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City of La Crosse South Avenue Corridor Multimodal Assessment

Draft

December 10, 2017

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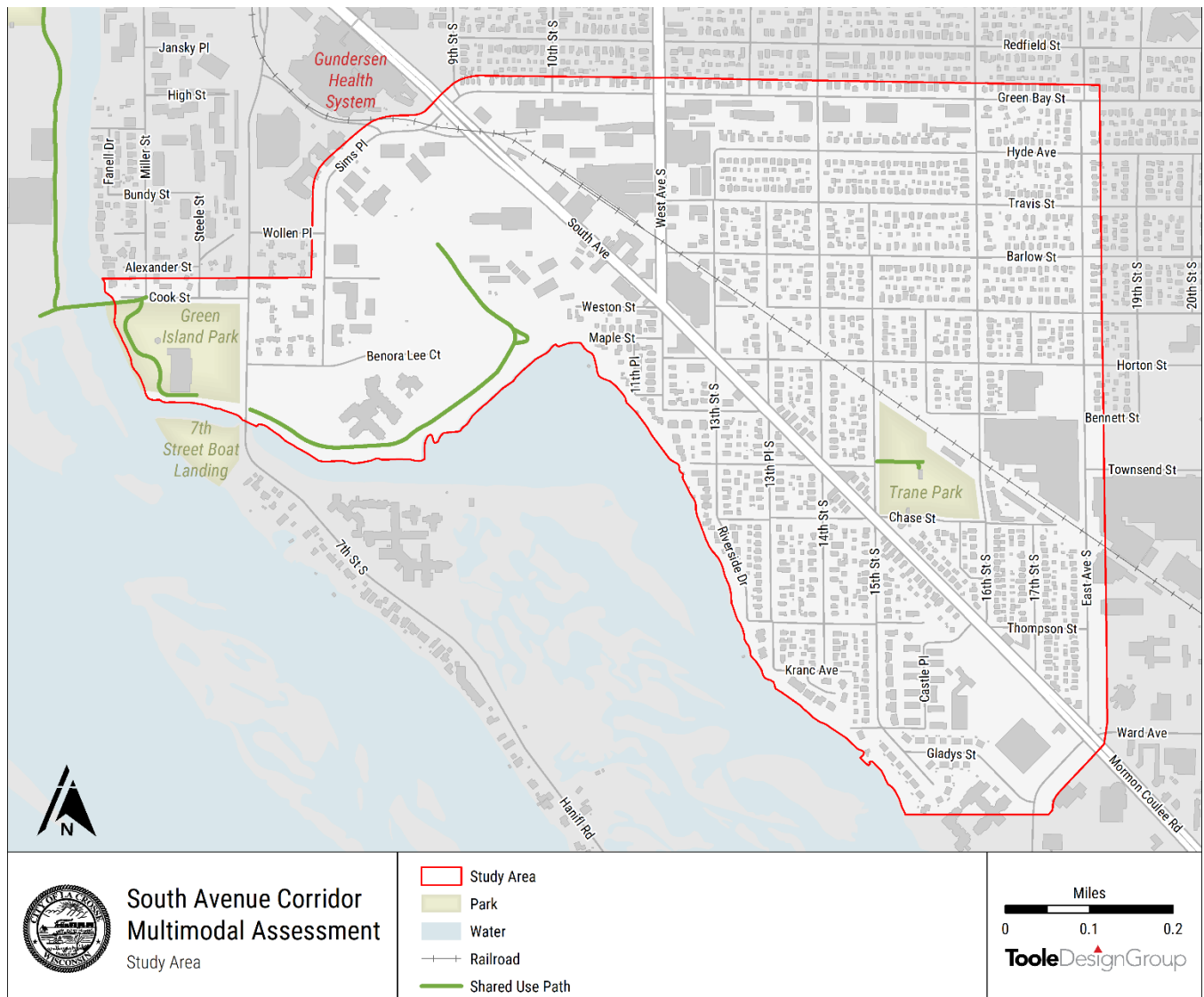
1. Introduction

South Avenue (U.S. Highway 14) is the primary gateway to La Crosse from the south. This four-lane urban street provides access to neighborhoods, major employers, the region’s largest medical campus, and downtown. South Avenue also serves as a significant barrier to mobility on the south side of La Crosse: the street is challenging for people to cross on foot, bike, and in cars, and there are significant numbers of serious crashes along the street. The Wisconsin Department of Transportation (WisDOT) is planning to reconstruct South Avenue from Green Bay Street to Ward Avenue in 2022 to address safety and maintenance concerns. This planned reconstruction provided impetus to the City of La Crosse to undertake the South Avenue Corridor Multimodal Assessment (the Assessment) to examine WisDOT’s recommendations for South Avenue as well as broader transportation and land use issues in the neighborhoods surrounding South Avenue.

Study Area

The Assessment study area is displayed in Map 1. The study area was selected to include the portion of South Avenue WisDOT plans to reconstruct and the neighborhoods abutting this portion of South Avenue.

Map 1: South Avenue Multimodal Assessment Study Area



Assessment Purpose

The Wisconsin Department of Transportation (WisDOT) is planning to reconstruct South Avenue between West Avenue and Ward Avenue in 2022. This reconstruction will have significant impacts on the south side of La Crosse. The primary purpose of this Assessment is to make recommendations to WisDOT that take into account the goals of the City, surrounding land use, and other factors when reconstructing South Avenue. At the same time, the Assessment makes recommendations regarding transportation and land use in the broader study area. The recommendations are intended to result in a corridor that is safe and easy to traverse by all travel modes, is attractive, and is economically vibrant.

This Assessment:

- Provides an overview of existing multimodal conditions and land use in the study area.
- Makes recommendations regarding the design of South Avenue to enhance safety and livability along the street.
- Recommends new multimodal connections throughout the study area.
- Offers a vision of land use changes and redevelopment opportunities in the study area.
- Responds to concerns voiced by residents, employers, and employees in the study area.

Related Projects

It is important to differentiate between this study and WisDOT’s project to reconstruct South Avenue. WisDOT’s planning effort has been underway since at least 2014 and is solely focused on reconstructing South Avenue from Green Bay Street to Ward Avenue. The South Avenue Corridor Multimodal Assessment came about because of concerns that City of La Crosse officials had about the direction of WisDOT’s project. This study looks more broadly at transportation throughout the neighborhoods surrounding South Avenue, and explicitly considers land use, recreational uses, and other issues that WisDOT’s project does not consider. Table 1 provides more detail about the differences between the two projects. Throughout this document, this study will be referred to as the South Avenue Multimodal Assessment, while WisDOT’s project will be referred to as the WisDOT South Avenue project.

Table 1: South Avenue Multimodal Assessment and WisDOT South Avenue Project summary descriptions.

	South Avenue Multimodal Assessment	WisDOT South Avenue Project
Goal	Examine multimodal transportation issues in the broader South Avenue area, including bicycle and pedestrian issues along and across South Avenue.	Reconstruct South Avenue to improve the safety of all users of the street and improve pavement conditions.
Project Area	The South Avenue area, roughly bounded by Green Bay Street, East Avenue, and the river.	South Avenue from Green Bay Street to Ward Avenue.
Timeframe	Recommendations summer 2017, implementation over the next decade or more.	Preferred alternative July 2017, construction in 2022.
Impacts	Project <i>may</i> recommend changes to the WisDOT study to improve bicycle and pedestrian access and safety, as well as improved bicycle routing through the neighborhood, and potential new path and street connections (long-term).	Project <i>may</i> include a variety of changes to the street including roundabouts, widening, elimination of left turns, and property acquisition.

Portions of this Assessment bear great similarities to a similar project on the north side of La Crosse: the US Highway 53 Corridor Study. This study examined existing conditions along US Highway 53 from Interstate 90 to the La Crosse River. The Study makes recommendations for improving multimodal transportation throughout the study area and for promoting land use changes through the development of “Pulse Nodes”—areas of dense, vibrant, mixed use development separated by areas of lower intensity development. The South Avenue and the Highway 53 corridors share many characteristics: they are primary gateways to the City of La Crosse, there is substantial amounts of underutilized land in proximity to the city center and major employment areas, both corridors are surrounded by established residential neighborhoods, and both corridors are dominated by the automobile, at the expense of other travel modes. Because of these similarities, many of the recommendations put forth in the US Highway 53 Corridor Study are carried over in this Assessment.

2. Existing Conditions

It is important to understand the existing conditions related to transportation and land use in the study area prior to developing recommendations. The project team performed a review of existing plans and policies impacting transportation and land use, engaged the public and city officials about issues and opportunities, and conducted field reviews to examine conditions in person. This chapter provides an overview of existing conditions in the study area, and issues and opportunities that were observed.

Relevant Plans and Studies

Numerous plans and studies have been conducted at the neighborhood, city, and regional level that make recommendations for the study area. Below are select recommendations from plans and studies that are relevant to transportation and land use in the study area.

Confluence: The La Crosse Comprehensive Plan (2002)

- Create a balanced and efficient transportation network that provides viable alternative to driving and maximizes the use of existing road infrastructure.
- Improve roadway design through streetscape enhancements and design standards that encourage interconnections; narrower widths and traffic calming; boulevard trees; sidewalks; and bicycle lanes.
- Improve road system safety and access management by following appropriate guidelines for driveway openings, intersection spacing, signal timing, etc.
- Continue to build a connected bicycling network consisting of on-street lanes and off-street paths.
- Improve transit ridership by making transit accessible and convenient, and encouraging higher density, transit-oriented development in key activity centers.
- Consider converting South Avenue to a parkway or boulevard.

Coulee Vision 2050 (2013)

- Envision the implementation of land use and transportation policies that will focus growth as infill development both through targeting and development and adopting policies to restrict and prevent sprawl. In order to support infill development the region's transit system will need to be enhanced to accommodate the increased demand while improving the quality of life for the residences of the La Crosse/La Crescent area.

City of La Crosse Bicycle and Pedestrian Master Plan (2012)

- Identify critical pedestrian crossings and improve with pavement markings, signs, and traffic control devices.
- Increase the number of on-street and off-street bicycle facilities.
- Implement a plan to correct all curb ramps at intersections, eliminate tripping hazards, and sidewalk gaps.
- Make connections between on-street bike facilities and the Gundersen Lutheran shared use path network.
- Continue planning for a continuous, riverfront shared use path in La Crosse.
- Begin work on redesign of the US 14/61 – Wisconsin 35 intersection.
- Reduce travel speeds on major roadways to the speed limit.
- Switch signals to pretimed cycles to better accommodate pedestrians and bicyclists and better control traffic speeds.

La Crosse Transportation Vision (2015)

- Reduce dependency on the single occupant vehicle as the primary mode of transportation and prioritize cycling, walking, public and private transit, telecommuting, land use changes, parking changes, and other supportive measures.
- Comfortably and safely accommodate the walkers, cyclists, and transit users within the city.
- Remove “barrier effects” where they exist for pedestrians and cyclists.
- Slow design speeds to alter driver expectations and reduce the number of crashes, deaths, injuries, and property damage.
- Design streets to self-enforce the desired speeds.
- Design streets for the breath of population groups including those who do not or cannot drive motor vehicles, people with various disabilities, young people, many elderly people, low income people.
- Encourage barrier-free street designs.
- Avoid, whenever feasible, having two general purpose lanes going in the same direction on the same street to reduce aggressive drivers from weaving, speeding, and overtaking within the city.
- Employ a series of roundabouts on South Avenue, and convert the street to three lanes (one lane in each direction and a center turn lane).
- Increase land use densities and mix where it can be served by existing transit services.
- Require buildings to front and address the streets.
- Create entry features and transitions at the edges of the city to announce to travelers that they have entered the City of La Crosse and to manage their expectation of speed.
- Use roundabouts for transitions between different contexts when longer transition distances are unavailable.
- Create great destinations along the corridors, within the downtown and districts, and within the city’s neighborhoods.

Powell-Hood-Hamilton/ Gunderson Lutheran Medical Center Joint Neighborhood and Campus Plan (2013)

- Extend Bennora Lee Court east to connect to Weston Street.
- Provide bicycle improvements on 7th Street South.
- Improve street lighting throughout the area to provide a greater sense of security.
- Create a consistent edge of development along South Avenue.
- Preserve structure of small neighborhood streets along South Avenue.
- Use landscape buffers to shield view of surface parking lots from South Avenue.
- Develop vacant or underutilized blocks.
- Promote mixed-use development with a residential component.
- Avoid large-scale, open surface parking lots.
- Develop a mixed-use catalyst project within walking distance of Gunderson Lutheran Medical Center.
- Provide improved pedestrian crossings of South Avenue.
- Connect the VIP Trail to the Medical Center, the Gund Brewery Lofts, and Maple Street.

