum cross-slope should be 2%.
2) **The frontage zone** is the portion of the sidewalk that provides access to businesses or other uses adjacent to the sidewalk. It is also the space that can be used for outdoor seating for cafés or restaurants in commercial districts. A minimum of 2.5 ft is recommended for store access, with greater widths to accommodate seating.
3) **The furniture zone** is the portion of the sidewalk where trees, newspaper stands, benches, signs and trash receptacles are placed. Part of its usefulness is that these important elements are placed where they don't obstruct the mobility of people walking or in wheelchairs. In addition, this zone increases the distance between the



Sidewalk zones and their uses and relative dimensions in a commercial district like Hopkins' downtown.



Sidewalk zones in a mixed use district like Hopkins' redevelopment districts.

pedestrian zone and moving motor-vehicles - increasing comfort and sense of safety for people on foot.

4) **The curb zone** is the outermost edge of the pedestrian realm and is generally raised above the motor-vehicle travelway to create a defined and safe separation between automobiles and pedestrians. Curbs should be of the vertical type (not mountable) to discourage automobiles from entering the pedestrian space.

Application in Hopkins

- An existing asset: many of Hopkins' streets already have sidewalks
- Sidewalks are recommended to complete gaps in Hopkins' existing residential sidewalk network, as well as to connect business areas, schools and parks to residential neighborhoods.
- Commercial zones and redevelopment districts should provide sidewalk infrastructure configured to include the four zones described above.

There are many areas in Hopkins where sidewalks once existed. Completing the sidewalk network would support increased rates of walking in the city.

Curb ramps

Curb ramps allow wheelchair users, people with sight or mobility impairments, and parents using strollers to easily enter and exit sidewalks and pedestrian crossings. They also make walking generally more comfortable and safer for all pedestrians. They should be used at all locations where pedestrians are expected to cross. The recommended practice is to provide two perpendicular ramps (rather than a single one at a corner) to better place wheelchair users and reduce conflicts with motor-vehicle traffic.

Application in Hopkins

- An existing asset: many curb ramps exist in Hopkins. However, several appear to not meet ADA standards
- ADA accessible sidewalks must have curb ramps at street intersections. ADA curb ramps should be installed at all intersections where sidewalks currently exist, as well as when new sidewalks are constructed.

Perpendicular curb ramps installed to meet ADA standards.

Marked crossings

Marked crosswalks are a visual indication of locations where pedestrian crossings can legally and safely occur. They help create a continuous network for pedestrians, and improve safety by alerting motorists to the potential presence of a pedestrian at a crossing. They should be used at all traffic-light controlled intersections, and at stop-sign controlled intersections in main street commercial districts. When placed at locations with more than one lane of travel per direction (including turn lanes), they should be combined with Advanced Stop Bars in order to minimize risk of "Hidden Threat" crashes.

Application in Hopkins

- An existing asset: many Hopkins intersections already include marked crosswalks.
- All crosswalks should be high contrast with longitudinal ("ladder" or "zebra" type) markings. Colored and stamped crosswalks should only be used at controlled locations. Please note that decorative crosswalk treatments made of distinctive materials can fade unevenly and become physically uneven over time.
- Community destinations and assets, including schools, parks and transit stations should include marked crosswalks.

Marked crossings should be high contrast with "ladder" or "zebra" type markings (Berkeley, CA, pictured above).

Median Crossing Islands

Crossing islands simplify pedestrian crossings and improve safety by dividing the crossing movement into two stages so that pedestrians only cross one direction of traffic at a time. They make crossing high-volume roads safer and easier, and allow slower walkers, including children and seniors, to cross wider roads without worrying about getting stranded in the middle of the crossing.

Application in Hopkins

- At intersections along high-traffic streets such as Highway 7, Excelsior Boulevard, Blake Road and Shady Oak Road.

Median crossing island (Bainbridge Island, WA, pictured above). Image courtesy of FHWA.

Curb extensions

Curb extensions extend the sidewalk and curb into the motor-vehicle parking lanes at intersection locations. These features (also known as bump-outs) improve safety and convenience by shortening the distance a pedestrian must walk to cross a street; by increasing the visibility of pedestrians to motorists; and by slowing down right-turning motorists. They also decrease the amount of time a pedestrian is in the line of vehicle traffic. Curb extensions work especially well on busy collector streets, on minor arterials where on-street parking is allowed, and in commercial / downtown districts.

Application in Hopkins

- An existing asset: Many street intersections in the city already feature bump-outs.
- Additional intersections throughout the Hopkins Downtown District, including Mainstreet, 1st Street and 8th Avenue should also include these elements.
- Can be implemented on truck routes by using mountable curb extensions (trucks with long loads can still go over, if necessary).
- Curb radius for bump-out corners is typically no greater than fifteen feet.

An existing asset: curb extension and marked crosswalks in Mainstreet Hopkins.

Pedestrian Hybrid Beacon (HAWK)

The pedestrian hybrid beacon (HAWK) is a pedestrian-activated red-indication signal designed for locations where current engineering practices make providing a standard traffic signal difficult. The HAWK gives pedestrians the ability to comfortably cross busy roads at intersection or midblock locations, and to do so protected by a red-indication signal for motorists.

The HAWK is dark until a pedestrian activates it by pressing the crossing button. It responds immediately, with a flashing yellow pattern that changes to a solid red light providing unequivocal "Stop" guidance to motorists - studies show that they are as effective as traditional stop lights in providing protection for pedestrian crossings. HAWKs are included in the MN-MUTCD. Installed cost for a typical crossing ranges between $75,000 to $150,000.

Illustration: HAWK signal at a marked mid-block pedestrian crossing.

Application in Hopkins

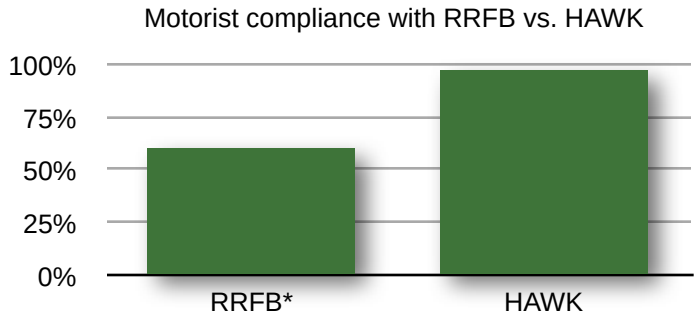
- Blake Road: Cedar Lake Trail crossing and at Lake Street (Cottageville Park).
- Excelsior Boulevard at 15th Avenue to access Central Park.
- Mid-block crossings on Excelsior Boulevard and Shady Oak Road.

Rectangular Rapid Flash Beacon (RRFB)

A Rectangular Rapid Flashing Beacon, or RRFB, is a pedestrian-activated signal that uses an irregular "stutter" flash pattern with very bright amber lights (similar to those on emergency vehicles) to alert drivers to yield to the pedestrians who wish to cross a road. It offers a higher level of driver compliance than other flashing yellow beacons, but lower than the HAWK. The RRFB is suitable for installation on two to four lane roads; it is not compatible with a three-lane approach. Installed cost for a typical crossing is between $10,000 to $15,000 (for two units, one on either side of a street).

Application in Hopkins

- Near schools, such as along Minnetonka Mills Road near Alice Smith Elementary.
- At crossings near parks, such as Burnes Park.
- At potential mid-block crossings throughout the Hopkins Downtown District, including on Mainstreet, 1st Street and 8th Avenue.



Source: George Branyan, Pedestrian Program Coordinator, DC Department of Transportation

* RRFB compliance ranges typically from 40-80% per installation, depending partially on how long the signal has been installed.

A HAWK signal with solid red light activated. Image courtesy of George Branyan, DC DOT.

Solar-powered RRFB installation. Image courtesy of ELTEC Corporation.

Countdown Timers

This device consists of a standard pedestrian crossing signal which works in conjunction with a timer that counts down during the period in which the 'red hand' symbol would normally be blinking. The timer indicates exactly how much time is left until the light changes, thereby reducing the number of pedestrians stranded in the crosswalk when the signal changes. This tool is relatively well-understood and inexpensive to implement.

Application in Hopkins

- Build off the existing installations in Hopkins for all signal-controlled intersections.

Pedestrian countdown timer at a pedestrian crossing at an intersection. Image courtesy of Bike Walk Lincoln Park.

Leading Pedestrian Interval (LPI)

LPI refers to a method wherein the traffic signal is programmed so that the pedestrian walk sign occurs several seconds before the 'green light' at the parallel street. This gives pedestrians a head start into the intersection so that they are more easily seen when cars begin to move forward. The LPI is typically three to five seconds.

Application in Hopkins

- Throughout Hopkins' downtown area, including the intersection of Mainstreet and 8th Avenue.

The Leading Pedestrian Interval allows pedestrians to cross before cars are permitted to proceed. Image courtesy of bikeuptown.org.

For Hopkins' biking network

Conventional Bike Lanes

Bike lanes designate a portion of the roadway for preferential use by bicyclists. Lanes are defined by striping, pavement markings and signage. Bike lanes allow cyclists to travel at their own speed in a space separate from motor vehicle traffic. A thick (eight-inch) stripe for the bike lane is recommended if the lane is not buffered. Width of the bike lane is measured from paint centerline to the edge of the longitudinal joint (if along curb and gutter).

Application in Hopkins

- An existing asset: bike lanes can be found in Hopkins on portions of South Blake Road and North Tyler Avenue.
- Bike lanes are recommended for 1st Street N, Mainstreet, 17th Avenue, 5th Avenue, as well as portions of 2nd Street N, 7th Street S, 11th Avenue, Minnetonka Mills Road.
- Bike lanes - or a shared bike and pedestrian shoulder - should be considered for Hopkins Crossroad and Oak Ridge Road.

A conventional bike lane defined by striping and, in this case, a different pavement treatment (North Lowry Avenue, Minneapolis, pictured above).

Buffered Bike Lanes

Buffered bike lanes provide cyclists with all of the benefits of a conventional bike lane, but with additional space between the bike lane and moving traffic, thereby increasing their comfort. Buffers can provide cyclists with adequate room to pass each other without having to merge into automobile traffic.

Application in Hopkins

- Buffered bike lanes should be considered first, before conventional bike lanes, when space allows and higher motor vehicle speeds are present. A minimum buffered bike lane should have a two-foot buffer zone and a five-foot bicycle travel lane.

A buffered bike lane. This example has a buffer on the left for separation from moving vehicles and a buffer on the right for separation from parked cars. Image: Portland, Oregon.

Advisory Bike Lanes

An advisory bike lane is a treatment applied to narrow residential streets. Advisory lanes allow for two way traffic in a narrow middle lane of the street while still allowing room for two bike lanes. In the instance that two cars meet going opposite directions in the middle lane, a car is allowed to merge into the bike lane with caution. The bike lane is marked with dashed lines to indicate that cars and bikes will sometimes mix in that zone.

Application in Hopkins

- Advisory bike lanes should be considered on streets where bike lanes are recommended, but the street is too narrow to accommodate a dedicated five-foot bicycle lane in each direction.
- Installation of advisory bike lanes requires education of Hopkins motorists and cyclists to ensure that all road users understand how to use the shared space.

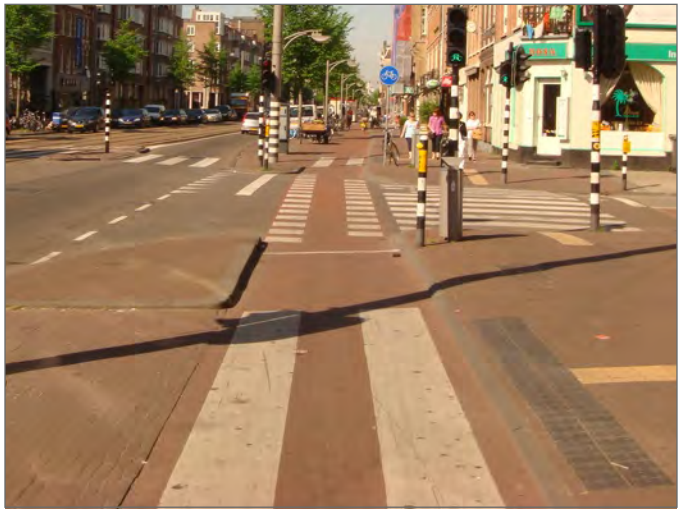
Advisory bike lanes along each side of a street. Image courtesy of the City of Edina.

Cycletracks

A cycletrack is an exclusive lane for cyclists separated from motor-vehicle traffic by a physical barrier and distinct from the sidewalk. Different forms of cycletracks include one-way protected cycletracks, raised cycletracks and two-way cycletracks. Cycletracks significantly increase ridership from all ages and experience levels because the significant separation from motorized vehicles greatly increases rider comfort.

Application in Hopkins

- Cycletracks should be considered for streets such as 8th Avenue, Blake Road and the future 17th Avenue extension to the Shady Oak Road station; these streets are vital connections to transit and downtown.
- Over the long-term, cycletracks should also be considered for Highway 7 and Shady Oak Road, where separation from high motor-vehicle speeds can create an increased sense of comfort for cyclists.



A one-way protected cycletrack.

Bike Boulevards

A Bike Boulevard (also sometimes known as a Neighborhood Greenway or Neighborhood Slow Street) is a neighborhood residential street modified to calm automobile traffic, discourage cut-through traffic, and make walking and bicycling in those streets more comfortable. Certain treatments at intersections are sometimes applied to give further priority to cyclists. A speed of twenty miles per hour should be the target motor-vehicle maximum speed on bike boulevards.