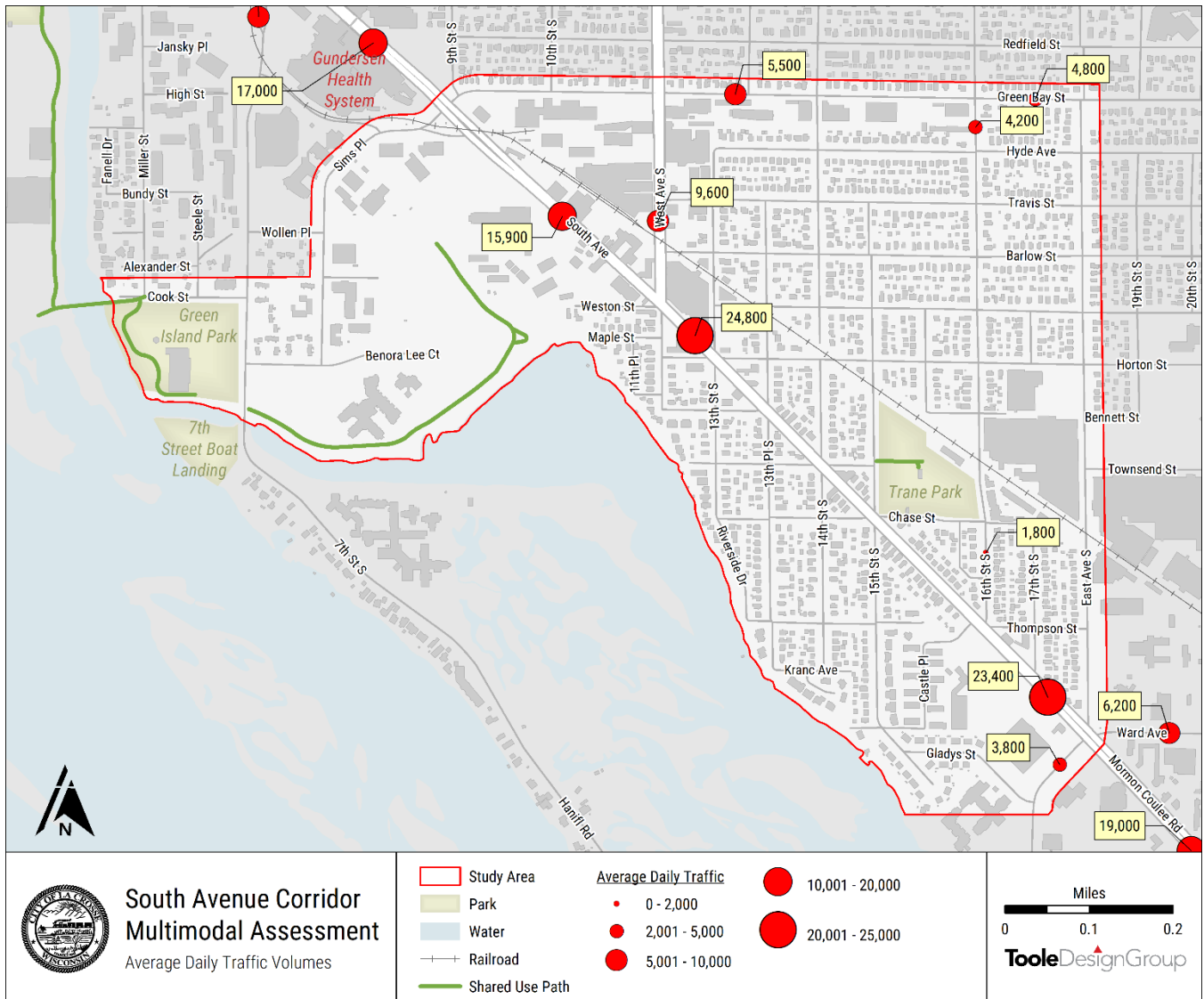
Multimodal Transportation Conditions

This section presents observations about the existing transportation network in the study area.

Motor Vehicle Conditions

Traffic operations generally function well within the study area. Select traffic counts are displayed in Map 2. South Avenue within the study area carries more traffic daily than any other streets in southern La Crosse, other than portions of Mormon Coulee Road, which is an extension of the same street. The busiest streets other than South Avenue include West Avenue, Ward Avenue, and Green Bay Street. Traffic generally operates under free-flow conditions on all streets, although some congestion occurs on South Avenue during morning and evening peak hours, particularly at locations where vehicles are making left turns, but there is not a dedicated left turn lane. Residents reported that speeding is commonplace on South Avenue, as well as other streets within the study area, and that South Avenue is difficult to cross whether walking, bicycling, or driving.

Map 2: Average daily traffic volumes for select streets within the South Avenue Multimodal Assessment study area

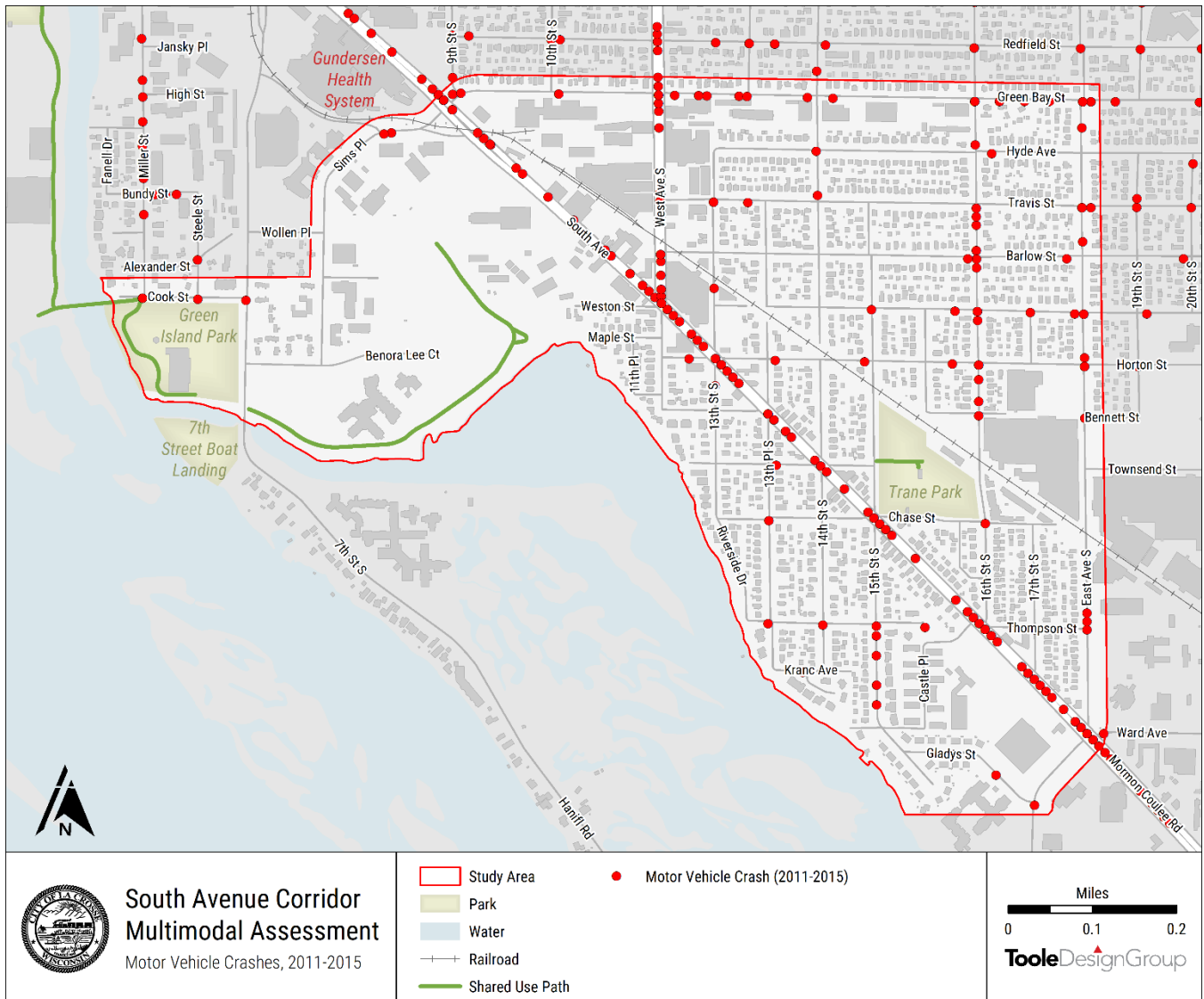


Crashes

There were 369 motor vehicle crashes in the study area reported to police from 2011 through 2015—an average of one crash every five days. Slightly over half of these crashes occurred on South Avenue. Map 3 displays reported motor vehicle crashes in and nearby the study area. The high number of crashes and the severity of many of the crashes is the primary factor driving WisDOT’s planned reconstruction of South Avenue. Many crashes involve a left turning vehicle that is either struck from behind when the driver slows to make a turn, or is struck by oncoming traffic while making a turn. WisDOT believes that eliminating the option to turn left onto or off of South Avenue will reduce the number of serious crashes that occur along the street.

In addition to the crashes on South Avenue, there are also concentrations of crashes along West Avenue South, 16th Street South, and Green Bay Street, which are the busiest streets in the study area after South Avenue. Other crashes are dispersed throughout the study area.

Map 3: Reported motor vehicle crashes (2011-2015)



Motor Vehicle Issues

A variety of issues related to motor vehicle travel were identified through field review and public input:

- Speeding is commonplace on South Avenue.
- Speed limit signs are not readily apparent to motorists on South Avenue.
- Motorists rarely yield to pedestrians at crosswalks on either local streets or major streets.
- The Rectangular Rapid Flash Beacon (RRFB) installed on South Avenue near the Gunderson Health System campus has improved motorist yielding to pedestrians.
- It is difficult to make a left turn off of or onto South Avenue at certain times of the day due to traffic volumes.
- Discontinuous street segments due to the railroad line can make navigating the neighborhood north of South Avenue challenging for people not familiar with the area.
- Pavement conditions are poor on South Avenue and some other local streets.
- Traffic congestion is not a significant factor within the study area.

Bicycle Conditions

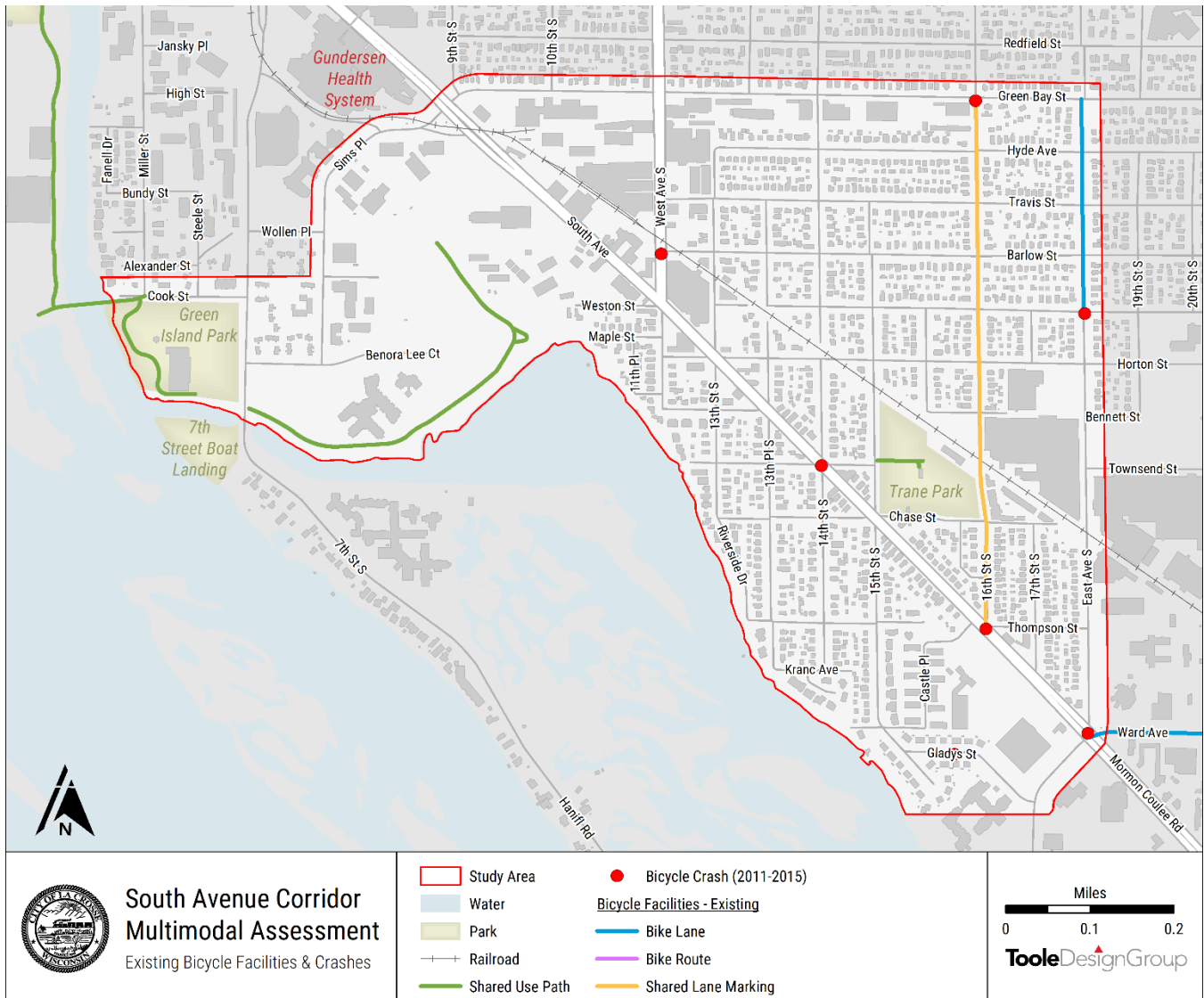
Bicycling conditions are generally good on most streets within the study area. This is due to most streets being lower traffic neighborhood streets. However, South Avenue and West Avenue serve as significant barriers to bicycling in the area: both are multilane streets that carry significant volumes of motor vehicle traffic that are difficult to cross on bicycle, and present generally unacceptable conditions for bicycling on.