Application in Hopkins

- Bike boulevards should be considered for streets throughout Hopkins' central residential area. Applications include portions of 11th Avenue, 12th Avenue, 4th Street N, 2nd Street NW, and portions of Minnetonka Mills Road.
- Additional streets for bike boulevard consideration include 3rd Street S / 2nd Street S and Goodrich Street

Illustration: Bike boulevard intersection treatment.

Bike Boxes

A bike box is a designated area for cyclists at the head of an intersection. Pavement markings signal to motorists to stop a greater distance before an intersection, allowing cyclists to move forward and stop in the bike box, increasing their visibility and decreasing the possibility of "right hook" crashes. This treatment also gives cyclists greater priority over motorists by allowing them to be the first to begin movement when a traffic signal turns from red to green (ideally installed with a leading bicycle signal).

Application in Hopkins

- Bike boxes should be considered for all bicycle lane treatments at intersections. Areas would include all signalized intersections along Mainstreet and 1st Street N, as well as along 17th Avenue and 5th Avenue.

Illustration: A bike box.

Median Crossing Island

A median crossing island is a traffic median of full (6 inch) curb height providing a protected space in the center of the street that allows pedestrians and bicyclists to divide their crossing movement and stop - separated from traffic - while crossing the street. This tool is useful especially on multi-lane or high-volume streets where the length of the full street crossing is relatively long. The crossing island should include a designated area for cyclists.

Application in Hopkins

- See application suggestions for Median Crossing Island for pedestrians, and combine if facilities align. Additional consideration should be given to where trails cross busy roads, such as at Cedar Lake Trail and Blake Road.

Illustration: A forward stop bar for bicyclists.

Forward Stop Bar

A forward stop bar is a stop bar just for cyclists located closer to the intersection than the stop bar for motorists. By providing a space for cyclists to stop ahead of motorists, forward stop bars provide bicyclists with better visibility of approaching cross-street traffic, as well as giving cross-street traffic a better sightline to see approaching cyclists.

Application in Hopkins

- A forward stop bar is a tool that may be used in lieu of a bike box to increase visibility of cyclists and may be considered at locations recommended for bike boxes. However, a forward stop bar is limited in its capacity to accommodate more than one cyclist at a red light cycle (unlike a bike box).

Illustration: A combined bike lane/right turn lane.

Combined Bike Lane/Right Turn Lane

A combined bike lane/right turn lane positions an advisory bike lane within a portion of the motor vehicle right turn lane. The right edge of the bike lane is marked with dashed lines to indicate that cars and bikes will sometimes mix in that zone. This tool maintains bicycle position and priority when approaching intersections, reducing the risk of right hook collisions at intersections.

Application in Hopkins

- A combined bike lane/right turn lane can be created when bike lanes are being installed on a street that has existing right turn lanes, such as Hopkins Crossroad. The combined lane maintains the integrity of the bike lane by not ending or interrupting it.

Colored Bike Facilities

Bike lanes, intersection treatments and other on-street facilities are made more visible by the use of colored pavement. By applying color, the bicycle travel areas are distinguished from the rest of the street, making cyclists more visible to motorists. Federal guidance permits their use in marked bicycle lanes and in extensions of bicycle lanes through intersections and other traffic conflict areas (see FHWA guidance >).

A colored bike lane being installed in Minneapolis near the University of Minnesota. Image courtesy of the Minneapolis Bicycle Coalition.

Application in Hopkins

- Colored bike facilities should first be considered for sections of bike lanes that intersect other streets or driveways. The sections that are colored draw attention to the potential automobile/bicycle conflict zones.
- Ideally, high-use bike lanes would receive a continuous color treatment to make it clear to all road users to expect to see cyclists in this space.
- Colored "sharrows" (see below) may be used on bike boulevards.

Shared Lane Markings

Shared lane markings (often called "sharrows") are pavement markings used to communicate cyclists' right to use roadway space for their travel - to both drivers and cyclists. Sharrows help bicyclists position themselves safely in travel lanes too narrow for a motor vehicle and a bicycle to comfortably travel side by side. If ADT is 3,000 or greater, bike lanes should be used instead of sharrows.

A green "sharrow" marking (San Francisco, CA, pictured above).

Application in Hopkins

- Shared lane markings should be used as a treatment for streets identified as bike boulevards.

- Shared lane markings should not be used in place of a bike lane.

Traffic Signals for Bicycles

Traffic signals for bicycles are electrically powered traffic control devices that regulate bicycle movement at intersections. These traffic signals give priority to bicyclists, increase the comfort of bicyclists by reducing stress associated with delays at intersections, and discourage illegal and unsafe crossing maneuvers. See Best Practices in Section 5 for information about loop detectors for bicycles.

Application in Hopkins

- At Excelsior where the North Cedar Lake Regional Trail, the Cedar Lake LRT Regional Trail, and the Minnesota River Bluffs LRT Regional Trail intersect.

A traffic signal for bicycles where previously there was no traffic signal at all (NE Minneapolis, pictured above).

Bicycle Route Wayfinding Signage

A bicycle wayfinding system is a comprehensive network of signing and pavement markings indicating information about destinations along preferred bicycle routes. Wayfinding signage encourages cycling by identifying useful information such as direction of destination, as well as time and distance to destination.

Application in Hopkins

- Wayfinding signage should be used to direct people from all three planned SW LRT stations to points of interest in Hopkins.
- Wayfinding signage should be used to help people connect from the Cedar Lake Trail to the Minnesota River Bluffs Trail, as well as from the Minnesota River Bluffs Trail to the Lake Minnetonka LRT Regional Trail.
- Wayfinding signage should be optimized to draw visitors through downtown on their way through Hopkins.
- Wayfinding signage in Hopkins should be intuitive so that a cyclist using the trails for the first time will have an easy time navigating the city.

Bicycle wayfinding signage should include both distances and times. Image courtesy of Bike Michiana.

3.6 Project and corridor-specific recommendations

With the upcoming construction of the Southwest LRT (SW LRT), Hopkins has a fantastic opportunity to greatly improve non-motorized mobility, make walking and biking a more welcoming activity, and make significant strides in its efforts to become a more livable, vibrant and convivial city. The organizing idea behind this Plan is to focus directly on the development of the LRT station locations and develop a clear north-south framework from which logical east-west walking and biking connections can spring.

The following section discusses specific areas of Hopkins and offers recommendations for making cost-effective and potentially transformational improvements. Recommendations are organized in three sections:

- Planned SW LRT Station Areas
- Connections to City Destinations
- Regional Connections

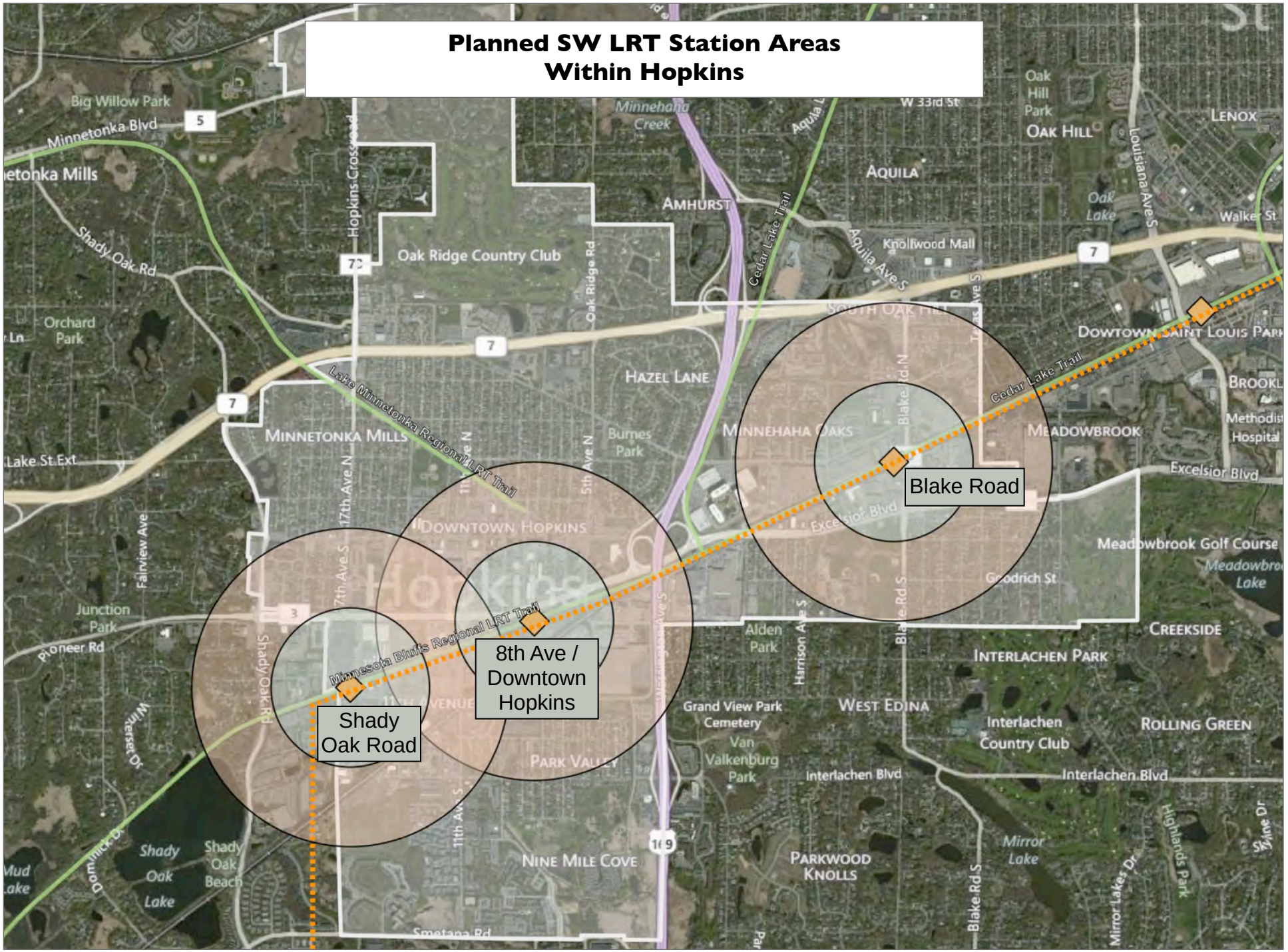
Metro Transit LIght Rail is expanding mobility options throughout the Twin Cities.

3.6.1 Planned SW LRT Station Areas

Planning is well underway for the proposed Southwest Light Rail Transit line connecting Eden Prairie, Minnetonka, St. Louis Park and Hopkins to downtown Minneapolis, the University of Minnesota and downtown St. Paul.

Three transit stations are planned in Hopkins: Downtown Hopkins, Blake Road, and Shady Oak Road. Priority is given to creating high-quality non-motorized access to all three planned LRT stations to facilitate multi-modal trips and increase access and mobility for Hopkins residents, employees and visitors. The diagram on the next page shows quarter- and half-mile concentric buffers from each of the proposed stations - a half-mile trip takes about ten minutes by foot or three minutes by bicycle.

Hopkins' 8th Avenue can become the backbone linking the SW LRT with the downtown Hopkins.

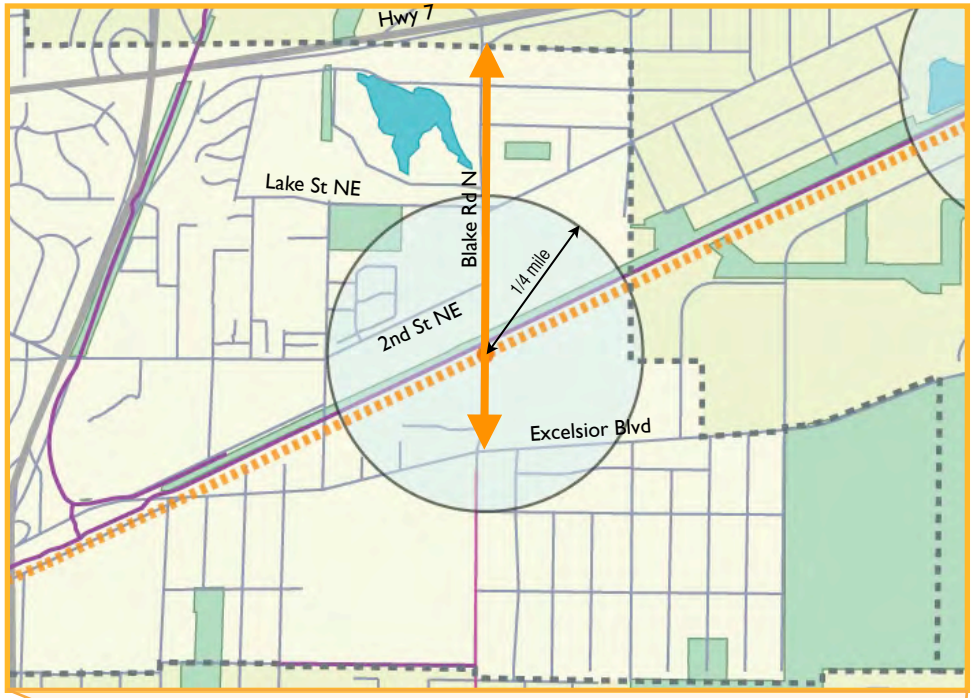

Planned SW LRT Station Areas
Within Hopkins
Blake Road
8th Ave / Downtown Hopkins
Shady Oak Road
Minnetonka Blvd
Shady Oak Rd
Hopkins Crossroad
Oak Ridge Country Club
Minnehaha Creek
Amhurst
Aquila
Cedar Lake Trail
Knollwood Mall
Oak Hill Park
Oak Hill
Lenox
Oak Lake
Walker St
Louisiana Ave S
Downtown Saint Louis Park
Hazel Lane
Lake Minnetonka Regional LRT Trail
Minnetonka Mills
Burnes Park
Minnehaha Oaks
Meadowbrook
Methodist Hospital
Excelsior Blvd
Meadowbrook Golf Course
Goodrich St
Downtown Hopkins
Minnesota Bluffs Regional LRT Trail
Alden Park
Creekside
Interlachen Park
West Edina
Grand View Park Cemetery
Van Valkenburg Park
Interlachen Country Club
Rolling Green
Interlachen Blvd
Park Valley
Nine Mile Cove
Parkwood Knolls
Mirror Lake
Shady Oak Lake
Shady Oak Beach
Smetana Rd
Lake St Ext
Orchard Park
Junction Park
Pioneer Rd
Fairview Ave
17th Ave N
5th Ave N
7th Ave S
11th Ave S
Harrison Ave S
Blake Rd S
Blake Rd N
Big Willow Park

3.6.1.1 Blake Road Station

Background / Current Condition

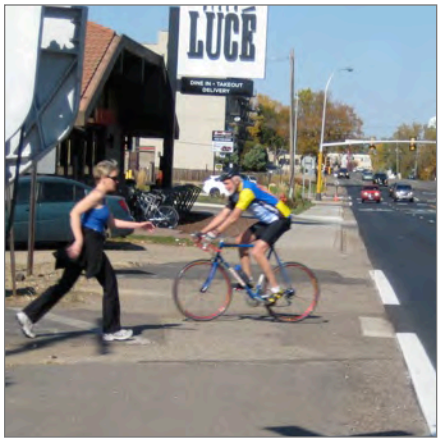
Blake Road is currently a busy four-lane street. The Cedar Lake Trail crosses Blake Road at the location of the future SW LRT station. The corridor is an important north-south connection for residents, students, business-owners and visitors on the east side of Hopkins. There are currently areas of limited sidewalk access, and the at-grade trail crossing has limited visibility.