The following bicycle facilities exist within the study area:

- Bike lanes on East Avenue from Green Bay Street to Weston Street
- Shared lane markings on 16th Street from Green Bay Street to South Avenue
- The VIP Trail extends from Green Island Park east to Maple Street

These facilities are show on Map 4. Most neighborhood streets within the study area do not require any sort of bicycle facility – traffic volumes are low enough for bicyclists to safely share the street with traffic.

Map 4: Existing bicycle facilities and reported bicycle crashes (2011-2015)



Bicycle Crashes

Between 2011 and 2015, 6 bicycle crashes were reported to police within the study area. Three of these crashes occurred on or along South Avenue with the remainder of the crashes dispersed throughout the study area. Rather than indicating a safe and comfortable environment for bicycling, the low number of crashes may indicate a low amount of bicycling occurring in the study area. According to public input, many people will not bicycle in the study area because of concerns about their safety, primarily when crossing South Avenue.

Bicycle Issues

A number of issues related to bicycling were identified through field review and public input:

- There are no bicycle facilities on major streets, making access to destinations challenging.
- Crossing South Avenue is challenging and intimidating.
- Poor pavement quality on some streets makes bicycling uncomfortable or dangerous.
- Little bicycle parking exists within the study area.
- There is no wayfinding to direct bicyclists to destinations.

Bicycle Crossings

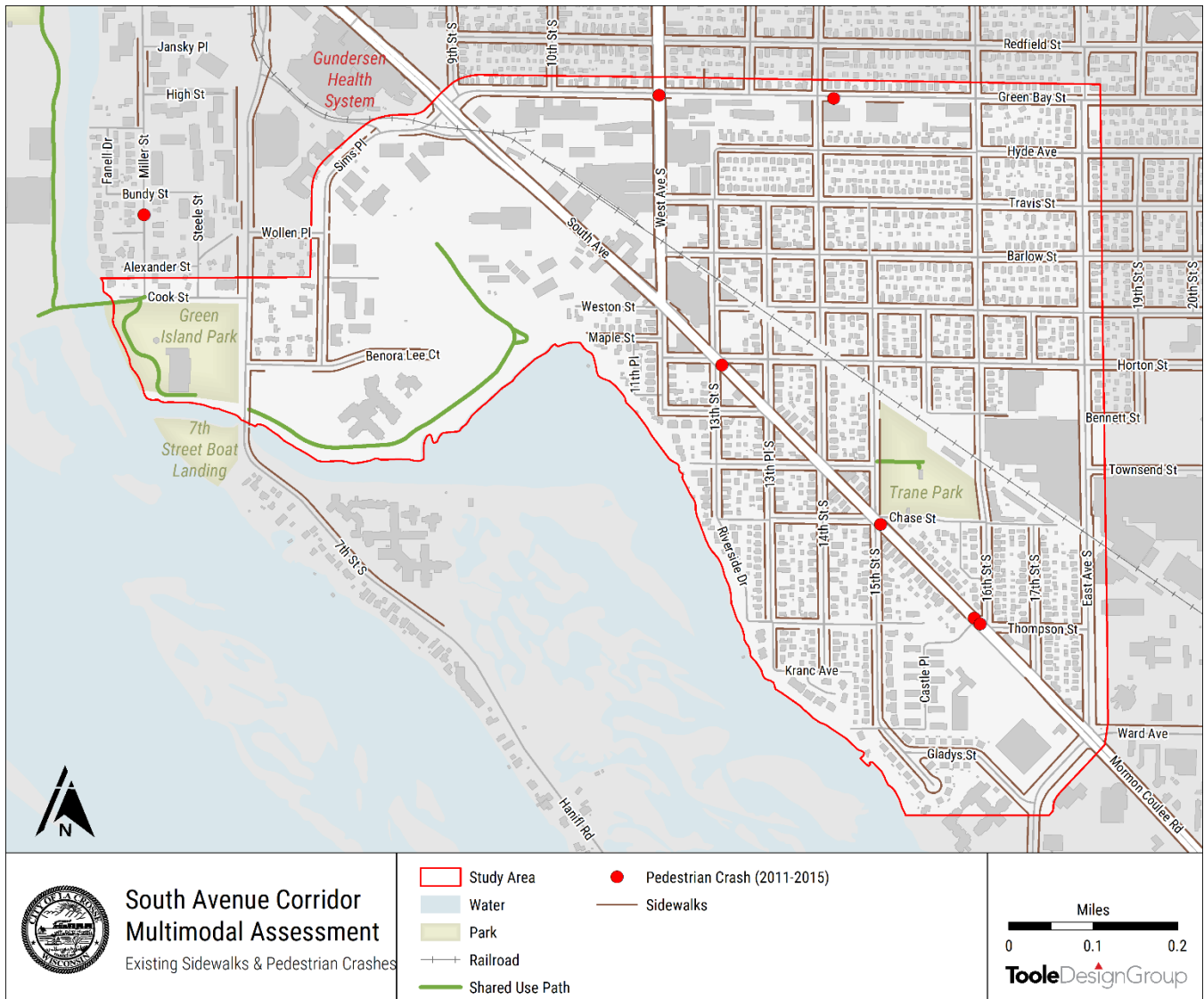
Crossing South Avenue on bicycle was frequently cited as problematic by the public, particularly at West Avenue, 16th Street, and East Avenue. The reconstruction of South Avenue should improve bicycle crossings in most areas, as a center median will allow bicyclists to cross one direction of traffic at a time.

Walking Conditions

Conditions for pedestrians are varied throughout the study area. As shown in Map 5, most streets within the study area have sidewalks on both sides of the street, although there are some exceptions, most notably along the south side of Green Bay Street from West Avenue to East Avenue. Sidewalks are generally in a good state of repair, and are free of major cracks and tripping hazards. Most sidewalks have curb ramps at street intersections to provide access to people using mobility devices. Very little terrace area is provided along South Avenue, which makes use of the sidewalks uncomfortable due to the proximity to fast moving traffic.

Although pedestrian conditions *along* streets is generally good, conditions *across* streets is challenging in many areas. Pedestrian crossings of South Avenue are very challenging at locations without traffic signals; drivers rarely yield to pedestrians, and when they do, pedestrians are often at risk of being struck by traffic in an adjacent lane. Where they have been marked, crosswalks are often faded and difficult to see. At many intersections, particularly on neighborhood streets, crosswalks are not marked. At signalized intersections, pedestrians have issues with turning traffic not yielding and with pedestrian signals that do not provide adequate time to cross the street, particularly for people with mobility issues.

Map 5: Existing sidewalks and reported pedestrian crashes (2011-2015)



Pedestrian Crashes

Between 2011 and 2015, 6 pedestrian crashes were reported to police within the study area. Four of these crashes occurred on or along South Avenue with the two other crashes occurring on Green Bay Street. According to public input, many people will drive to nearby locations, or avoid traveling all together, rather than walk across South Avenue.

Pedestrian Issues

A number of issues related to walking were identified through field review and public input:

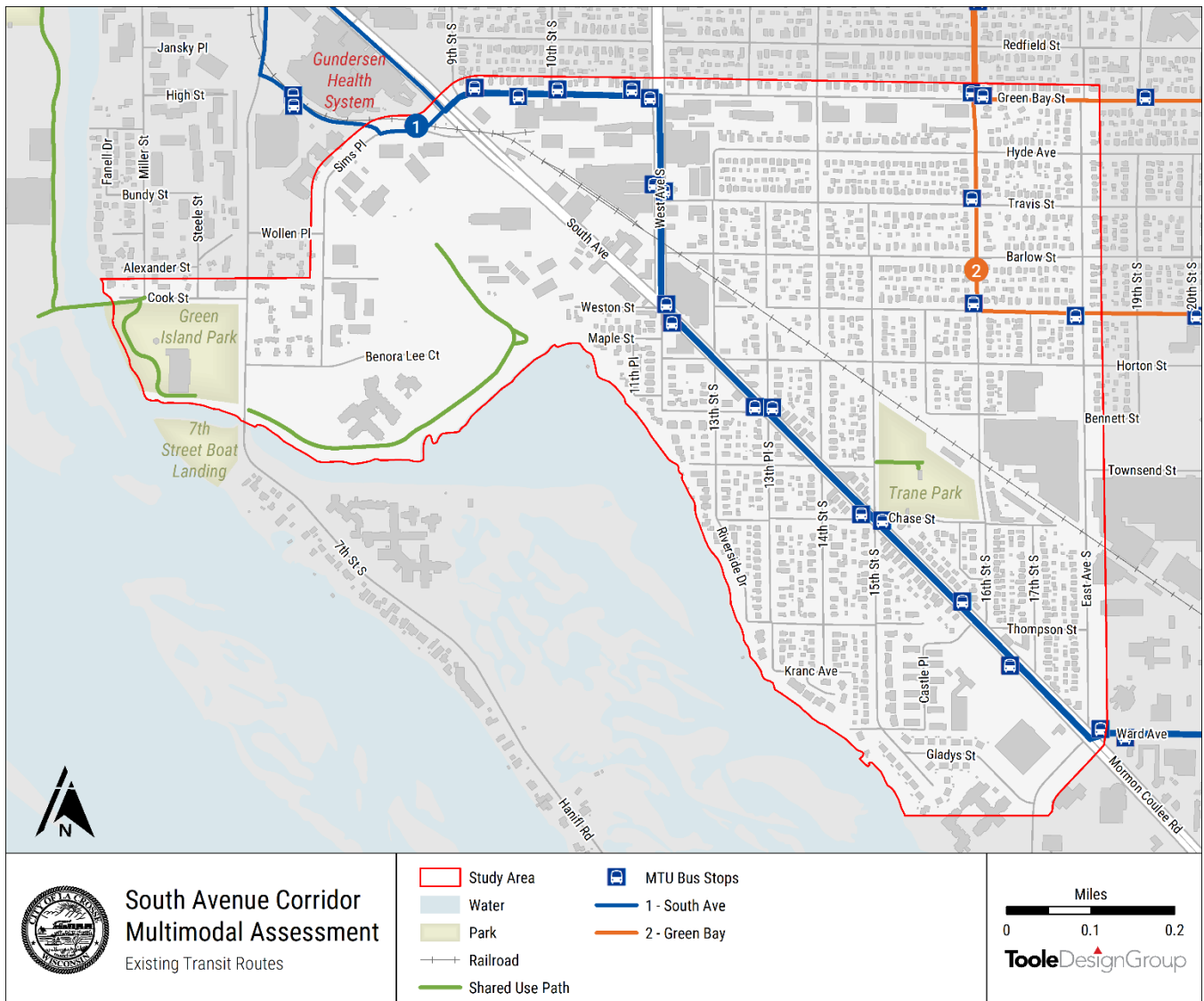
- Crossing South Avenue is challenging and intimidating due to multiple lanes of traffic, fast traffic, and drivers who do not yield to pedestrians.
- Riverfront, Inc., which provides services and training for people with disabilities, is located on South Avenue; many people visiting the facility have disabilities and issues safely crossing South Avenue, particularly to access the bus stop near 16th Street.
- Snow and ice is not always cleared from sidewalks during the winter making them impassable; in some areas, including South Avenue, there is little to no space to clear snow from sidewalks.
- Sidewalk obstructions such as sign posts, vegetation, utility poles, garbage cans, and temporary signs are prevalent along South Avenue and narrow the pedestrian space.
- There is little to no streetscaping, including grass terraces and street trees, along South Avenue, West Avenue, and portions of East Avenue which makes sidewalks unpleasant to use.
- Curb ramps are missing or do not meet current standards at some intersections.
- Many crosswalks need to be remarked to increase visibility.
- Pedestrian lighting is inadequate in some areas.
- In some locations on South Avenue and East Avenue, vehicles parking in parking lots encroach onto sidewalks or areas without sidewalks that are within the public right of way.