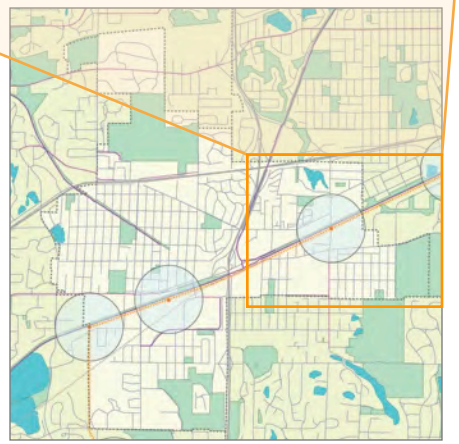
Blake Road in this area has about 12-16,000 ADT - well below the need for a four lane road. A road diet (four to three lane conversion) should be considered to reduce speeding and crashes and increase space for uses other than car movement.



General Recommended Treatments

- Four to three lane conversion
- Crossing enhancements, including RRFB or HAWK at Cedar Lake Trail Crossing
- Access management - consolidate driveways for access to businesses to minimize sidewalk disruption



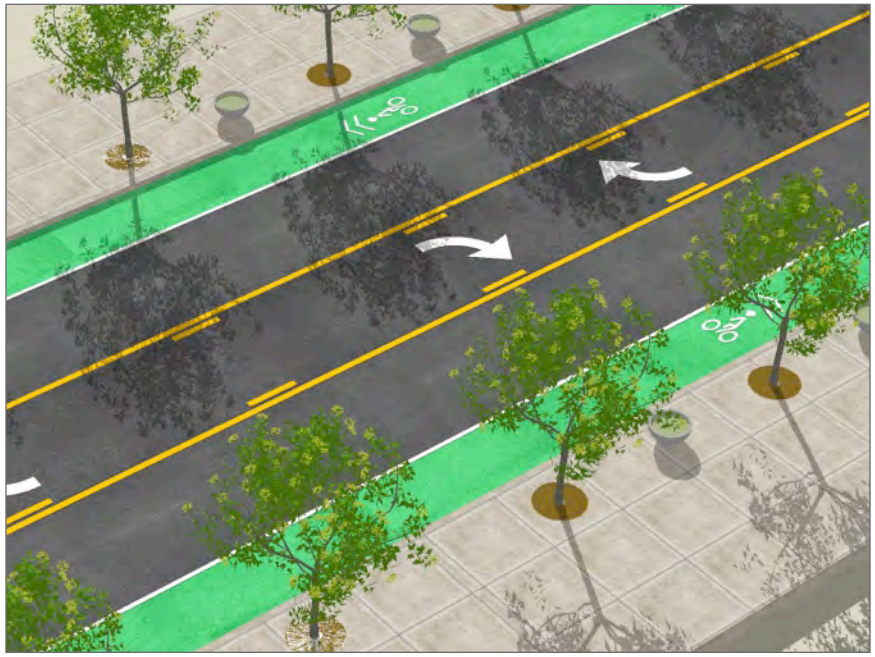


Blake Road recommended street improvement (Scenario A)

Right-sizing with Green Bike Lanes

After reducing the number of car travel lanes from four to three, highly-visible, six-foot green bike lanes are added against the curbline. The speed along this corridor should be no higher than 30 mph, warranting ten or eleven foot travel lanes and a ten foot center lane. Because most conflicts between road users occur at intersections and driveways, the number of driveways should be limited creating discreet entrance and exit locations from businesses.

A vision for Blake Road: Narrower travel lanes are a safe choice at speeds below 35 mph and allow for other road uses such as bike lanes, street trees and enhanced sidewalk space.



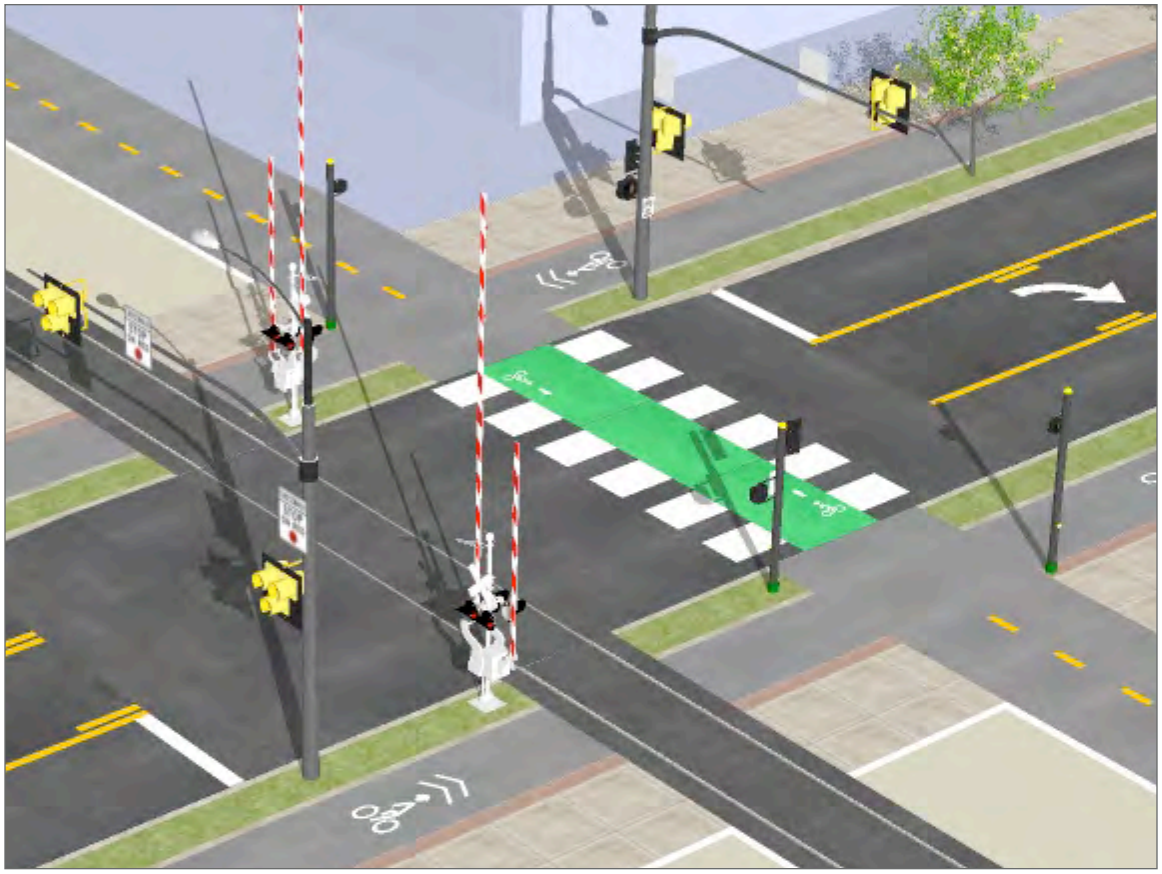
Highly-visible green bike lanes and a wide sidewalk are made possible by reducing the four-lane cross-section to three lanes.

Blake Road recommended street improvement (Scenario B)

Right-sizing with Cycletracks

Like Scenario A, the speed along this corridor should be no higher than 30 mph, warranting ten- or eleven-foot travel lanes and a ten-foot center lane. A vegetated boulevard separates the travel lanes from the cycletrack and sidewalk area on each side of the street. Crossings, such as the Cedar Lake Trail, are highly-visible using longitudinal crosswalk markings and should include a "crossbike" (crosswalk for bikes) treatment along the crosswalk. Furthermore, the crossings should be enhanced by an RRFB or, preferably, a HAWK signal. The crosswalk should remain at the same grade as the trail; the approaching Blake Road travel lanes ramp up gradually to a speed table that includes the railroad crossing and crosswalk.

A raised crossing, protected by a HAWK signal, allows sidewalk, cycletrack and trail users to cross Blake Road with safety, comfort and confidence.



A separated cycletrack increases the comfort of road users and creates a direct connection from the proposed SW LRT station to other destinations in Hopkins via Blake Road. The Cedar Lake Trail crossing is enhanced by way of high-visibility markings and separate bike and walk signals.

A Vision for Blake Road

Blake Road, with the addition of the SW LRT, has the potential to become one of the most livable and desirable corridors in the Twin Cities region. The recommendations presented in this Plan can be realistically accomplished by the time the SW LRT is anticipated to open in 2018, providing a short-term path to transforming this important corridor into a vibrant place that encourages active transportation and conviviality.

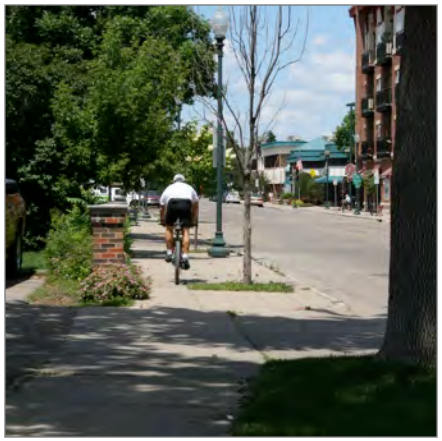
3.6.1.2 8th Ave / Downtown Station

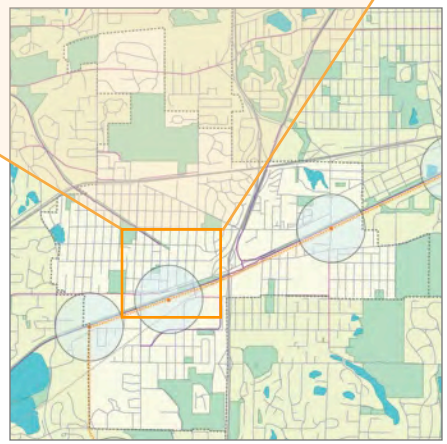
Background / Current Condition

8th Avenue is the primary connection between the planned Downtown Hopkins SW LRT station and Hopkins' historic Mainstreet. Enhanced bicycle and pedestrian facilities need to be prioritized so that people choose to use non-motorized transportation to travel the quarter mile between the station and Mainstreet. Additionally, 8th Avenue connects two regional trails: the Minnesota River Bluffs LRT Regional Trail and the Lake Minnetonka LRT Regional Trail.