Transit Conditions

The La Crosse Municipal Transit Utility (MTU) provides bus service in the study area through the Route 1 South Avenue bus and the Route 2 Downtown bus. Both routes provide regular service on weekdays and weekends. More detail about these routes is provided below and on Map 6.

- Route 1: South Avenue
 - Seven days a week service
 - Weekday service every 30 minutes from 5:12 am until 5:42pm; service every 60 minutes until 10:15 pm
 - Weekend service every hour from 7:42 am until 7:15 pm (Saturdays) or 6:15 pm (Sundays)
 - Route 1 continues as Route 2 Downtown busses
- Route 2: Downtown
 - Seven days a week service
 - Weekday service every 30 minutes from 5:45 am until 6:15 pm; service every 60 minutes until 10:40 pm
 - Weekend service every hour from 8:15 am until 7:40 pm (Saturdays) or 6:40 pm (Sundays)

Map 6: Transit routes within the study area



The majority of bus stops in the Corridor are single signs noting the location of a bus stop, with most bus stops lacking benches, lights, and shelters. While concrete pads exist at bus stops, snow removal in the winter is inconsistent and can make bus loading and unloading difficult.

Transit Issues

A number of issues related to transit were identified through field review and public input:

- Crossing South Avenue to access transit stops is challenging and intimidating due to multiple lanes of traffic, fast traffic, and drivers who do not yield to pedestrians.
- Most transit stops do not provide shelter or benches for people waiting for buses.
- Most transit stops lack adequate lighting to make people feel comfortable while waiting for buses.

Rail

The BNSF Railway Company owns and operates a spur rail line that passes through the study area. The spur leaves the mainline east of the intersection of Highland Street and 29th Street South and continues northwest through the study area to its termini at City Brewing Company near the intersection of Market Street and 3rd Street. The rail line is shown on all maps accompanying this report. Service on the spur line is infrequent, with one small train operating a handful of times each week. Trains operate at very low speeds, and most street crossings do not have warning gates, lights, or bells. A number of streets have been dead-ended to eliminate railroad crossings, including Weston Street, 13th Place South, and 14th Street South; in all of these locations, pedestrian facilities were maintained across the tracks. The dead-ending of these streets has broken up the street grid in the study area and resulted in a disconnected street network.

Issues

A number of issues related to the railroad were identified through field review and public input:

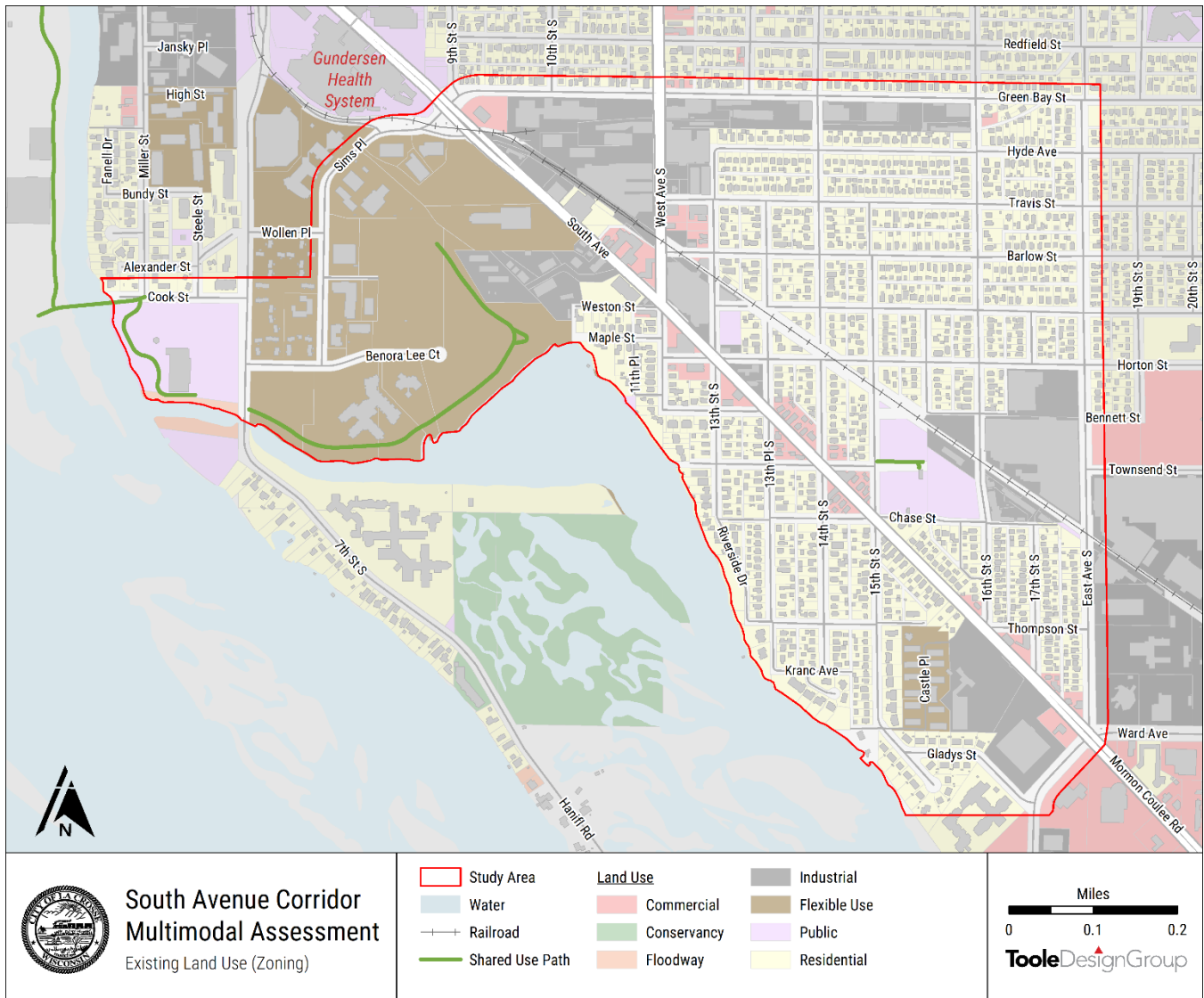
- The street network has been broken up by the railroad in a number of locations.
- Access across the railroad at 15th Street South results in convoluted motor vehicle routing as 15th Street South does not continue through to Green Bay Street.
- Many of the rail crossings are rough and uneven which can be dangerous for people walking or bicycling, and may eliminate access for people using wheelchairs.

Development and Land Use

The South Avenue Multimodal Assessment study area consists primarily of traditional development patterns, with a grid street pattern, closely spaced buildings, and a compact, pedestrian friendly environment. However, this traditional urban development pattern is broken up in a number of locations by South Avenue and the BNSF rail line that run diagonally through the study area, and by large, industrial blocks. These industrial blocks often comprise numerous standard size blocks, and do not have through streets providing access. The Gunderson Health System campus and the areas south of the campus are also defined by large blocks without a regular street grid or development pattern.

The existing land use within the South Avenue Multimodal Assessment study area is variable. Using zoning as a proxy for land use, the predominant land uses are residential, “flexible use,” industrial, and commercial. “Flexible use” areas are zoned for planned developments, that is, developments that will, over a period of time, be enhanced by coordinated area site planning, diversified location of structures and/or mixing of compatible uses. Map 7 displays the existing zoning, while Figure XX displays the approximate breakdown of land use within the study corridor.

Map 7: Existing zoning reflecting land use



Generally, the land along South Avenue consists of commercial properties, interspersed with some residential and industrial uses. The commercial properties vary widely in nature, and include restaurants, retail establishments, and locations providing services. Although not generally the highest and best use of land along a major city thoroughfare, many residents spoke about the importance of the businesses that exist along South Avenue to the neighborhood, and the convenience of having many of these commercial establishments nearby.

Significant areas of industrial use exist in the study area, including along the south side of Green Bay Street, West Avenue South, and portions of East Avenue South. These industrial areas range from light industrial uses such as printing services to heavy industrial uses including Trane’s manufacturing facility on East Avenue.

Moving away from South Avenue in either direction, the land use is primarily residential, generally with single family homes, although some areas of multifamily housing are scattered throughout the study area. The existing multifamily housing varies from duplexes to small multi-unit apartment buildings.

However, South Avenue, as a major thoroughfare, divides the study area, and makes walking or bicycling to many nearby destinations infeasible for many people. Additionally, there is no clear neighborhood center or commercial node—land uses along South Avenue, East Avenue, and West Avenue vary from block to block. The mixture of land uses, lack of a defined neighborhood center, and a barrier street present significant challenges for transportation within the study area. Although most of the study area is pleasant to walk and bicycle in along quiet neighborhood streets, neither of these modes is heavily relied on for transportation because of difficulties crossing South Avenue. Transit viability is also impacted by the dispersed land uses and an overall lack of density along South Avenue. An opportunity exists to better organize land use along South Avenue and the other major streets to better support a variety of transportation options within the study area while also growing the residential and commercial base of the community.

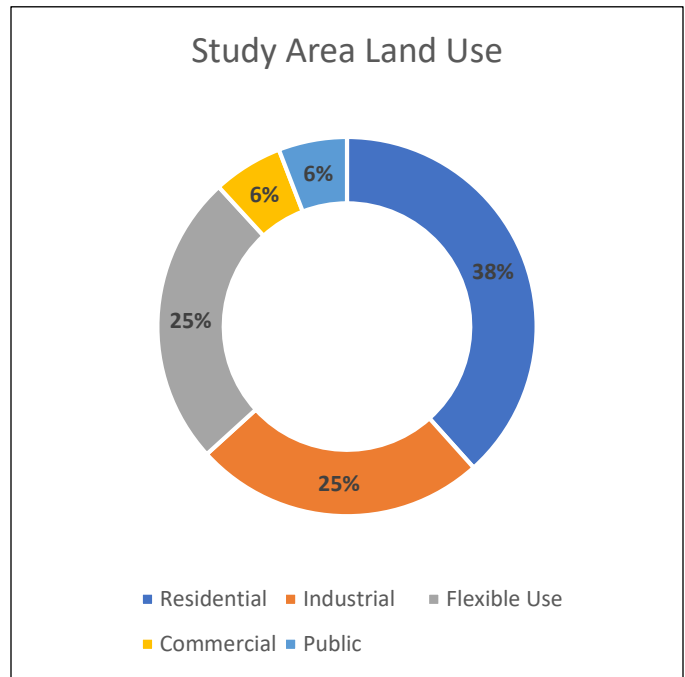


Figure 1: Land use in the South Avenue Multimodal Assessment study area

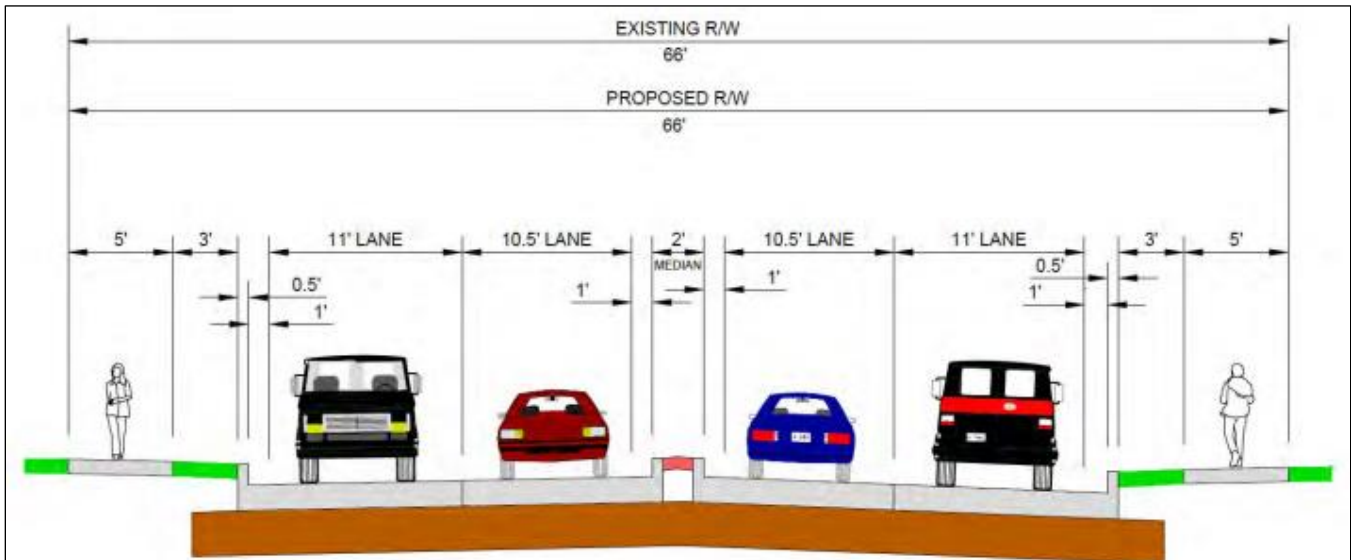
3. South Avenue Design Recommendations

This chapter provides recommendations specifically related to WisDOT’s plans for reconstructing South Avenue. The recommendations provided here were developed with public and Steering Committee input, and were formally submitted to WisDOT by Jason Gilman, Director of Planning and Development, on behalf of the South Avenue Steering Committee on August 7, 2017.