General Recommended Treatments

- Highly-visible and comfortable bicycle facility
- Enhanced pedestrian areas with wide sidewalks and room for street furniture
- Wayfinding directing visitors to Mainstreet and the Regional Trails
- Bike Station and Nice Ride / public bikeshare at station



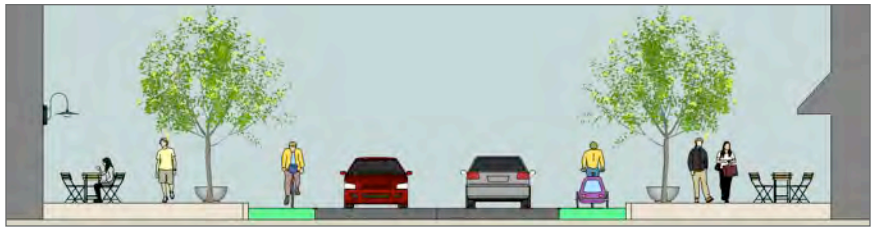


8th Avenue recommended street improvement (Scenario A)

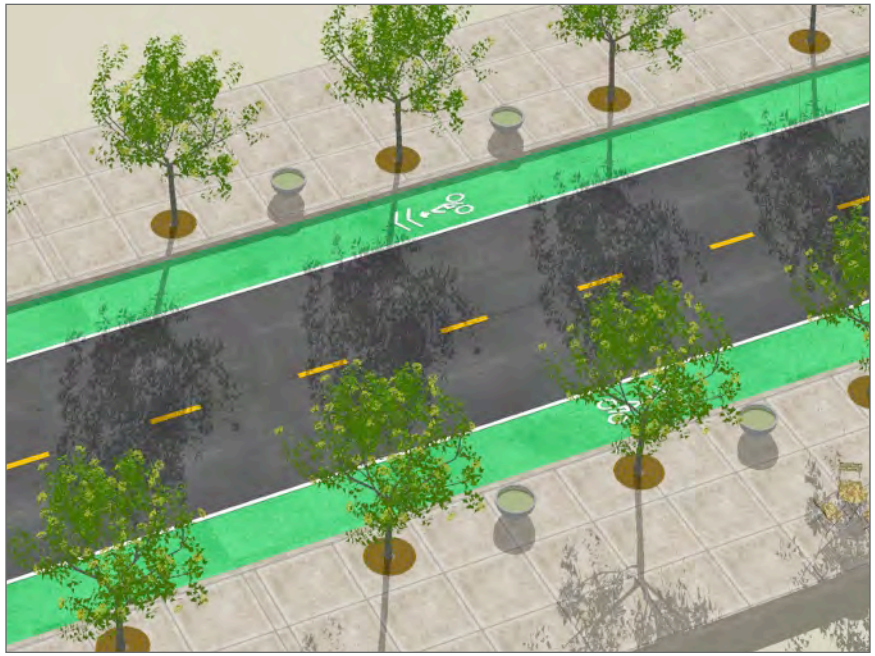
Green bike lanes

Six-foot green bike lanes are added between the parking and the travel lane. The speed along this corridor should be no higher than 25 mph, warranting ten-foot travel lanes. The green bike lanes should be continuous all the way from Excelsior to the Lake Minnetonka LRT Regional Trail. The crossing at Excelsior should include a crossing island with crossbike treatment along either side of the crosswalks. Easy-to-access wayfinding should be present to help guide walkers and bikers unfamiliar with the Hopkins landscape from and to the SW LRT station and the Regional Trails.

8th Avenue has 66 feet of available right-of-way, allowing for various configurations under Scenario A. Two ten-foot travel lanes plus two six-foot bike lanes allows 34 feet to be used for on-street parking and/or sidewalks.



A vision for 8th Avenue: Narrower travel lanes allow for other road uses such as bike lanes, on-street parking, street trees and enhanced sidewalk space.



Highly-visible green bike lanes, on-street parking and the current two lanes of motor-vehicle traffic can fit within the existing roadway space. A high-quality sidewalk environment will increase walkability.

8th Avenue recommended street improvement (Scenario B)

Cycletrack

Like Scenario A, the speed along this corridor should be no higher than 25 mph, warranting ten-foot travel lanes. A vegetated boulevard separates the travel lanes from the cycletrack and sidewalk area on each side of the street. The cycletrack treatment should continue all the way from Excelsior to the Lake Minnetonka LRT Regional Trail, north of Mainstreet. Like Scenario A, the crossing at Excelsior should include a crossing island with crossbike treatment along either side of the crosswalks. Easy-to-access wayfinding should be present to help guide walkers and bikers unfamiliar with the Hopkins landscape from and to the SW LRT station and the Regional Trails.

A separated cycletrack along 8th Avenue will increase the comfort of road users and create a direct connection from the proposed SW LRT station to other destinations in Hopkins.

Cross-section of the cycletrack configuration for 8th Avenue.

Crossing detail of Excelsior at 8th Avenue

Birds-eye view

Intersection improvements include a crossing island on Excelsior, high-visibility crosswalks and "crossbikes," and curb ramp transitions between the crossings and the potential cycletrack treatment on 8th Avenue.

Crossing detail of Excelsior at 8th Avenue

Eye-level view

In addition to curb ramps and high-visibility crosswalk and crossbike markings, pedestrians and cyclists are invited to cross Excelsior by way of bicycle and walk signals with push-button activation.

A Vision for 8th Avenue

8th Avenue is a destination full of art, energy, walking and biking. The planned SW LRT station is very close to downtown—actually, it feels like you are already there once you leave the train. This ARTery is complete with ephemeral public art that invites passersby to enjoy their experience traveling to or from the station. Residents and visitors are invited to slow down and linger, enjoying their surroundings and their commute.

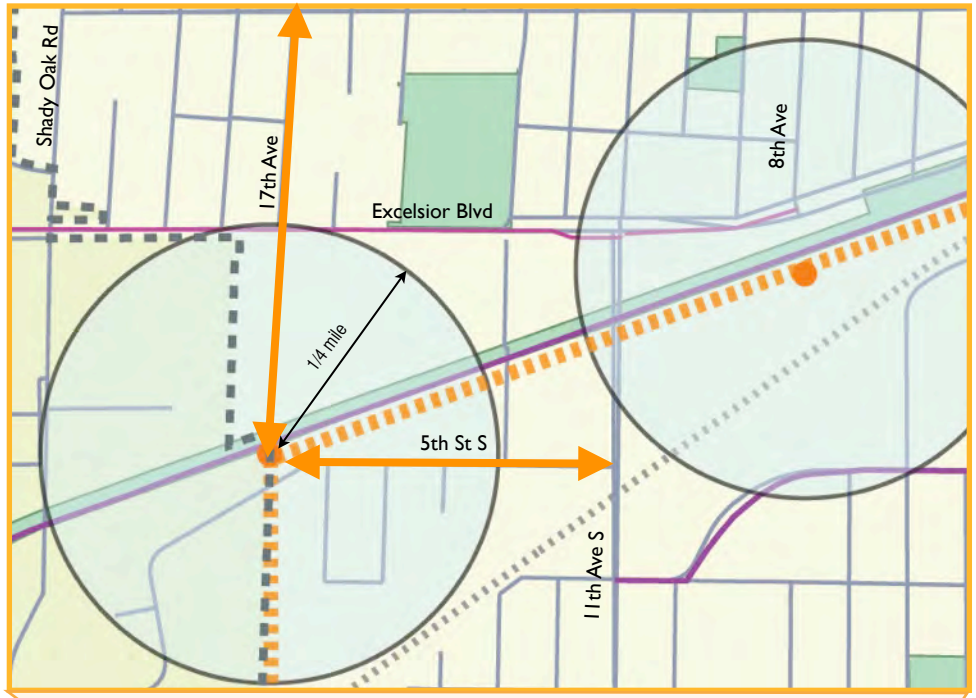
3.6.1.3 Shady Oak Road Station

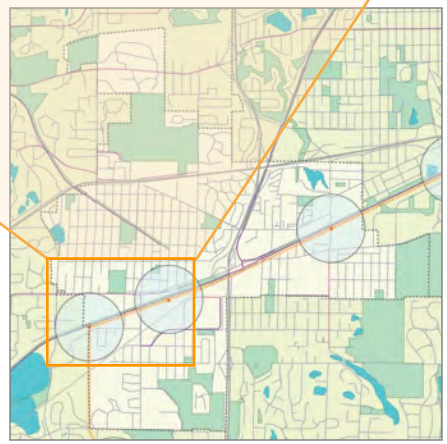
Background / Current Condition

The Shady Oak Road Station will utilize a planned extension of 17th Avenue, a continuous north-south connection in western Hopkins from Excelsior Boulevard all the way to Highway 7. The street continues north as Hopkins Crossroad.

Recommended Treatments

- Use the existing wide right-of-way on 17th Avenue to accommodate bike lanes on each side of the street from Excelsior to Highway 7 and down to the planned station location
- The new section of 17th Avenue should be a greenway-type treatment, prioritizing separated bicycle (cycletracks) and pedestrian space and low-speed traffic access, if necessary
- Work closely with the redevelopment of the area south of Excelsior to prioritize safe and accommodating biking and walking access to the proposed station, both from north of Excelsior and along 5th Street S to 11th Ave S





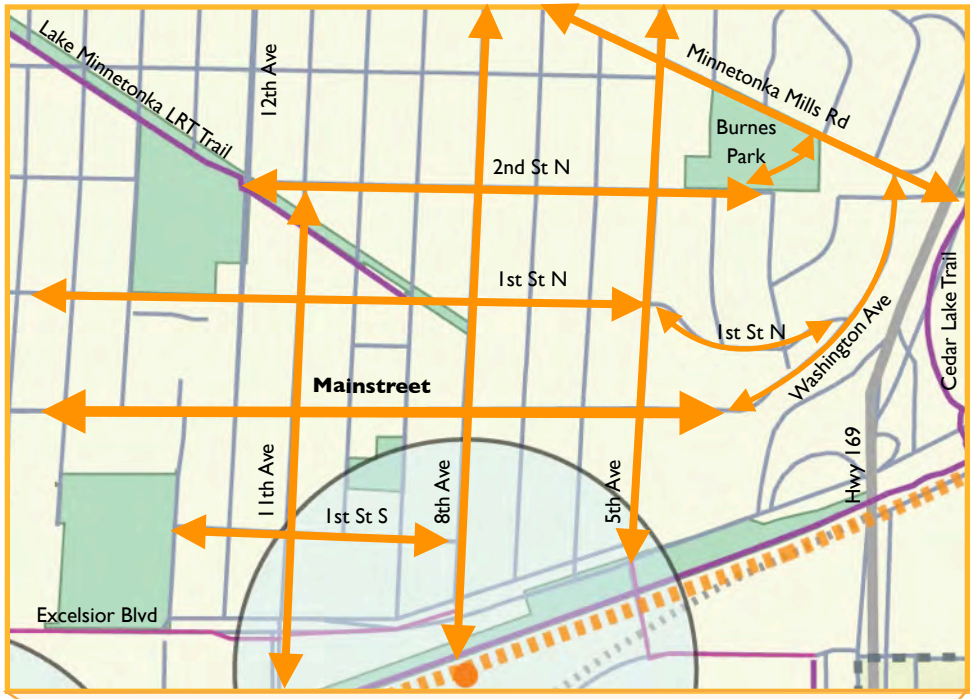
3.6.2 Connections to Downtown

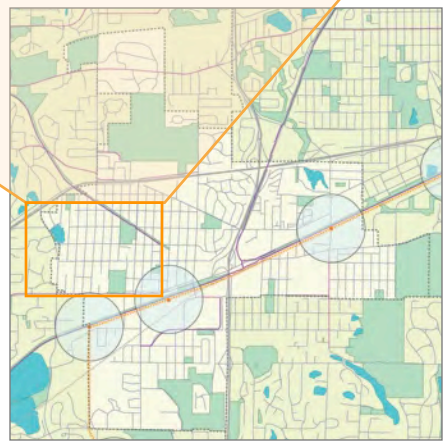
Several important connections will help to create a vital grid of routes to connect city destinations with each other, as well as the SW LRT stations. **The areas discussed in this section supplement the map of recommended treatments presented in Section 3.4.**

3.6.2.1 Mainstreet and Downtown (central and eastern connections)

Background / Current Condition

Mainstreet is the backbone of Hopkins' historic downtown area. Lined with shops and civic institutions, Mainstreet has many existing assets including curb extensions, sidewalks and pedestrian signals. 1st Street continues from the west as a residential street and parallels Mainstreet until it reaches 5th Avenue. Mainstreet extends to the east as Washington Ave and connects with 1st Street, creating an important connection to eastern portions of Hopkins (on the other side of Highway 169). Mainstreet and 1st Street N connect with many north-south streets including 11th Avenue, 8th Avenue and 5th Avenue.





Recommended Treatments

Mainstreet and 1st St N

- Develop bike lanes on each side of 1st Street N
- Develop colored bike lanes on each side of Mainstreet
- Create a continuous sidewalk network on 1st Street N
- Install Leading Pedestrian Intervals for all signalized intersections on Mainstreet
- Install bike boxes at all signalized intersections

- Continue bike lanes onto Washington Ave to connect to Minnetonka Mills Road

11th Avenue, 8th Avenue and 5th Avenue

- Right-size / reduce the number of car lanes south of Mainstreet and provide a bicycle boulevard on 11th Avenue
- Provide a bicycle boulevard on 8th Avenue north of 1st Street N
- Provide a cycletrack on 8th Avenue south of 1st Street N (see discussion under 3.6.1)
- Provide bike lanes on 5th Avenue

Minnetonka Mills Road, 2nd Street N and 1st Street S

- Provide bike lanes on Minnetonka Mills Road from 7th Avenue to the Cedar Lake Trail
- Develop a bicycle boulevard on 2nd Street N from the Lake Minnetonka LRT Trail to Burnes Park (Park Lane)
- Provide bike lanes on 1st Street S to connect the 8th Avenue cycletrack to Central Park; this also provides access to Downtown Park, City Hall and the Post Office

This existing underpass under Highway 169 is an important asset linking downtown with eastern portions of Hopkins and connecting to the Cedar Lake Trail and 2nd Street NE.

Bike lanes on Mainstreet would provide more comfortable access for residents who want to access other city destinations.

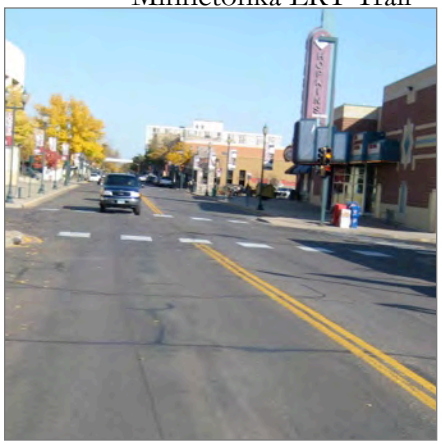
3.6.2.2 1st Street N and Mainstreet (west connections)

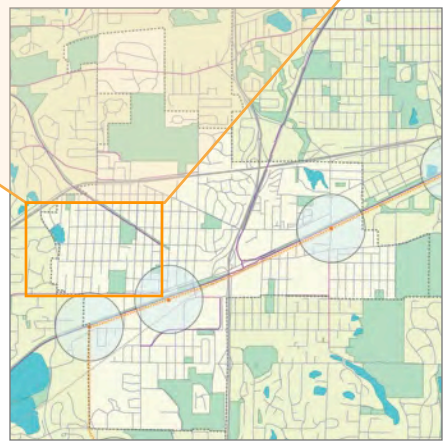
Background / Current Condition

1st Street N is an important east-west connection through central Hopkins. There are currently no bicycle accommodations and limited sections of sidewalk. Mainstreet has shops and civic institutions and many existing pedestrian assets including curb extensions, sidewalks and crossing signals. Both 1st Street N and Mainstreet are the primary connectors to Shady Oak Road. 17th Avenue is an important north-south connection that intersects both 1st Street N and Mainstreet

Recommended Treatments

- Develop bike lanes on each side of 1st Street N
- Develop colored bike lanes on each side of Mainstreet
- Create a continuous sidewalk network on 1st Street N
- Install Leading Pedestrian Intervals for all signalized intersections on Mainstreet
- Install bike boxes at all signalized intersections
- Develop bike lanes on 17th Avenue from Excelsior to the Lake Minnetonka LRT Trail





3.6.3 Connections to Other City Destinations

This section builds from previous sections and address connections that extend from downtown and the LRT station areas. **The areas discussed in this section supplement the map of recommended treatments presented in Section 3.4.**

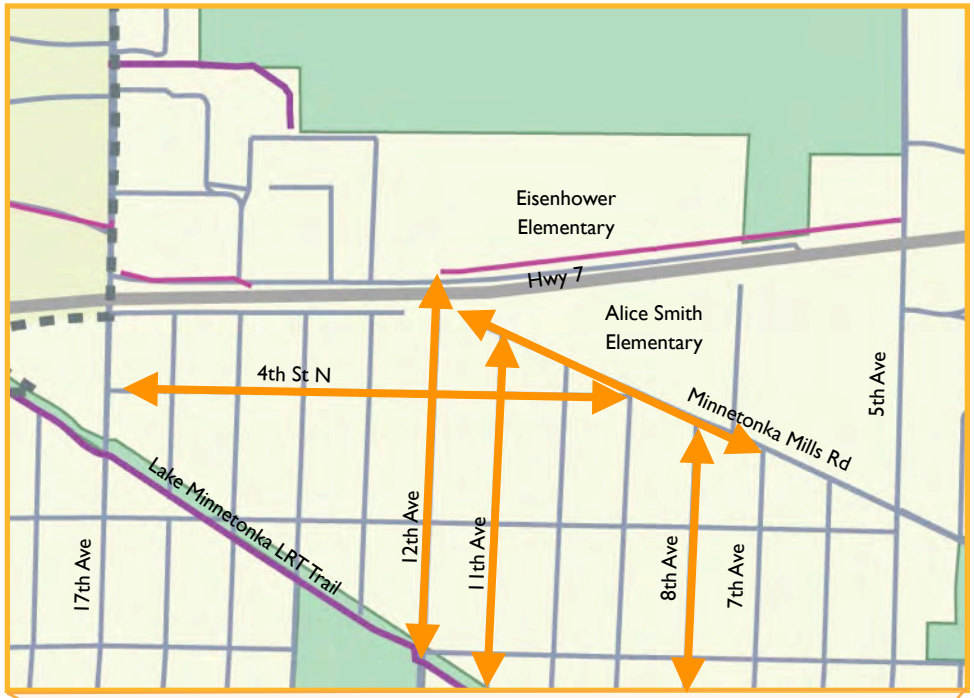
3.6.3.1 Hopkins Public School Area

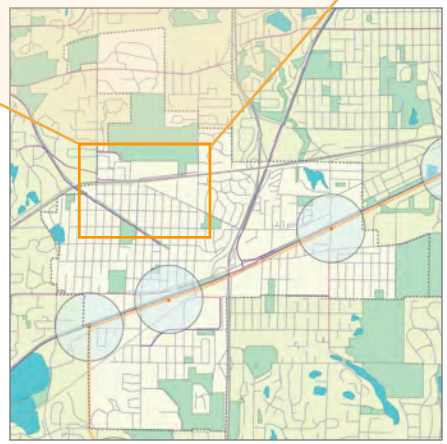
Background / Current Condition

The connection from central Hopkins to the Eisenhower Elementary campus on the north side of Highway 7 is challenging for pedestrians and cyclists. 4th Street, near Alice Smith Elementary, is a quiet neighborhood street.

Recommended Treatments

- Develop enhanced crossings with median crossing islands where 12th Avenue crosses Highway 7, including high-visibility crosswalk markings, a "crossbike," and reduced wait times
- Create a bicycle boulevard treatment along 4th Street N from 17th Avenue to Minnetonka Mills Road
- Create a bicycle boulevard treatment on Minnetonka Mills Road near Alice Smith Elementary from Highway 7 to 7th Ave (transition to bike lanes on Minnetonka Mills Road—see 3.6.2)
- Create enhanced pedestrian connection between Minnetonka Mills Road and Highway 7 / 12th Avenue intersection
- Develop a bicycle boulevard on 12th Avenue from Highway 7 to the Lake Minnetonka LRT Trail
- Develop a bicycle boulevard on 11th Avenue, continuing from downtown to Minnetonka Mills Rd
- Continue bike boulevard on 8th Avenue from the south





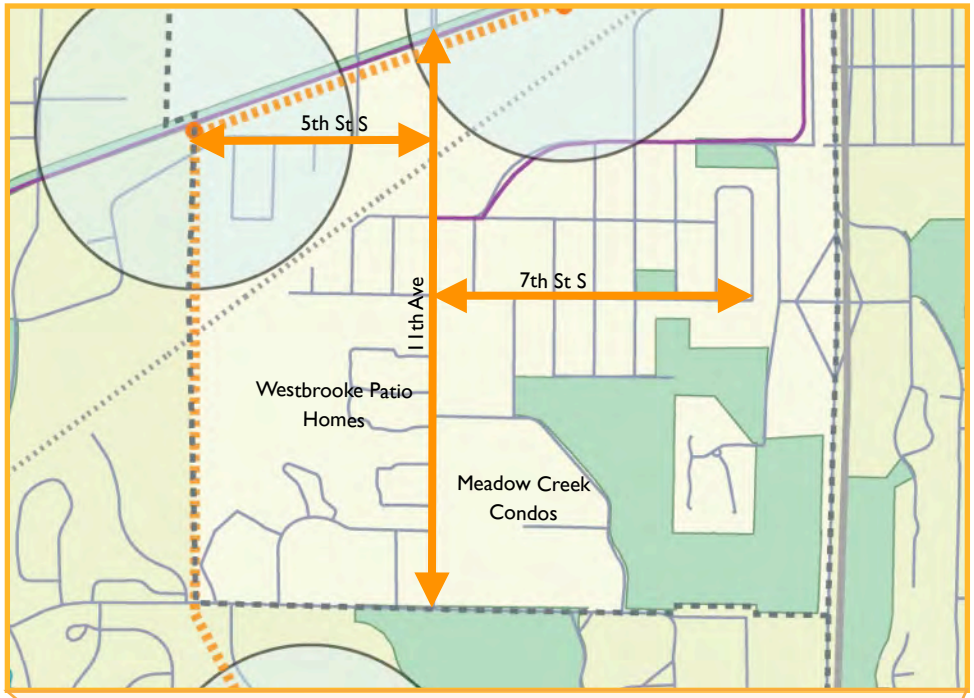
3.6.3.2 Southern Hopkins

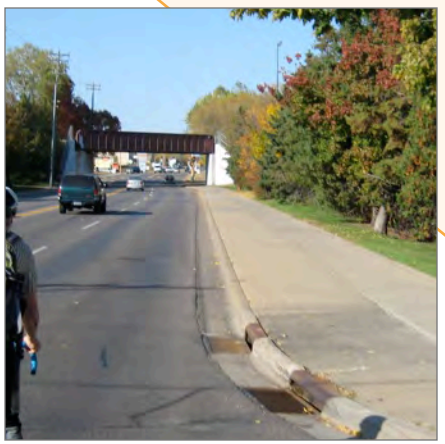
Background / Current Condition

Portions of 11th Avenue South of Excelsior carry over 17,000 cars per day. With current accommodations, cyclists must mingle with automobiles on this busy multi-lane north-south connector in south-central Hopkins. 11th Avenue South is the primary link for workers and residents in southern Hopkins; primary residential areas include Westbrooke Patio Homes, Meadow Creek Condominiums, as well as homes off of 7th Street S. 11th Avenue South is the only access point across the heavy fright rail line just south of 5th Street S.

Recommended Treatments

- Right-sizing would reduce the number of motor vehicle lanes from four to three, providing space to provide bicycle facilities on 11th Avenue in the form of cycletracks or buffered bike lanes
- Provide a continuous sidewalk network throughout the neighborhoods
- Develop buffered bike lanes on 7th Street S
- Create an inviting crossing and connection to 5th Street S, which will be the point of connection to the Shady Oak LRT station





3.6.3.3 Shady Oak Road (CSAH 61)

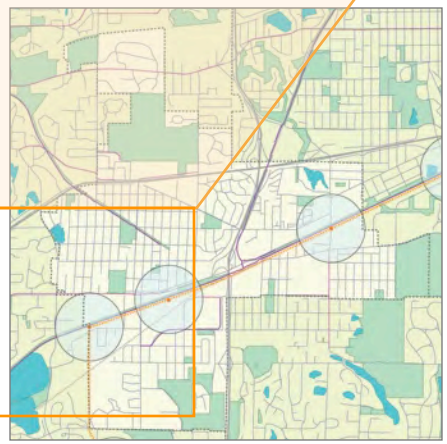
Background / Current Condition

Shady Oak Road is an important business corridor along the western edge of Hopkins. Bicycle and pedestrian accommodations north of Excelsior are limited and make non-motorized transportation very difficult.

There is a current County project underway for CSAH 61 (Project Number 9112) that includes road widening recommendations as well as sidewalk and trail improvements.

Recommended Treatments

- Coordinate closely with CSAH 61 planned improvements
  - Separated bike/walk paths on each side of Shady Oak
  - Enhanced street crossings with median refuge islands and high-visibility markings
  - Curb extensions with appropriately-sized curb radii
- Wayfinding to Shady Oak Lake beach from Minnesota River Bluffs Trail and Excelsior Boulevard



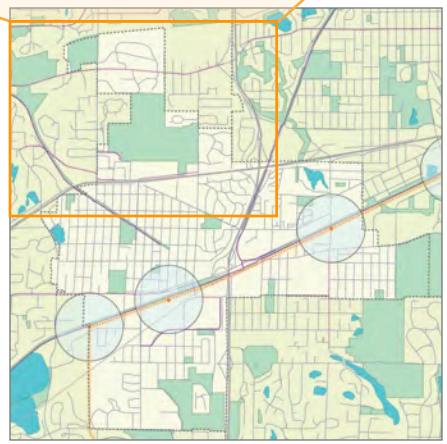
3.6.3.4 North Hopkins

Background / Current Condition

Connections to North Hopkins are made on either Hopkins Crossroad or Oak Ridge Road. Both streets have sections of shoulder on each side. The streets connect to County Road 5 (Minnetonka Boulevard), where an existing shared-use path is present on the south side of the street.

Recommended Treatments

- Develop a shared bike/walk dedicated space on each side of Hopkins Crossroad and Oak Ridge Road
- Use combined right turn/bike lane, or eliminate large sections of right-turn lanes
- Create dedicated sidewalks to connect to public transit stops
- Mark existing south sidepath driveway intersections with green paint
- Complete existing sidepath connections on Highway 7 to connect Hopkins Crossroad to Oak Ridge Road via Eisenhower Elementary School



3.6.3.5 Blake Road Area / Eastern Hopkins

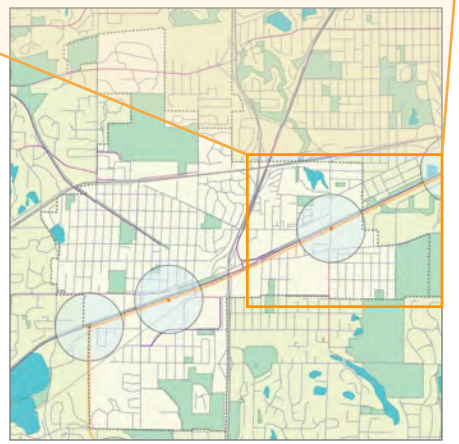
Background / Current Condition

Blake Road is an important residential and commercial corridor in Hopkins. With the addition of the SW LRT station on Blake Road, enhanced pedestrian and bicycle connections will be necessary (see discussion of the Blake Road station are in Section 3.6.1).

2nd Street NE is a vital connector to the downtown area and is currently lacking comfortable pedestrian and bicycle treatments. Blake Road south of Excelsior transitions to a two-lane road with bike lanes and connects to The Blake School and residential areas. The Blake School property is bounded on the south by an existing trail that connects to 2nd Street South to the west.