Recommended Alternative

WisDOT developed four primary alternative designs for South Avenue before selecting a Recommended Alternative (RA) for reconstruction. The selected alternative was preferred by city officials and the public for minimizing impacts of the street reconstruction on surrounding properties. The Recommended Alternative provides two travel lanes in each direction with a continuous center median that eliminates left turns onto and off of South Avenue. Three roundabouts are included in the design: one at the intersection with East and Ward Avenues, one at 16th Street, and one at West Avenue. Eight property acquisitions will need to occur to implement the design. A general depiction of the street cross section.

Figure 2: Cross section of the Recommended Alternative design for WisDOT’s South Avenue reconstruction project.



While the Recommended Alternative will improve many of the existing issues on South Avenue, there are significant issues with the proposed design which are noted below.

Lack of Bicycle Facilities

The RA does not provide bicycle facilities, either on or adjacent to South Avenue. While bicycling on the sidewalk is allowed in this area of La Crosse, the proposed 5-foot wide sidewalk is not adequate for bicycling, and sidewalk bicycling is not a safe practice in environments with many street and driveway crossings as is the case here.

Pedestrian Crossing Safety at Roundabouts

Roundabouts reduce traffic speeds and have fewer conflict points than standard intersections. Single lane roundabouts can improve safety for pedestrians and motorists, and current studies suggest that they are acceptable for many bicyclists. However, multilane roundabouts, as would be installed on South Avenue, present significant challenges for pedestrians to

cross and for bicyclists to navigate. Multilane roundabouts introduce the risk of multiple threat collisions because pedestrians need to cross more than one lane in the same direction; they are also very challenging for people with vision or mobility impairments to navigate.

Motorist yielding to pedestrians tends to be poor at multilane roundabouts; combined with a steady flow of traffic, this can make crossing streets very difficult. A variety of studies have demonstrated that the design of roundabouts strongly impacts motorist yielding behavior; designs with tight curve radii and increased deflection improve yielding compliance versus designs with looser curve radii and decreased deflection.

General Crossing Safety

Long crossing distances present safety issues for pedestrians and bicyclists. Each lane of traffic that a pedestrian or bicyclist crosses is a potential conflict point. Whether crossing at a traffic signal or at an uncontrolled location, shorter crossings are better for pedestrian and bicyclist safety. The PA eliminates all controlled crossings of South Avenue within the study area.

At uncontrolled locations with more than one lane in the same direction, pedestrians and bicyclists are exposed to risk of multiple-threat crashes. This is when a car in one lane stops for a pedestrian, and the vehicle in the adjacent lane does not stop. This is a high-risk condition for pedestrians, particularly if vehicles stop close to the pedestrian, blocking the traffic in the adjacent lane from the pedestrian's view.

The Federal Highway Administration has developed guidelines for uncontrolled marked crosswalks based on safety research. The study found that pedestrian crash risk increases with the number of travel lanes the pedestrian must cross, with the volume of traffic, and with traffic speed. On multilane streets with traffic volumes of 15,000 or greater, substantial crossing improvements are necessary to provide safe pedestrian crossings.

Reduction in Vehicle Access and Increased Vehicle Misdirection

Alternative 1's provision of a continuous center median will eliminate motor vehicle access to properties and streets on the left side of the street from the vehicle. To access streets or properties on the left side of the street, motorists will need to either use the roundabout before their destination to access local streets, or will need to overshoot their destination, travel fully around the next roundabout, and return to their destination.

Additionally, residents living south of South Avenue must follow convoluted routes on neighborhood streets to access westbound South Avenue. This convoluted routing, or the need to backtrack on South Avenue will likely increase traffic on neighborhood streets, which may present safety issues. The access to the roundabout at West Avenue is via an alley (11th Place South) and access to the 16th Street roundabout is via a semi-private substandard street (Castle Place), neither of which are designed to carry additional traffic.

WisDOT is considering changes to the PA design to partially address these concerns.

Emergency Vehicle Access

The proposed continuous center median between roundabouts in the PA will eliminate left-turn access and crossings at many points on South Avenue. While this may be desirable from a crash safety perspective, it will limit access by emergency responders and may lengthen emergency response times.

Increase in Motor Vehicle Speeds

Eliminating left turns on South Avenue using a continuous center median will likely result in increased motor vehicle speeds. This is due to traffic not be forced to slow or stop behind vehicles waiting to turn left and the loss of “side friction” between vehicles using the center lanes. The PA proposes narrowing the width of the travel lanes slightly from the existing conditions. Typically, narrowing travel lanes reduces motor vehicle speeds slightly. However, the increased speeds from addition of the continuous center median and the removal of traffic signals will likely more than offset the reduction from the narrowed lanes. Additionally, the roundabout design in the PA encourages high-speed exit from the roundabouts, which makes yielding to pedestrians less likely.

Design Recommendations

This section presents recommendations about roundabout design, street design, and pedestrian crossing to mitigate some of the concerns about the Preferred Alternative design for South Avenue.

Roundabout Design

Use a symmetric roundabout design to limit traffic speed entering and exiting the roundabout.

The roundabouts in the PA are designed to limit the speed of traffic entering each roundabout. However, the offset design allows drivers to accelerate out of the roundabout. This is problematic for pedestrians attempting to cross the exit leg of a roundabout, as faster traffic is unlikely to yield to pedestrians.¹ All roundabouts on South Avenue should use a symmetric design relative to South Avenue to limit both the entering and exiting speeds of motorists. A symmetric design will improve yielding behavior of motorists to pedestrians crossing the street. Symmetric roundabouts may also reduce some of the right-of-way impacts necessitated by the installation of roundabouts.

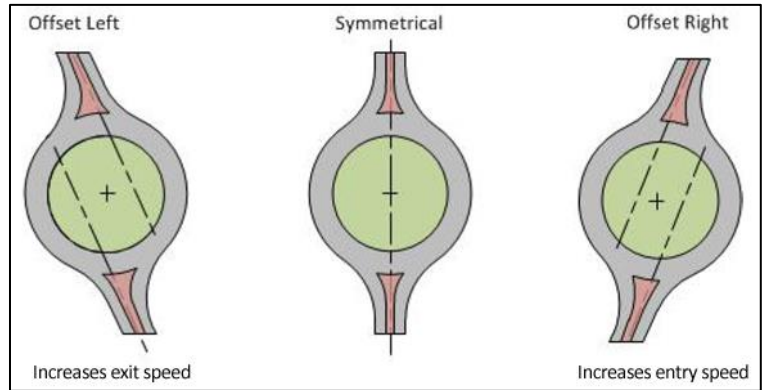


Figure 3: Alternative 1 utilizes "offset left" style roundabouts that decrease entry speed but allow for higher speed exit from the roundabouts. A symmetric design should be used to reduce both entry and exit speeds and improve yielding to pedestrians.

Consider Rectangular Rapid Flash Beacons (RRFBs) and raised crosswalks at all multilane legs of roundabouts.

Both RRFBs and raised crosswalks at multilane roundabouts have been shown to significantly decrease pedestrian delay and significantly improve motorist yielding to pedestrians at multilane roundabouts.² Raised crosswalks also decrease motor vehicle speeds, even when pedestrians are not present, which may address concerns about speed in the project corridor. Guidance from agencies including New York State DOT state that "raised crosswalks may be used at multilane roundabouts, regardless of the approach posted speed."³



Figure 4: This multilane roundabout provides RRFBs at the pedestrian crossings.

The Draft Proposed Rights-of-Way Guidelines *require* the signalization of multilane roundabout

¹ FHWA. Evaluation of Rectangular Rapid-Flashing Beacons (RRFB) at Multilane Roundabouts. Publication No. FHWA-SA-15-069. September 2015.

² Crossing Solutions at Roundabouts and Channelized Turn Lanes for Pedestrians with Vision Disabilities. NCHRP Report 674. National Cooperative Highway Research Program. 2011.

³ NY State DOT. Raised Crosswalks. Engineering Instruction 13-018. https://www.dot.ny.gov/programs/completestreets/repository/ei_13-018_raised%20crosswalks.pdf

legs; it is anticipated that some level of signalization will be required when the Final Guidelines are adopted. WisDOT should consider the use of RRFBs or raised crosswalks on all legs of the proposed roundabouts.

Provide shared-use paths around the perimeter of all roundabouts and bicycle slip lanes.

All roundabouts in the project should include a ten-foot-wide shared use path around the exterior of the roundabout and bicycle slip lanes to and from all streets to the path. The slip lanes and path should be provided regardless of the presence of on-street bicycle facilities. This complies with WisDOT's recommended roundabout design.

Use the roundabout at Ward Avenue as a gateway feature to the City.

The roundabout at Ward Avenue presents an opportunity to provide a gateway to the City and signal to motorists that they are entering a slower-speed environment than on Mormon Coulee Road. Landscaping, signs, or sculptures should be used to limit visibility across the roundabout, and should feature La Crosse branding or public art.

Neighborhood Access

Provide a roundabout at South Avenue and 14th Street South.

A fourth roundabout should be provided at the intersection of South Avenue and 14th Street South. This roundabout will be a significant access point for the neighborhood south of South Avenue, and will minimize the need for people to utilize the 11th Place alley to access westbound South Avenue. The additional roundabout will reduce vehicle miles traveled on South Avenue as it will reduce the need for people to drive the wrong direction on South Avenue and travel around a roundabout to travel in their desired direction. A fourth roundabout will also help limit motor vehicle speeds, as it breaks up the 3,000 foot distance between the roundabouts at West Avenue and 16th Street.

As of this draft, WisDOT has declined to include a roundabout at 14th Street in the PA.

Provide a mountable curb on the center median to allow emergency vehicles to traverse the median as necessary.

The continuous center median should utilize a mountable curb that can be traversed by emergency. This design would allow emergency responders to directly access destinations on the opposite side of the street from their direction of travel.



Figure 5: This median uses a mountable curb that allows emergency vehicle access across the median.

Street Design

Use 10-foot wide lanes; use the space saved to widen the sidewalks on each side of the street.

The Institute of Transportation Engineers (ITE) Traffic Engineering Handbook states “Ten feet should be the default width for general purpose lanes at speeds of 45 mph or less.” The Preferred Alternative design includes 10.5-foot inner and 11-foot outer travel lanes, exclusive of the gutter sections. All travel lanes could be narrowed from the proposed design to provide additional width for the sidewalks along South Avenue. Providing wider sidewalks will better accommodate bicyclists who may use the sidewalks rather than riding in mixed traffic on the street. While not an official bicycle facility, the widened sidewalks recognize the reality that bicyclists will need to access destinations along South Avenue, but are unlikely to ride in the street. In addition to ITE’s guidance, guidance from AASHTO and FHWA allow for the use ten-foot lanes in urban settings.

Use a speed limit of 25 miles per hour and a design speed of no more than 30 miles per hour when designing the street.

The risk of pedestrian serious injury or fatality rises significantly as motor vehicle speeds increase above 20 miles per hour. Every effort should be made to reduce the travel speed on South Avenue in recognition of its status as an urban street with active pedestrian uses.

The speed limit on South Avenue should be set to 25 miles per hour. Additionally, when designing the street, the design speed used should ideally be 25 miles per hour. Using a design speed greater than the intended speed for the street will result in traffic speeds above the posted speed limit.



Figure 6: The risk of pedestrian serious injury or fatality in a crash with a motor vehicle increases dramatically between 20 and 40 miles per hour.

Pedestrian Crossings

Provide “State Law Yield to Pedestrians within Crosswalk” signs, and advanced yield lines at crossing locations with median crossing islands.

The PA provides for median crossing islands at 13th Street, 13th Place, 15th Street, and 17th Street. Because multilane roundabouts are challenging for pedestrians to navigate, it is likely that these crossing locations will experience heavier pedestrian crossing volumes than they currently do.