General Recommended Treatments

- Create an enhanced crossing of Excelsior Boulevard on each side of Blake Road with crossing islands, high-visibility crosswalk and crossbike markings, and bike and pedestrian signals
- Extend suggested road right-sizing and cycletrack treatment south of Excelsior until Blake becomes two lanes; transition cycletrack to existing bike lanes
- Create a comfortable and legible connection to downtown and Cargill
  - Develop buffered bike lanes on both sides of 2nd Street NE
  - Complete sidewalk gaps on 2nd Street NE
- Develop a bicycle boulevard on Goodrich Street
- Develop a continuous bicycle boulevard on 3rd Street S and 2nd Street S; connect to existing shared-use path west of Highway 169 and existing trail south of The Blake School



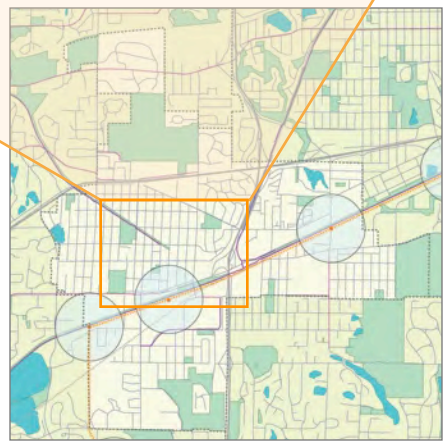
3.6.4 Regional Connections

The City of Hopkins is conveniently located near the City of Minneapolis and adjacent to the western suburbs of Minnetonka (west), St. Louis Park (to the north and east) and Edina (south). Four major regional trails connect with the City: North Cedar Lake Regional Trail, Cedar Lake LRT Regional Trail, Minnesota River Bluffs LRT Regional Trail and Lake Minnetonka LRT Regional trail. Developing safe and convenient pedestrian and bicycle connections to the trails and to the adjacent communities is a priority of this Plan. This section focus on the regional trail assets that exist in Hopkins and how they can be better leveraged as tools for connecting people with places via non-motorized transportation.

3.6.4.1 Lake Minnetonka LRT Regional Trail: Way-finding

Background / Current Condition

Hopkins is fortunate to be well-connected to many regional trails. For someone unfamiliar with the geography of Hopkins, it is difficult to navigate from one trail to the other, as well as from trails to city amenities such as Mainstreet, schools and other civic institutions. Specifically, the Lake Minnetonka LRT Regional Trail cuts directly through central Hopkins and is an asset for non-motorized transportation, but it is currently unclear how it connects to the Minnesota Bluffs Regional LRT Trail.



Recommended Treatments

- A comprehensive wayfinding system to direct people from the Minnesota Bluffs Regional LRT Trail to the Lake Minnetonka LRT Regional Trail, and vice versa

- The wayfinding system should be anchored on the 8th Avenue ARTery and be incorporated into public art along the corridor
- Wayfinding should be located on the trails, 8th Avenue, as well as on intersecting streets (both of 8th Avenue and the trails in Hopkins) to help create a network of non-motorized mobility
- Wayfinding should be extended to a block off of the trails to direct people from the street grid to the trails
- Wayfinding should include both distances and times to destinations

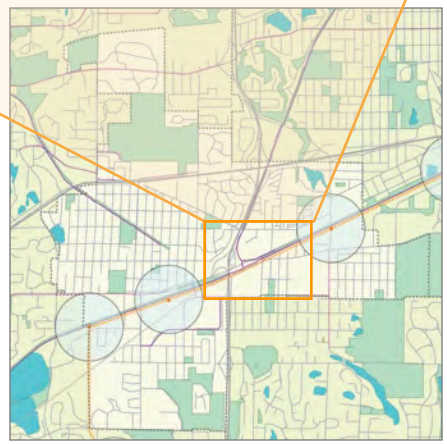
3.6.4.2 Cedar Lake Trail Crossing / Connection to Minnesota River Bluffs Trail

Background / Current Condition

Excelsior Boulevard is a significant barrier to pedestrian and bicycle movement in Hopkins. Safe and convenient non-motorized movement across Excelsior will be a high priority to enable connection with the three SW LRT stations. Additionally, the area along Excelsior near the North Cedar Lake Regional Trail, the Cedar Lake LRT Regional Trail, as well as the Minnesota River Bluffs LRT Regional Trail, is a confusing at-grade intersection.

Recommended Treatments

- Create a simple yet comprehensive wayfinding system to direct trail users with information about distances and times to important regional destinations
- In the short term, direct trail users to cross Excelsior at-grade at the crossing nearest to The Depot Coffeehouse to transition from the North Cedar Lake Trail to the Minnesota River Bluffs Trail, instead of having users cross the railroad tracks on an angle, twice



- Develop a reactive, highly-visible at-grade crossing of Excelsior near the existing crossing at The Depot Coffeehouse at the US 169 access ramps
- Continue the seamless at-grade transition from the Minnesota River Bluffs Trail to the Cedar Lake Trail with highly visible crossing markings, as well as bicycle traffic signals that activate quickly—this should be applied for the crossing of Excelsior as well as where the Cedar Lake Trail crosses Jackson Ave N
- In the long term, this development of this area should be closely coordinated with the engineering of the SW LRT—there is an opportunity to combine extensions of the Minnesota River Bluffs Trail and the Cedar Lake Trail as part of an elevated passageway to connect the trails with each other, as well as the existing shared-use path on the south side of Excelsior Boulevard

The area where the two legs of the Cedar Lake Trail come together with the Minnesota River Bluffs Trail.

The Excelsior Avenue intersection of North Cedar Lake Regional Trail, the Cedar Lake LRT Regional Trail, and the Minnesota River Bluffs LRT Regional Trail.

Crossing a major street, such as Excelsior, should be done at grade and with a reactive crossing activation, and with highly-visible crosswalk markings and a median crossing island.

3.6.5 Crossing major corridors

There are several major streets in Hopkins that act as barriers to pedestrian and bicycle movement. Without crossing provisions, it is difficult for people to reach their destinations. Where intersections exist, legal crossings also exist in the form of marked or unmarked crosswalks, but sometimes it is unclear to road users who has the right of way. The Toolbox of Treatments (Section 3.5) has solutions for penetrating barriers such as Excelsior Boulevard, Blake Road and Shady Oak Road at mid-block locations or at intersections. Effective solutions include the Rectangular Rapid Flash Beacon (RRFB) and the Pedestrian Hybrid Beacon (HAKW).

The Pedestrian Hybrid Beacon, or HAWK, is an effective solution for pedestrians and cyclists to cross busy streets.

3.7 Transit Integration

This section provides discussion into the importance of integrating pedestrian and bicycle networks into current and future transit networks for the creation of a more effective network overall.

Improving bicycle connections to transit can play an important role in making these modes a part of daily life in Hopkins. Easy and convenient linkages to transit help increase the potential number of trips made by bike by increasing the number of destinations available, and by alleviating concerns about lengthy trips, riding at night, and adverse weather. Effective linkages to transit allow pedestrians and cyclists to reach more distant destinations while increasing transit ridership.

Good connections between modes can also help make transit more effective. Ease of access by non-motorized modes reduces the need for services such as costly and infrequent transit feeder services. Additionally, the coming SW LRT train will be a significantly more effective for users in Hopkins.

Cyclist waiting to board LRT train. Photo courtesy of MetroTransit.org.

Bike racks are conveniently located on the front of MetroTransit buses. Photo courtesy of MetroTransit.org.

Connecting bicycles with transit

There are four main components of bicycle-transit integration:

- Allowing bicycles on transit
- Offering bicycle parking at transit locations
- Improving bikeways to transit
- Encouraging usage of bicycle and transit programs

Bikes on transit

Allowing bikes on transit helps extend the distance that a cyclist may comfortably reach. MetroTransit has greatly strengthened the interconnection between cycling and transit in the Twin Cities region by providing space for bikes on all of its buses and trains. On buses, this takes the from of a pull-down rack on the front of the bus. On the Metro Transit LRT trains, each train car has ample designated room for several bikes near the entrance.

Bike parking at transit

Providing safe, long-term bicycle parking at transit stations helps reassure bike commuters that their bikes will still be there when they return from a work, and will encourage bike commuting to transit. Typically, an appropriate mix of short-term and long-term bicycle parking is provided at transit centers.

Often times it is appropriate to provide some secure, long-term bike parking for those who leave their bikes at a station for extended periods of time. Photo courtesy of the City of Folsom, CA.

Bicycling to transit

Local and national surveys consistently show that the biggest barrier to more frequent cycling is the lack of safe and comfortable routes to destinations, specifically bikeways. Given that transit centers have not traditionally been viewed as major destinations for cyclists, few safe and convenient bikeways from neighborhoods to transit centers have been established. Such bikeways, along with the other necessary components for convenient bike commuting, are an important part of the solution for attracting additional commuters to transit.

Encouraging biking and transit

Educating people about existing bike and transit facilities is one of the best ways to encourage and increase their use. Sharing information on the practical benefits of combing cycling and transit (greater radius of reachable distance, convenient connection to destinations, health benefits from physical activity, and potential time and cost savings over driving an automobile) will encourage potential cyclists to combine their trip with transit.

Incentive programs which offer transit discounts to people who arrive at a destination by bus or bike can help to increase the number of bicycle and transit users. Programs like MetroTransit's "Guaranteed Ride Home" for cyclists who ride their bikes to work three times a week or more can also help reduce reluctance to traveling without an automobile.

Nice Ride Minnesota, a bicycle sharing program, is currently expanding to include additional locations adjacent to LRT station platforms.

Bicycle "Park and Rides"

Many transit agencies in the US have built expansive and costly automobile "Park and Rides" as an alternative to providing costly feeder bus service. Recently, growing concerns about congestion, air quality and facility costs have prompted a reexamination of the "Park and Ride" concept—especially when considering that many of the automobile trips to these facilities are less than two miles, which is an easy cycling distance. Cycling to transit ("Ride to Ride") instead of driving benefits communities by reducing demand for land and lowering taxpayer costs, energy consumption, traffic congestion and air pollution.

Bike Stations at transit centers

"Bike stations" are common in a number of cities across the US and Canada, and provide cyclists with robust facilities for storage and maintenance of bicycles, generally nearby to transit hubs or other major destinations. Cyclists who ride their bikes to transit can leave their bikes to be stored and serviced as needed while they continue their commute via transit. Bike stations often act as an important way-point, and provide amenities such as long-term bike parking and shower and locker facilities.

The McDonald's Bike Center in Chicago is a great example of a comprehensive bike facility which provides amenities such as bike parking, maintenance, showers/lockers, retail, and acts in general as a hub of bicycle activity.

Nice Ride

A bike share program such as Nice Ride Minnesota can be a great way to increase the effectivity of a transit center. By siting kiosks at LRT stations in Hopkins, commuters are given the option for hassle-free bike access to the transit system, and to the larger bike share system within the Twin Cities.

The University of Minnesota recently installed a bike center near the route of the Central Corridor LRT which provides bike-transit commuters with many services. including showers/changing facilities, and parking. Photo courtesy of the University of Minnesota.

McDonald's Cycle Center in Chicago. Photo courtesy of the City of Chicago.

3.8 Bicycle parking

Bicycle parking is an end of trip facility that makes it more convenient and inviting for people to arrive by bicycle to a destination.

Provision of adequate bicycle parking cannot be overlooked: if these are inadequate or if finding them is enough of an inconvenience, cyclists will next time choose a different mode for arriving or may choose another destination altogether, even if the provided bicycle routes are perfectly safe and convenient.

End of trip facilities for Hopkins

Aside from special provisions discussed in Section 3.7, the type of end-of-trip facility most needed throughout Hopkins is bicycle parking. Where it exists, it has sometimes been placed in a way that conflicts with pedestrian circulation, or is in other cases of a substandard type or is inconveniently placed, in a location that may not be visible or obvious.

Given that easily accessible, secure and convenient bicycle parking is an essential and inexpensive tool to support people's choice to travel by bicycle, the provision of ample, convenient and accessible bike parking is one of the first priorities recommended by this Plan.

Types of bicycle parking

Bicycle parking is commonly grouped into two types:

- **Short-term bicycle parking** accommodates visitors, customers, messengers and others who arrive at a destination and are expected to depart within two hours. A standard "inverted U" rack, appropriate location and placement, and weather protection is recommended. This type of parking is recommended for Hopkins' downtown and shopping districts, and for city parks.
- **Long-term bicycle parking** accommodates employees, students, residents, commuters, and others expected to leave their bikes unattended for more than two

Bicycle parking conveniently located in a commercial district.

Availability of parking provides convenient access to an essential element of a bicycle network.

hours. This type of parking should be secure, weather-protected and in a visible and convenient location. It may be provided by using standard "inverted U" racks in a visible, supervised or a monitored location, by bicycle lockers, or by offering a locked room with standard racks and access limited to cyclists only (See Section 3.7). Long-term bicycle parking should be provided at Hopkins schools, office and employment sites.

Recommendations

- Develop comprehensive bicycle parking options at the three SW LRT station locations (see discussion in Section 3.7)
- Improve bicycle parking at Hopkins parks and community centers
- Improve provision of bicycle parking in Downtown and at shopping destinations
- Improve provision of bicycle parking at employment centers and at multi-family housing units

Two types of rack recommended by this Plan: the "inverted U" (left) and the "post and loop" (right).

Guidelines for the design of bicycle parking facilities

Easily accessible, secure and convenient bicycle parking is a critical component of inviting people to make the choice to travel by bicycle.

Providing functional, visible and secure bicycle parking inexpensively and efficiently increases a building's parking capacity, serves those who use bicycles as a mode of transportation, and supports and encourages bicycle use. Choosing appropriate components and layout for a bicycle parking facility will improving the conditions for biking there.

Bike parking components

Functional and convenient bike parking results from the proper design and combination of the following three elements:

- The design of the bike rack itself, which supports the bicycle
- The rack area, which may include several individual bike racks

"Wave" racks are not recommended because cyclists tend to use them as if they were a single "inverted U." This limits their actual capacity to two bikes regardless of the potential or stated capacity.

- The location of the rack area, and its relationship to the building entrance it serves and the cyclists' approach to that entrance

The bike rack

The rack should support the bicycle upright by its frame in two places, enabling the frame and one or both wheels to be secured while preventing the bicycle from tipping over. Additionally, it should not require a cyclist to lift their bike to be able to lock it securely—a useful rack design should allow a cyclist to roll-in or back-in their bicycle to lock it.

The rack area

The rack area is the "bike parking lot" that the racks and the circulation needed to move in and out of the racks define. To be functional and useful, certain minimum clearances and access rules should be observed:

- Individual racks should be located no closer than 30 inches to each other in order to allow sufficient space for easy entry and removal of bicycles on either side
- No rack element should be closer than 24 inches to a wall or other obstruction in order to allow full usability and easy access to perimeter racks
- Large rack areas, or rack areas with high turnover, should provide more than one entrance to ease circulation of cyclists and pedestrians
- Rack areas should preferably offer protection from rain and snow in order to ease loading and unloading of bikes and to keep bike saddles dry
- When multiple rows of bike racks are provided, the circulation space provided from the wheel of a bike on one row to the closest wheel of a bike on the next row should be a minimum of 48 inches

Location of the rack area

One of the most important considerations in providing useful and functional bicycle parking is the location of the rack area in relation to the building it serves. Some guidelines for locating the rack area include:

- The recommended location for a bicycle parking area is immediately adjacent to the entrance it serves, preferably within 50 feet. It should be located as close as possible

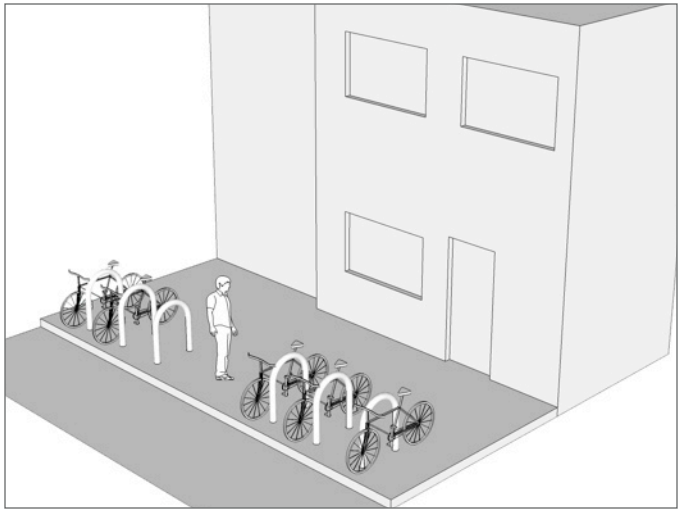


Illustration: Perpendicular bike parking.

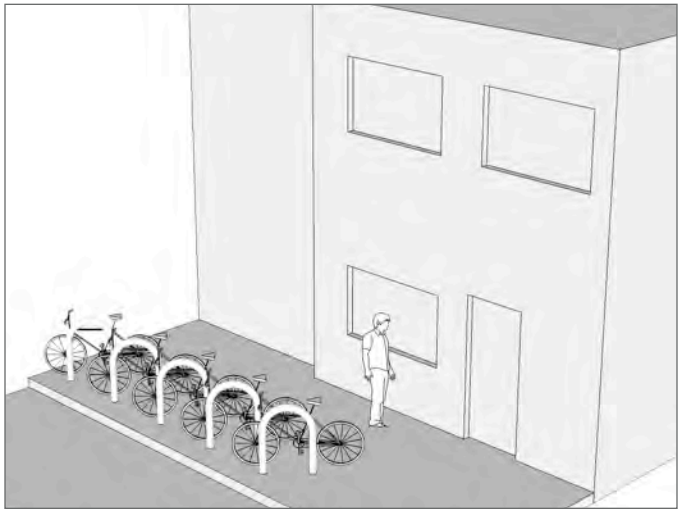


Illustration: Diagonal bike parking.

without blocking the entrance or inhibiting pedestrian movement to or from the building

- The rack area should be clearly visible from the entrance it serves and from the building's approach line
- Bike rack areas should be as close or closer than the nearest car parking space
- Buildings with multiple active entrances should include bike rack areas at each entrance
- Racks that are hard to find, are far from principal entrances or perceived to be unsafe will not be used by cyclists

Bicycle parking areas should be located as close as possible to the building entrance they serve.

A list of locations where different forms of end of trip facilities should be prioritized are listed below:

At SW LRT stations (see Transit Integration, Section 3.7)

- Blake Road
- 8th Avenue / Downtown Hopkins
- Shady Oak

At retail and community destinations

- Excelsior Boulevard
- Mainstreet
- Shady Oak Road
- Hopkins Center for the Arts
- Depot Coffee House
- Hopkins Activity Center
- Hopkins Pavilion
- City Hall
- Post Office
- Library

At Hopkins schools and community centers

- Alice Smith Elementary
- Eisenhower Elementary
- The Blake School
- John Ireland Elementary
- Main Street School of the Performing Arts
- Ubah Medical Academy

At Hopkins area parks and recreational facilities

- Burnes Park
- Central Park
- Cottageville Park
- Downtown Park
- Elmo Park
- Harley Hopkins Park
- Hiawatha Oaks Preserve
- Hilltop Park
- Interlachen Park
- Maetzold Field
- Minnehaha Creek Preserve
- Oakes Park
- Overpass Skate Park
- Park Valley Playground
- Shady Oak Beach
- Shady Oak Nature Area
- Valley Park

3.8 Maintenance

This chapter provides an overview of maintenance recommendations for sidewalks and bikeways in Hopkins. For additional guidance and information please consult Chapter 9 (Maintenance) of the Minnesota Department of Transportation Bikeway Facility Design Manual, which is incorporated into this Plan by reference.

Walking and biking facilities should receive adequate maintenance to protect the investments made by Hopkins and its partners and to ensure that they continue to provide safe, comfortable and inviting facilities for residents and visitors well into the future.

Winter walking, running and biking are increasingly popular activities. Encouraging year-round Active Living requires year-round maintenance.

User needs

Pedestrians

A pedestrian or wheelchair user depends on having a level, slip-resistant surface for their travel. Walking surfaces that are free from unexpected bumps, holes or cracks, and free from ice or other slippery materials, are paramount for their safety and comfort. Pedestrians also depend on the ability of motorists to anticipate and respond to their presence while crossing streets or when otherwise exposed to motor-vehicle traffic; therefore, signs, signals and markings should be maintained and kept in good working condition.

Bicyclists

A cyclist rides on two very narrow, high-pressure tires. What may be an adequate roadway surface for automobiles (which have suspension and shock-absorbing systems and travel on four wide, low-pressure tires) can be treacherous for cyclists: small rocks can deflect a bicycle wheel; a crack in the pavement or a poorly-placed drainage grate can trap a wheel; wet leaves, ice, and the gravel that gets blown off the travel lane are slippery and can cause a fall.

An incorrectly-placed grate can trap a cyclist's wheel and cause a serious fall. This grate, on a bicycle lane, was reported and correctly repositioned the same day.

Addressing user needs

Although walkways and bikeways will always be subject to debris accumulation and surface deterioration, a proactive and pedestrian- and cyclist-conscious approach to roadway maintenance and operations will go a long way towards ensuring safe and efficient utilization of Hopkins' non-motorized network assets.

General considerations

Maintenance budget

Preventive maintenance reduces hazards and future repair costs. Maintenance costs and responsibility for maintenance should be assigned when projects are planned and budgets developed; typical annual maintenance costs range from 3 to 5 percent of infrastructure replacement costs—for example, a $100,000 facility should include a $5,000 annual maintenance budget. Life-cycle cost analysis is recommended to determine the net value of using longer-lasting, higher-quality materials during construction if they reduce yearly maintenance expenditures.

Management plans

A management plan is a tool to identify maintenance needs and responsible parties. A management plan that includes the maintenance component for a proposed facility should be in place before construction. Additionally, a management plan should include a means for users of the system to report maintenance and related issues and to promptly address them.

A facility's management plans answers basic operational and staffing questions such as: How frequently are preventive maintenance tasks performed? Who fills potholes? Who removes downed or dangerous trees? Responds to vandalism and trespassing? Removes litter? Replaces stolen or damaged signs? Waters and weeds landscaping? Acts as the main contact? Does the work? Pays the bills?

User-initiated maintenance requests

The users of Hopkins' pedestrian and bicycle network will likely be the first parties to notice hazards, maintenance issues, or opportunities to bring improvement to the system. Establishing a formal mechanism for receiving requests for maintenance can help focus and prioritize investments, avert deterioration of the city's infrastructure investments, provide effective management, and reinforce citizen-ownership of Hopkins' non-motorized network assets.

Maintenance Request Program

One simple, low-cost way of establishing this program would be through the addition of a "Pedestrian / Bicycle Facility Maintenance Request" button on the city's existing website which would take visitors to a web form where they would be prompted to identify the location and nature of the issue they are reporting. Potential issues that might be reported include small-scale, low-cost improvements, such as sweeping, repairing surface problems, trimming vegetation blocking signs or obstructing routes, and replacing unsafe gratings.

Routine maintenance

Snow and ice removal

Snow removal is a critical component of pedestrian and bicycle safety. The presence of snow or ice on sidewalks, curb ramps, or bikeways will deter pedestrian and cyclist use of those facilities to a much higher degree than cold temperature alone.

Seniors and other vulnerable adults will avoid walking in locations where ice or snow accumulation creates slippery conditions that may cause a fall. Curb ramps that are blocked by ice or snow effectively sever access to pedestrian facilities for wheelchair users and seniors. Additionally, inadequately maintained facilities may force pedestrians and bicyclists onto facilities that may not offer safe or adequate accommodations, or that require them to take a route that is a longer distance.

When the surface of a road is covered by snow, the pavement markings that guide and warn motorists, pedestrians and bicyclists may be difficult to see. Care should be taken to clear roads so that pavement markings are identifiable. Snow should be cleared from a roadway's entire surface to allow pedestrians or bicyclists to travel as far as possible to the right side of the road or shoulder.

Prioritizing snow clearing operations

A useful approach for maximizing the efficiency of maintenance investments is to identify locations where accumulation of snow or ice would significantly impede pedestrian and bicycling access and safety so that these locations are prioritized for clearing by maintenance immediately after a storm event.

A year-round approach

Snow and ice removal must be planned with the expectation that walking and bicycle facilities will continue to be used during winter months. Care should be taken to place snow and ice well out of the portion of sidewalks, bike lanes and shoulders that pedestrians and bicyclists use. Bike trails and paths should also be swept with regularity.

Poorly maintained sidewalks will force pedestrians to use the motor-vehicle travelway , or will deter them from walking at all.

A well maintained network of walking and biking facilities can encourage year-round use.

Sidewalks, bikeways, gutters and curb ramps should not be used as snow storage areas for snow removed from streets; city policies should address the clearance of snow from walkways, bikeways and road shoulders as being of equal importance as clearance of snow from the automobile travel lanes in streets.

Sweeping

Loose sand and debris on the surface of bicycle lanes, paved shoulders, and paved sections of shared use paths should be removed at least once a year, normally in the spring. Sand and debris will tend to accumulate on bicycle lanes because automobile traffic will sweep these materials from the automobile portions of the roadway. This is especially true for bicycle lanes that are located directly adjacent to a curb, where debris collects already.

Surface repairs

Pedestrians and bicyclists are more sensitive and more vulnerable to problems in the roadway surface than motor vehicles. A smooth surface, free of potholes and other major surface irregularities, should be provided and maintained. Care should be taken to eliminate other physical problems. Requests for surface improvements could be made through the Pedestrian / Bicycle Facility Maintenance Request Program described above.

Resurfacing / pavement overlays

Street resurfacing projects provide ideal opportunities to greatly improve conditions for pedestrians and cyclists—by narrowing automobile travel lanes, widening shoulders, or adding bicycle lanes, for example. However, if not done correctly (by, for example, leaving a ridge or a joint in a shoulder or bicycle lane), some conditions may worsen.

Items to consider on resurfacing projects that will help improve conditions for pedestrians and cyclists include:

- Gravel driveways and alleys should be paved back 5 to 10 feet from the edge of pavement or right-of-way to prevent gravel from spilling onto the shoulders or bike lanes
- Using chip seals to surface or resurface shoulders should be avoided, as they will render the shoulder area unusable to most bicyclists
- Avoid leaving a ridge in the area where cyclists ride, which occurs where an overlay extends only part-way into a shoulder or bike lane. If possible, the overlay should be extended over the entire surface of the roadway to avoid leaving an abrupt edge.

Signs and pavement markings

Signs and pavement markings are important features of walkways, bikeways and roadways, and help ensure continued safe and convenient use of these facilities. It is critical that bikeway signs, striping, and legends be kept in a readable condition.

Some recommendations to address these infrastructure elements include:

- Regular inspection of bikeway signs and legends, including an inventory of signs to account for missing or damaged signs
- Replacement of defective or obsolete signs as soon as possible
- Regular inspection of striping, and prompt reapplication as needed
- Depending on wear, bike lanes may need to be repainted on an annual basis. Bike lane stripes may wear out less often on lower traffic volume streets than on higher volume streets
- Durable cold plastic should be used for skip-striping bike lanes across right turn lanes

Vegetation

Vegetation encroaching into and under a walkway or a bikeway creates a nuisance and a hazard for pedestrians (especially for those with sight or mobility impairments) and for bicycle riders. The management of vegetation is generally considered the responsibility of city maintenance staff. To provide long-term control of vegetation, its management should be considered during design and construction. Vegetation management helps to maintain smooth pavement surface, as well as clear zones, sightlines, and sight corners to promote pedestrian and cyclist safety.