These crossings should include high visibility crosswalks, advance yield lines, and signage to highlight the crossings and presence of pedestrians. The crosswalks should be at least ten feet wide for increased visibility and should be marked with a durable marking materials. All crosswalks should be checked at least twice a year to ensure that markings have not worn away and should be re-marked as necessary. “Yield to Pedestrian” signs should be cantilevered over the street to provide maximum visibility.

Provide Rectangular Rapid Flash Beacons (RRFBs) at 15th Street and 17th Street.

The City of La Crosse will be investing significant funds in Trane Park in 2019 to develop it as an all-abilities park. Activities at the park will be specifically targeted at youths who are on the autism spectrum or have other disabilities. A RRFB should be installed at 15th Street to allow easier crossing of South Avenue by pedestrians accessing Trane Park.

Riverfront, Inc. provides services for people with various disabilities, many of whom rely on transit to access the Riverfront facility near Castle Place. A RRFB should be installed at 17th Street to provide access to a relocated Municipal Transit stop on the far side of South Avenue from Riverside.



Figure 7: Crossings between roundabouts should include features to improve pedestrian safety and visibility similar to the crossing shown here.

The City of La Crosse will be completing an extension of the VIP trail connection to Maple Street this year. A RRFB should be provided at 13th Street to provide access to the new shared use path from areas north of South Avenue.

Compliance with the RRFBs and crosswalks should be regularly monitored and enforced. If motorists are not complying with the RRFBs, WisDOT should replace the RRFBs with Pedestrian Hybrid Beacons.

Additional Recommendations

Shift the crosswalk and median island at 17th Street from the east side of the street to the west side of the street.

Moving the crosswalk at 17th street to the west side of 17th Street will provide a marked crosswalk closer to Riverfront, Inc.'s facility, which serves many transit users who have disabilities. Shifting the crosswalk to this location may necessitate narrowing Riverfront's driveway. The current driveway is three lanes wide to accommodate left and right turning traffic as well as entering traffic; following reconstruction, exiting traffic will only be allowed to turn right, and a reduction to two lanes should be adequate.

Relocate the inbound MTU bus stop west of 16th Street to west of 17th Street.

Clients at Riverfront, Inc. currently have a difficult time crossing South Avenue to access the existing bus stop just east of 16th Street. Following reconstruction of the street and the addition of a pedestrian median island and RRFB at 17th Street, the bus stop should be relocated to just west of 17th Street. This location will allow crossing without having to negotiate the roundabout at 16th Street, and will be closer to across the street from the outbound bus stop.

Convert 11th Place between Weston Street and Maple Street from an alley to a street.

11th Place provides the only access from the neighborhood south of South Avenue to the roundabout at West Avenue, but is currently an alley marked for "No Through Traffic." The alley should be reconstructed as part of this project to a narrow local street. This reconstruction will necessitate acquiring one of the properties adjacent to 11th Place.

Consider maintaining the intersection of South Avenue, East Avenue, and Ward Avenue as a conventional intersection.

Trane and other companies that frequently utilize South Avenue to transport oversized loads have voiced concern over the installation of a roundabout at the intersection of South, East, and Ward Avenues. The intersection could be redesigned as a conventional intersection with left turn lanes and other geometric improvements rather than a roundabout. This could provide safety improvements over the existing intersection design, and alleviate concerns related to oversized loads negotiating a roundabout.

Consolidate driveway entrances wherever possible.

Driveways present hazards for pedestrians, bicyclists, and motorists as motorists move onto and off of the main street. Wherever possible, driveway entrances should be consolidated and the use of shared driveways for commercial properties should be encouraged or required. Commercial properties should have no more than one driveway entrance on South Avenue, and driveway widths should be minimized as much as feasible.

4. Multimodal Recommendations

Transportation and land use are intrinsically linked, with land use directly impacting the types of transportation that are viable in specific locations. Sprawling, dispersed development or land use that is predominantly of one type requires people to use motor vehicles to access destinations, while dense, mixed use development can support transit use and make walking and bicycling to destinations feasible. While driving is currently the predominant transportation mode in the South Avenue Multimodal Assessment study area, and is likely to remain so, providing safe and inviting bicycling, walking, and transit opportunities while also providing denser, multi-use development will improve the vibrancy, connectivity, and accessibility of the area. This chapter presents recommendations to improve conditions for these travel modes, as well as for the general transportation network, while Chapter 5 discusses land use recommendations.

General Transportation Improvements

Traffic generally operates smoothly within the study area, with the exception of crashes and occasional congestion on South Avenue. WisDOT's South Avenue reconstruction project will address these issues, and the recommendations below focus on general transportation and connectivity improvements throughout the remainder of the study area.

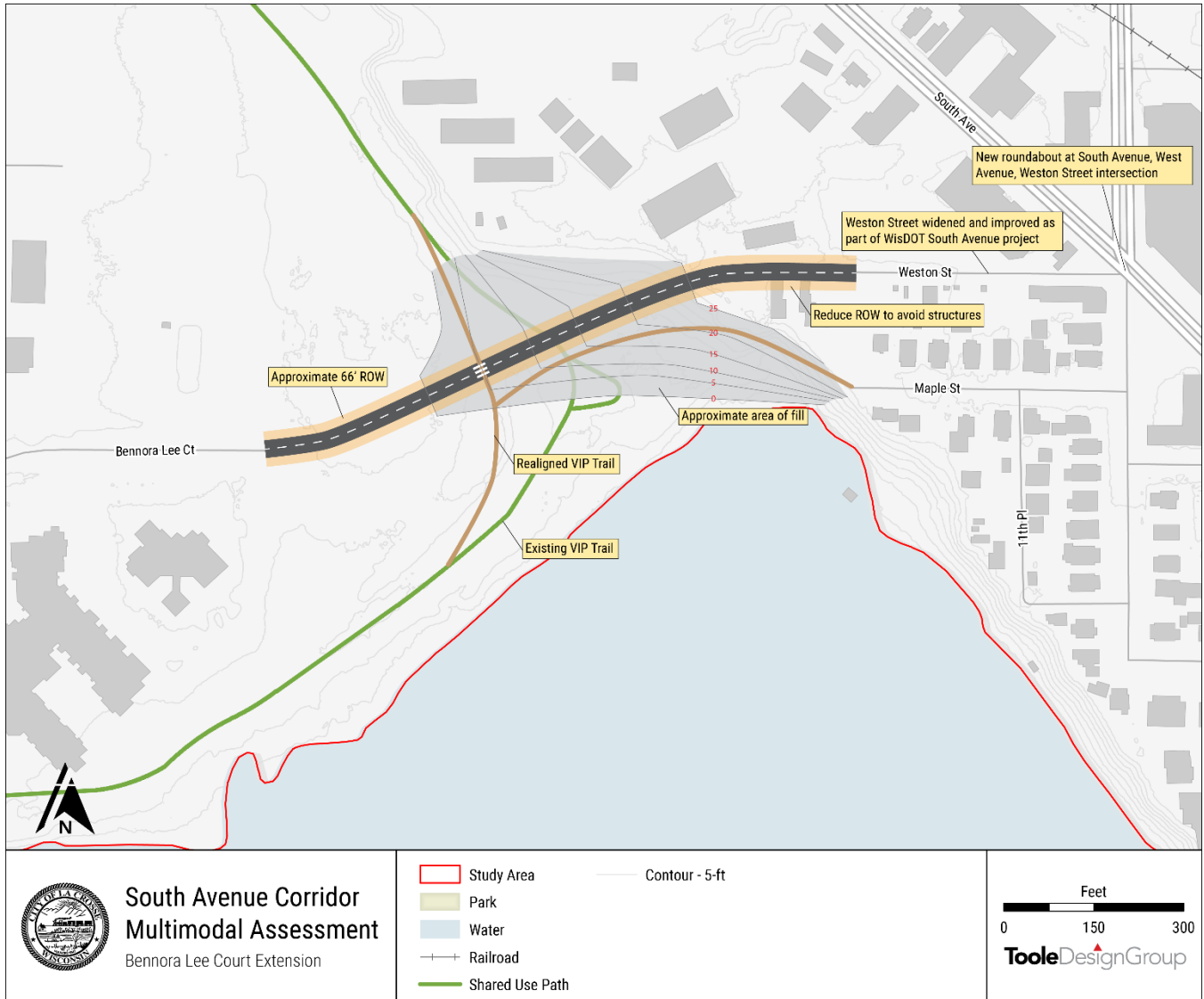
- Provide a new street extension that connects Bennora Lee Court to Weston Street (detailed below).
- Reconnect 14th Street South at the BNSF railroad while closing 15th Street (detailed below).
- Utilize narrow lanes and traffic calming to bring motorist speeds into alignment with posted speed limits
- Reduce posted speed limits on major street to no more than 30 miles per hour, and preferably 25 miles per hour
- In order to provide better connectivity and a regular street grid, consider providing the following connections if redevelopment occurs in the future:
 - Connect 13th Street South to Green Bay Street (segment from Hyde Avenue to Green Bay Street)
 - Connect Hyde Avenue to West Avenue South (segment between 13th Street South and West Avenue)
 - Provide a network of streets in the area bounded by Sims Place, Bennora Lee Court, and South Avenue as conceptualized in the Powell-Hood-Hamilton/ Gundersen Lutheran Medical Center Joint Neighborhood and Campus Plan (2013).
- Provide improved streetscapes along South Avenue and portions of West Avenue, East Avenue, and Green Bay Street.

Bennora Lee Court Extension

The area of La Crosse south of the Gunderson Health Systems campus is largely cut off from the rest of this city. Access to this area is limited, particularly immediately south of the Gunderson Health Systems campus and the residential lands on Green Island. This area is a mix of residential properties, medical and other offices, senior living facilities, parkland, and other uses, and is primarily accessed from 7th Street South and Sims Place. This limited access created significant congestion near the intersections of these streets with South Avenue.

WisDOT's reconstruction of South Avenue will add a roundabout at the intersection of South Avenue, West Avenue, and Weston Street, and will reconstruct the short length of Weston Street to the west of South Avenue. This reconstruction presents an opportunity to connect the reconstructed leg of Weston Street to Bennora Lee Court, and create a new connection into the area south of the Gunderson Health Systems campus. Bennora Lee Court is a short street that begins at 7th Street South and terminates in a cul-de-sac approximately 1,200 feet to the east. The cul-de-sac is situated such that Bennora Lee Court could be extended east to match the WisDOT work at Weston Street. This connection would provide a new access point to serve the various land uses in this area. If extended east to South Avenue, the street would provide a direct connection to existing housing, businesses, and Green Island, as well as land that is potentially ripe for redevelopment. One potential alignment of the new street is shown on Map 8.

Map 8: Potential alignment of extension of Bennora Lee Court to Weston Street



Benefits

There are several residential developments and large parking areas surrounding Gunderson Health System and the streets in this area are stressed during the peak hours due to the lack of sufficient access points in the neighborhood. Providing an additional access point will provide relief to the major intersections at 7th Street South and at Sims Place. Residents at the southern end of the neighborhood and Green Island would no longer have to mix with the Gunderson Health Systems traffic which would benefit all users of the street system. Better access may be a catalyst to new development in the area.

Cost Estimate

The estimated cost to construct a new 2-lane urban roadway between the Bennora Lee Court cul-de-sac and the terminus of the WISDOT construction in Weston Street (approximately 1,000 feet) is approximately \$1.875 million dollars. This includes right of way acquisition costs, street lights, sewer and water main, as well as engineering and contingencies. This estimate was developed without the benefit of a survey or plans and should only be considered a planning-level figure. Field conditions may impact the actual costs. A more detailed cost breakdown is provided in Table 2.

Table 2: Planning-level cost estimate for extension of Bennora Lee Court to Weston Street

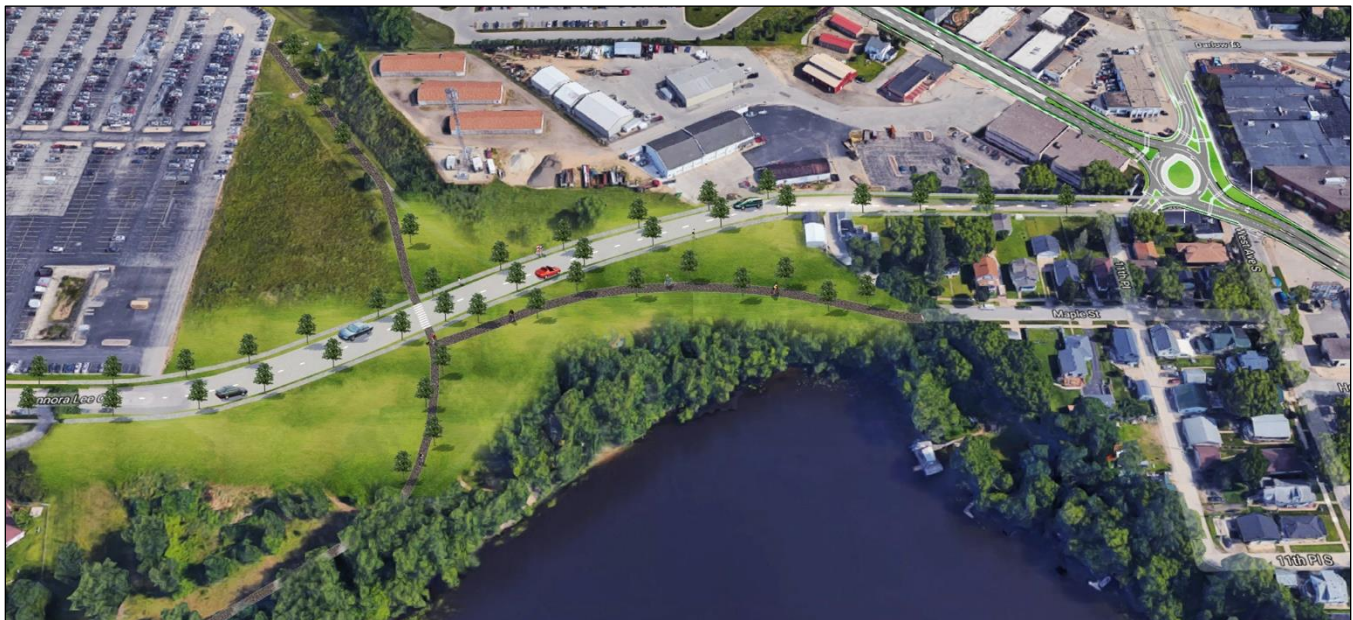
Description	Units	Unit Cost	Cost	Notes
Right of way acquisition	66,000 sf	\$3.00/sf	\$200,000	Assumes 66-foot-wide ROW for 1,000 feet
Street construction	0.20 miles	\$4,000,000/mile	\$800,000	Unit cost from "Generic Cost Per Mile Models" dated 08/02/16 for urban, new construction, 2-lane, undivided roadway. Cost includes street lights and storm sewer.
Fill	40,000 cubic yards	\$10.00/cubic yard	\$400,000	
Water main	1,000 linear feet	\$100/linear foot	\$100,000	
Subtotal			\$1,500,000	
Design and contingency (25%)			\$375,000	
Total			\$1,875,000	

Concerns

There is a grade differential of approximately 25 feet between the Bennora Lee Court cul-de-sac and the terminus of Weston Street. To construct a street with a maximum grade of five percent, the grade will have to be constructed over approximately 500 feet, which will require a substantial amount of fill. Fill may be available at very low cost from the United States Army Corps of Engineers, which provides dredging operations in the Mississippi River ship channel.

Right of way acquisition is often a challenging process; it is assumed that the necessary acquisition will be a cooperative effort with all property owners. Depending on the final alignment of the new street, one auxiliary building may have to be demolished.

Figure 8: Illustration of the extension of Bennora Lee Court to Weston Street and the realignment of the VIP Trail



VIP Trail Extension

In 2017, the City constructed two extensions of the VIP Trail: one from its terminus to South Avenue near the Gund Brewery Lofts, and another extension to the western terminus of Maple Street. Extending Bennora Lee Court to Weston Street, will require realigning portions of the VIP Trail, possibly including the new connection to Maple Street. The realignment may add an additional \$50,000 to the Bennora Lee Court extension project cost, bringing the total project cost estimate to \$1,925,000.

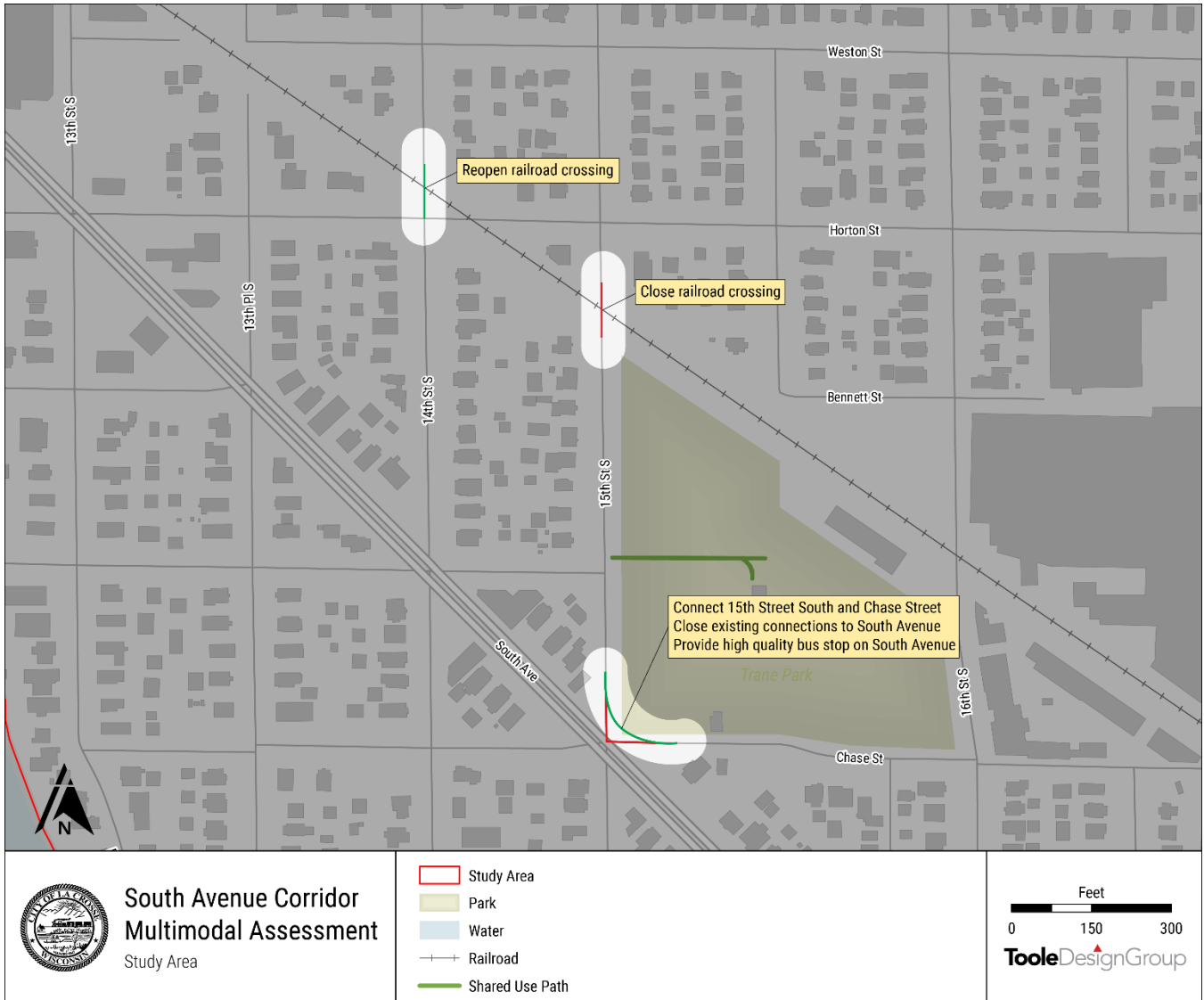
14th Street South Reconnection and 15th Street South Realignment

The City of La Crosse will be providing substantial improvements to Trane Park in 2018 and 2019 pending project funding. Currently a largely empty field, the park will be upgraded to an “all abilities” park specifically designed for children with autism and other disabilities. Concern has been voiced about traffic on 15th Street South adjacent to Trane Park as 15th Street South provides a connection across the BNSF railroad tracks. The South Avenue reconstruction project provides an opportunity to reconfigure some of the streets in the area of Trane Park:

- **14th Street South should be reconnected across the BNSF railroad tracks.** This connection provides a number of benefits over the existing connection across the tracks at 15th Street. First, 14th Street South is continuous north to Denton Street, while 15th Street South terminates a few blocks north of the railroad at Travis Street. Second, a railroad crossing at 14th Street South better distributes the railroad crossings between West and East Avenues.
- **15th Street South should be closed to motor vehicle traffic at the BNSF railroad tracks.** In exchange for reopening the railroad crossing at 14th Street South, the crossing at 15th Street South could be closed. If this occurs, bicycle and pedestrian crossings of the railroad should be maintained on both sides of the street.
- **Consideration should be given to closing the north side of the intersection of 15th Street South, Chase Avenue, and South Avenue.** Chase Avenue and 15th Street South could be connected near South Avenue, with the actual intersection with South Avenue closed. This would further reduce traffic on both Chase Avenue and 15th Street South, would allow for additional parking near Trane Park, and would provide the opportunity to provide a bus stop out of the South Avenue travel lanes.

These recommendations are displayed on Map 9 and all hinge on the ability to reopen the 14th Street South crossing of the railroad tracks. The City should initiate discussions with the BNSF Railroad Company in the near term about the feasibility of swapping the crossing between 15th Street South and 14th Street South. Additionally, the City should request WisDOT support for this project in exchange for limiting access to South Avenue, which WisDOT supports.

Map 9: Realignments of streets near Trane Park



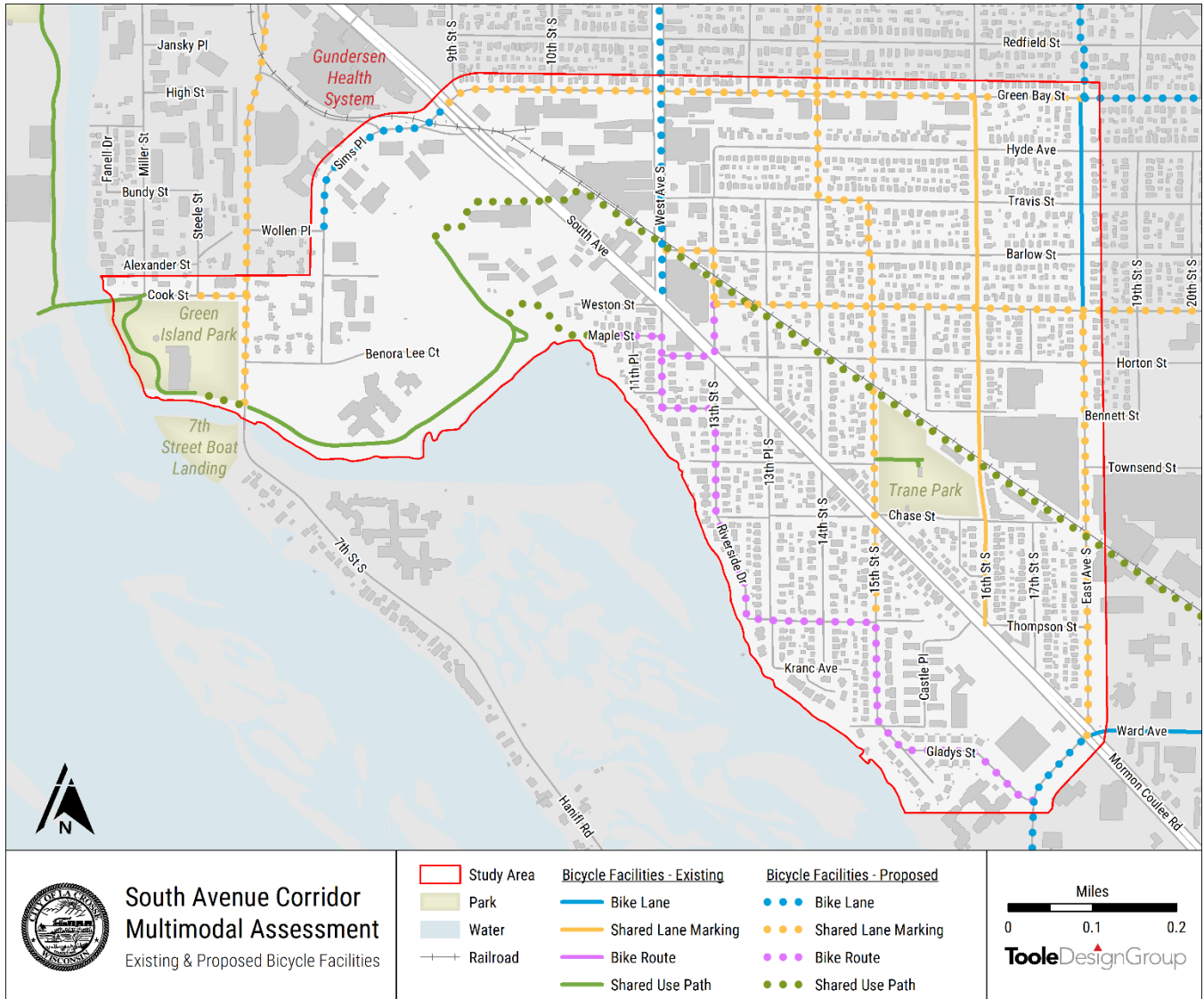
Bicycle Improvements

There is a desire for improved bicycling conditions in La Crosse, including within the study area. This section presents general recommendations for improving bicycling conditions in the study area, as well as more specific recommendations for priority projects that have the potential to vastly improve bicycling on La Crosse's south side. The recommendations presented here build upon the 2012 La Crosse Bicycle and Pedestrian Master Plan, which provides strong recommendations for improving bicycling in the study area.