Vegetation management issues identified by users (e.g. tree roots causing heaving of sidewalk surfaces) may be reported through the Pedestrian / Bicycle Facility Maintenance Request Program described above.

Drainage issues

Drainage facilities may change grades and deteriorate over time. Ensuring that bicycle-safe drainage grates are located at the proper height greatly improves cyclist safety; it may sometimes be necessary to adjust or replace catch basins to ensure continued safe operations and improve drainage. The small asphalt dams that are sometimes constructed on roadway shoulders to divert storm water into catch basins are a hazard to cyclists and their use should be avoided.

Event-related drainage issues (e.g. backed-up grates) and long-term drainage hazards (unsafe grates) can be reported and addressed through the Pedestrian / Bicycle Facility Maintenance Request Program, and should be proactively addressed whenever street improvements are made.

Other maintenance activities

Patching activities

Loose asphalt materials from patching operations often end up on the shoulder, where the larger particles adhere to the existing surfacing, creating a very rough surface for pedestrians and cyclists. Fresh loose materials should be swept off the road before they have a chance to adhere to the pavement.

Utility cuts

Utility cuts can leave a rough surface for cyclists if not back-filled with care. Cuts should be backfilled and compacted so that the cut will be flush with the existing surface when completed. Extra care should be used when cuts are made parallel to bicycle traffic to avoid a ridge or groove in the bicycle wheel track.

3.9 Education and encouragement

Developing walking and bicycle infrastructure is only the first part of increasing walking and biking in a community, as even the best-planned walking or bicycle network will fail to live up to its full promise if potential users are unaware of its existence, or if it's difficult to figure out how to get from one destination to another. In addition, walkers, cyclists and motorists will each do better if they learn how to consistently and courteously share road space with each other and to coexist within Hopkins' transportation and recreation infrastructure.

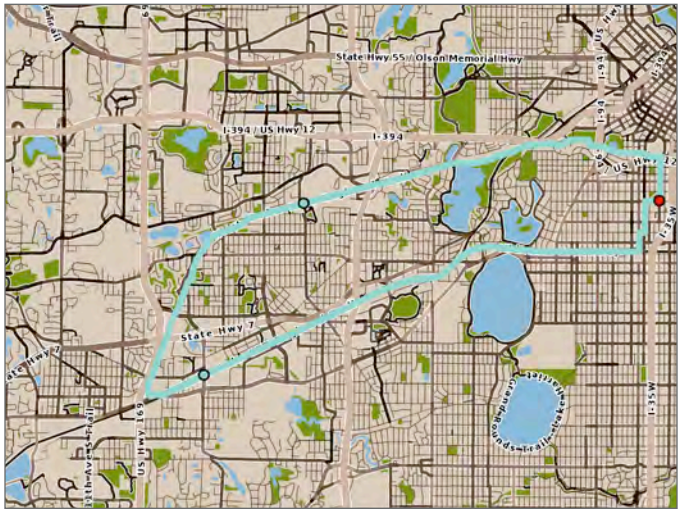
This chapter presents some ideas that may help Hopkins invite its residents, businesses and visitors to safely and effectively use the route network that develops from this plan. It is titled "education and encouragement" to acknowledge that both of these activities build on each other, and that learning about safe riding and disseminating information about the city's walking and bikeway networks will lead to more people using them part of their transportation and recreational activities.

Bike rodeos teach safe cycling techniques and encourage families to ride together.

Inviting users to routes and facilities

Network maps

People won't use a walking or biking network if they are unaware of its existence, or if they don't know how it may help them reach their routine destinations. Printing and distributing bikeway maps is a high-benefit, low cost project that can help cyclists locate bikeways, walkers identify better route choices for their trip, and the city promote its local businesses and festivals. Map inserts can provide information covering such topics as Rules of the Road, bicycle safety and maintenance, and connecting with mass transit. Another low-cost and potentially helpful tool is the addition of existing web-based trip planner services to the Hopkins website (like Cyclopath or Google Maps) where pedestrians and cyclists type in their destination and receive one (or several) recommended routes.



Bicycle route planning using Cyclopath, a tool developed at the University of Minnesota with support from BikeWalk Twin Cities.

Special community events

Special events offer an opportunity to bring attention to practical, fun, and healthy aspects of walking and cycling as tools for getting places and for recreation. Because these events are community-wide and of limited duration, people are more open to participating without feeling like they have to commit to making a long-term change in their travel or recreation habits—they are just skating, walking or biking in their city once, not everyday. But sometimes that's all that's needed to open the door to adopting new travel behaviors over the long term.

Some events and programs that can encourage participation include:

- Monthly group rides with the City Council or the Mayor or other important local personalities can help promote cycling in Hopkins. Similar events, including Open Streets / Ciclovia events close a road or two to auto traffic once a month and make it a bike and pedestrian-only event.
- Parks and recreation programs can work with non-profit or cycling advocacy groups to sponsor cycling events and activities, especially on trails and regional cycling routes.
- Special bicycle commuter events can help raise the profile and potential for bicycle commuting. Bike to Work Week events, which typically include special publicity, route guidance to first-time bicycle commuters, and group breakfasts, offer an opportunity to try cycling in a safe, relaxed and fun environment. Bike to Work Week events have been held in many Minnesota communities over the last several years.

Visitor programs

Tourist promotion materials can highlight walking and bicycling as great ways to circulate within and experience Hopkins' natural and recreational assets. Several communities in Minnesota boast of their cycling orientation as part of their identity and as a draw for potential visitors. Completing safe and comfortable connections to the regional trails could help bring in additional visitors and customers to Hopkins' Downtown.

Open Street events close car traffic in one or two city streets and invite residents and visitors to use them on foot or bike instead.

Bike Walk to Work Day has been held in the Twin Cities for several years.

Student programs

Encouraging student walking and cycling to school helps instill life-long habits of health and activity, and provides proof to students that cycling is a serious and valid transportation option. Some strategies and programs that could be implemented in Hopkins to encourage student cycling include:

- Working with local schools to encourage students and staff to ride to school
- Working to integrate cycling education into physical education classes
- Establishing awards and incentives programs for completion of bicycle classes, or for riding to school so many times per week, etc.
- Discounts to area bicycle shops as prizes for outstanding students

Rider incentive and TDM programs

Increased use of walking and biking can help achieve Transportation Demand Management (TDM) objectives for workplaces and communities while improving community health and supporting local economic development. Several types of incentive programs are in use in communities throughout the United States. Among the most popular are:

- Business associations provide discounts to shoppers who arrive by bike
- Employers offer parking cash-out benefits, which give commuters who don't drive the cash equivalent of the parking subsidies provided to drivers

These programs help address issues of lack of parking and increasing congestion that often sometimes hinder successful commercial areas. Hopkins businesses could offer discounts for customers who arrive on foot or by bike.

Learning to ride safely

Walking and cycling are health-promoting and safe activities that can become even safer with improved education. Motorists, cyclists, and pedestrians each have much to contribute to making walking and cycling (and other modes of travel) safer and more effective: one of the leading causes of crashes is the unexpected behavior of at least one of the parties involved. Cyclist, motorist, and pedestrian safety programs can help

Walking to school also benefits children by helping them learn about the layout and context of their community. Image courtesy PedBike Image Library.

Bike to school programs help students learn to travel under their own power. Image courtesy of Bikes Belong Coalition.

reduce the risk of crashes and injuries while giving new cyclists the confidence needed to ride more regularly. In fact, safety training has been shown to be an effective and cost-efficient way of reducing collisions and encouraging cycling.

Three main components of safety training are addressed under this section. They center on:

- Developing safe cycling skills in children,
- Teaching adult cyclists their rights and responsibilities, and
- Increasing motorists' awareness of bicyclists' rights on the road, and teaching them how to safely share the road with bicycles

For children and young people

It is important to share information on safe walking and bicycling with young people from early on. This will help them be safe and will also reinforce the message that walking and cycling are useful and acceptable means of transport. While it is not uncommon for schools in the US to provide automobile driver education for children 16 or older, it is rare to find similar provision of cycling education, even though most children seven and older are able to ride a bicycle and (because of generally poor provision of separated trails) routinely ride in streets that are also used by automobiles.

In European countries where cycling serves a much larger portion of all trips it is a given that schools provide formal training in safe cycling for children starting in elementary school. In the Netherlands, for example, children undergo a three week training on cycling rules and maneuvers each year. It is easy to imagine that Hopkins students could receive similar training, perhaps as a component within physical education classes (and one which could help promote a lifetime of safe and enjoyable physical activity). It is also a given that schools, parks and other places where young people congregate need to provide a physical infrastructure that supports children's cycling by making sure that adequate bike parking, and well-marked trails or lanes, are available (covered elsewhere in this Plan).

Some approaches

School children are most effectively reached when an action-oriented teaching approach and a repetitive practice process are coupled with awards and incentives. Awards and incentives can consist of certificates of completion or bicycle/pedestrian licenses, free or reduced-cost bicycle helmets and other accessories, or discount coupons for area bicycle shops.

Messages

The following messages should be consistently taught:

- Wear a helmet. In the event of a bicycle crash, wearing a helmet can reduce the risk of serious head injury by up to 85%.
- Obey all traffic laws. Bicyclists have the same rights, and consequently the same responsibilities, as motorists.
- Look both ways before crossing streets.
- Always ride with the flow of traffic.
- Be predictable and always signal your intentions.
- Be visible; wear light-colored clothing and bright or reflective clothing and always use a front light and rear reflectors at night.
- In addition, very young children (seven or less) should ride with supervision.

For adult cyclists

Adult cyclists range in skills and confidence. Some adults are comfortable riding on busy streets and mixing with traffic while others prefer quieter streets or off-street paths. There are adults who ride a bicycle only a few times a year and those who ride often but

primarily for recreation. Each type of cyclist has his or her own concerns and philosophy about how bicycles fit into the transportation system—education efforts must recognize this and tailor messages to each group.

Messages

The following messages should be consistently taught:

- Be alert. Watch for other users and sudden behavior changes. Pay careful attention to potential road hazards, such as potholes and gravel. Adjust speed to maintain control of the bicycle.
- Obey all traffic laws; bicyclists have the same rights, and consequently the same responsibilities, as motorists. Disobeying traffic laws makes it more difficult for motorists to know what to expect from cyclists and is potentially dangerous.
- Always ride with the flow of traffic. Ride where motorists and others expect cyclists, and never against traffic.
- Avoid riding on sidewalks. It is illegal in commercial districts in Minnesota, and puts pedestrians at risk. It also makes it more difficult for motorists to see cyclists—research demonstrates that sidewalk riding is much more dangerous than riding on the street, even in places where no bicycle facilities are provided.
- Be predictable. Signal your turns and do not weave in and out of traffic.
- Be visible. Wear light-colored, bright or reflective clothing and use front lights and rear reflectors or lights at night.
- Wear a helmet.

For motorists

The goal in educating motorists is to foster a broad and general public awareness and respect for bicycling. Many motorists are already occasional or regular cyclists, and may begin riding more often if they see and feel the emphasis on providing safe conditions for all road users. Bicycle route signs and markings are also helpful for motorists because they remind them of the presence of cyclists and of the need to share space with other users of the road. Information on the rights of cyclists should be included as part of training for all automobile drivers.

Messages

- Share the road. Cyclists have the right to travel on all roads and streets except limited access freeways.
- Give room. Follow and pass at a safe distance. Never get closer than three feet to a cyclist under any circumstance. It is dangerous and illegal under Minnesota law.
- Be alert. Watch for cyclists and other users and for sudden behavior changes. Pay attention especially at intersections.
- Obey all traffic laws. What would amount to a minor fender bender between two motor vehicles could be a serious injury for a cyclist in a bicycle-motor vehicle crash. Driving the speed limit and coming to a full stop at red lights creates a safer environment for all.
- Be predictable. Signal turns well before an intersection.
- Cyclists have the right to take full possession of a travel lane in several situations, including when avoiding fixed or moving objects on the road (like vehicles, pedestrians or road surface hazards) and when the provided road space is too narrow to allow a motor vehicle to safely pass with three feet of clearance of the cyclist.
- Be patient and courteous with cyclists and other users. Passing bicyclists just before a stop light or sign creates an atmosphere of unnecessary hostility.
- Do not honk unless absolutely necessary. Cyclists can hear and see motor vehicles; honking simply jars their nerves.

Becoming designated as a Bicycle Friendly Community

The Bicycle Friendly Community (BFC) Program is a program to which communities can apply based on their commitment to the five E's of bike planning:

- Education
- Encouragement
- Engineering
- Enforcement
- Evaluation & Planning

Becoming a BFC has important benefits for a community like Hopkins, including recognition, promotion of community amenities, technical assistance, benchmarking, and inspiration for further improvements for cycling. Hopkins can also partner with local businesses as a part of the Bicycle Friendly Business program.

Currently, Minnesota is ranked as the #2 Bike Friendly State in the US, and #1 in the Midwest Region with 5 Bicycle Friendly Communities, 35 Bicycle Friendly Businesses, and 1 Bicycle Friendly University.

The next review cycle deadline is February 26, 2013. More information is available at: www.bikeleague.org/programs/bicyclefriendlyamerica/communities/

Photo courtesy of The League of American Bicyclists.

Providing education to potential bike commuters is an important component of becoming a Bicycle Friendly Community. Photo courtesy of Bike Commute Tips.