General Recommendations

- Continue to implement the recommendations of the 2012 Bicycle and Pedestrian Master Plan.
- Implement the bicycle facilities show on Map 10; more detail on some of these projects is provided below.
- Provide a ten foot wide shared use path with access ramps from all connecting streets around all roundabouts installed in the study area.
- Improve bicycle and pedestrian crossing opportunities on South Avenue.
- Add bicycle parking in public areas including parks and transit stops, and require private landowners to add bicycle parking at destinations including businesses, offices, employment areas, and multifamily housing.
- Encourage the provision of amenities such as showers, locker rooms, and secure bicycle parking for employees with new developments.

Map 10: Existing and proposed bicycle facilities

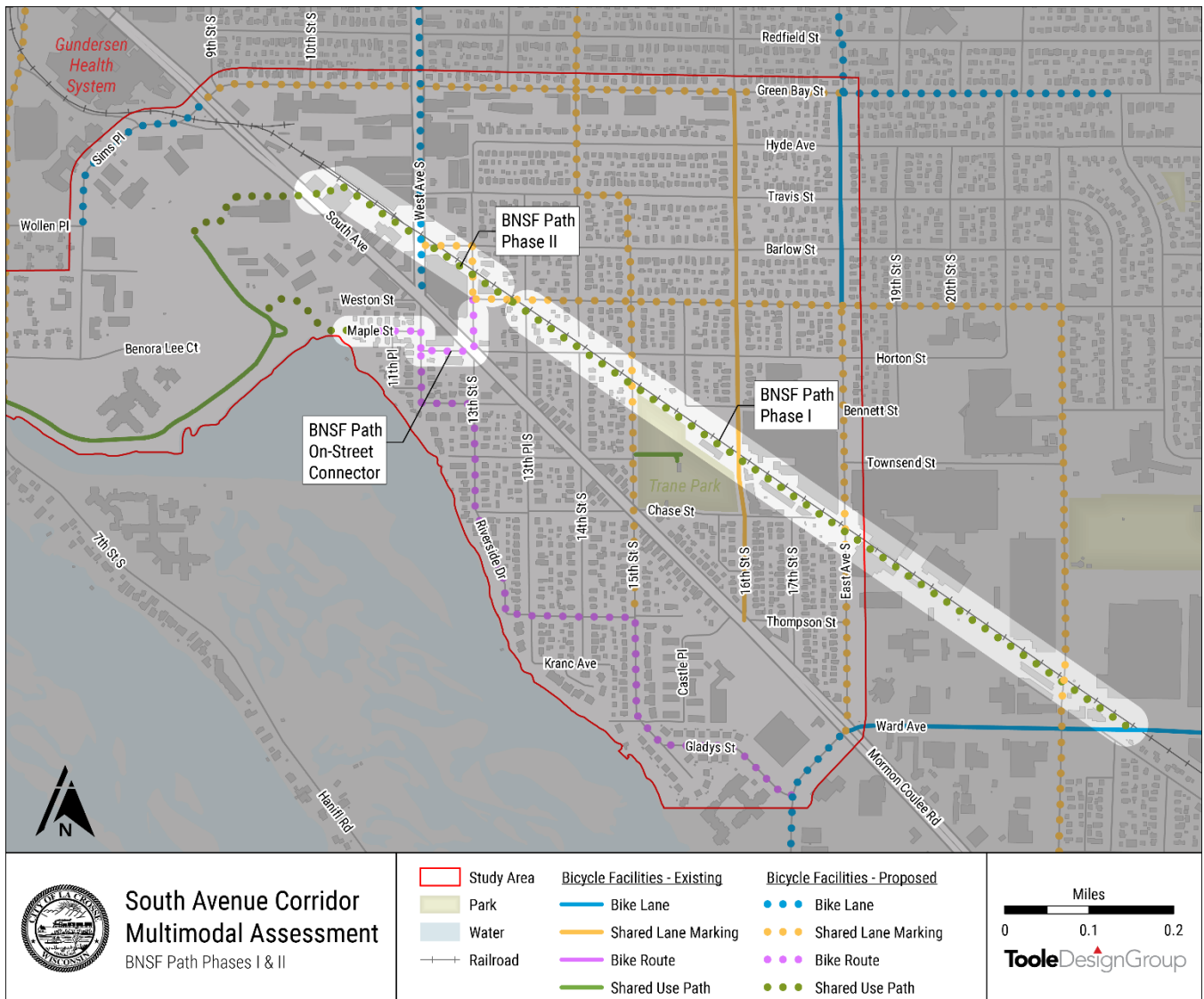


Bicycle Priority Projects

The River Route

The 2012 Bicycle and Pedestrian Master Plan recommended a signed bicycle route roughly paralleling Swift Creek and the Mississippi River from East Avenue South to the west end of Maple Street, where the VIP Trail now connects. This route provides a parallel route to South Avenue, which does not have bicycle facilities, on low traffic neighborhood streets. With the new connection to the VIP Trail, the route also connects the south side of La Crosse north to Market Street and on to downtown via low traffic streets and shared use paths. The “River Route” is not intuitive to follow, with a number of turns and jogs. Wayfinding signs are needed to guide people along the route and to nearby destinations. Map 11 displays the proposed route, as well as proposed wayfinding signs to guide people along the route. Supplementary shared lane markings can be installed with this project to emphasize the bicycle route and aid in bicyclist navigation. This project can be implemented in the near term at minimal cost.

Map 11: The River Route bicycle route runs from the VIP Trail to East Avenue South

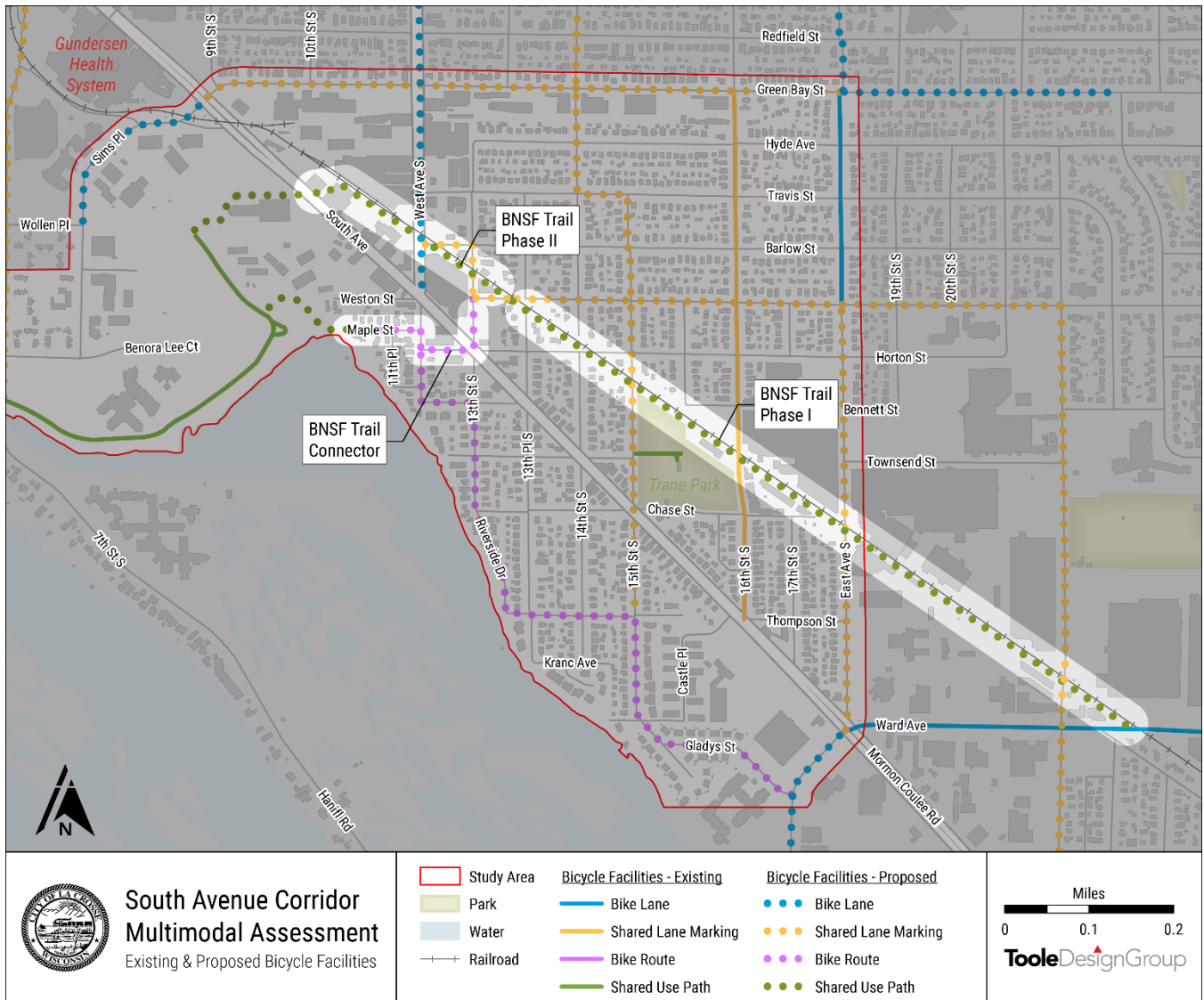


BNSF Railroad Company Path

An opportunity exists to develop a shared use path along the south side of the BNSF railroad tracks through the study area for pedestrian and bicyclist use. This path will provide an off-street bicycle route roughly parallel to South Avenue, will provide direct access to Trane Park (which will be fully developed in 2018), will provide a direct connection to the VIP Trail, and will provide a comfortable transportation and recreational bicycle route on La Crosse’s south side. Paths within or adjacent to railroad rights of way are increasingly common in the United States and offer a variety of benefits. These “rails-with-trails” reduce trespassing on tracks as they provide a legitimate route for people who may otherwise walk along tracks, and can be developed with minimal impacts on adjacent properties. The BNSF Path could be developed in two phases as shown in Map 12.

The first phase of the path extends from Weston Street southeast toward Ward Avenue. At the western end, this path segment will connect to the VIP Trail via on street bicycle routes. At the eastern end, the path will connect to the bike lanes on Ward Avenue. Bicyclists that continue east on Ward Avenue will intersect with another shared use path approximately two-thirds of a mile away. Alternately, path users can continue southeast on Diagonal Road, a low-traffic local street.

Map 12: BNSF Path phases I and II and the on-street connection to the VIP Trail



Based on review of GIS data and aerial photography, there appears to be adequate space to construct this segment of the path and provide the needed clearance from the active railroad tracks, however this needs to be verified with a field survey. Just southeast of East Avenue minor demolition to auxiliary buildings that serve the salvage operations in that area will be required. To provide a connection from the VIP Trail to this new path, a signed bicycle route should be provided from the terminus of Maple Street to the terminus of the new trail at Weston Street. This route is displayed on the attached map.

The second phase of this path extends from the terminus at Weston Street northeast to South Avenue, where it can connect to a spur of the VIP Trail adjacent to the Gund Brewery Lofts. This phase of the path has significant impacts on properties west of West Avenue, and may require the purchase of right of way, or easements from property owners. This phase should be completed with redevelopment of properties in the area. This path segment will require a new mid-block crossing of South Avenue; this crossing should provide a pedestrian median island at least eight feet wide in the center of the street to accommodate people on bicycles.

The BNSF Railroad Company will need to be an active partner in developing this path along its spur line.

Figure 9: Render of the BNSF Path at the intersection of 14th Street South and Horton Street looking toward the southeast (not to scale)



Pedestrian Improvements

The neighborhoods encompassed by the study area are generally good places to walk with quiet, tree lined neighborhood streets and sidewalks in most areas. However, a variety of pedestrian improvements can be implemented to significantly improve the pedestrian experience and safety, particularly along South Avenue and the other busier streets in the study area. The 2012 Bicycle and Pedestrian Master Plan presented comprehensive recommendations for pedestrian improvements, and the recommendations below reiterate many of that plan's recommendations. Many of the recommendations below will be implemented with the South Avenue reconstruction project.

- Continue to implement the recommendations of 2012 Bicycle and Pedestrian Master Plan
- Ensure that crosswalks throughout the study area are clearly marked. Unsignalized crossings of South Avenue should utilize high visibility crosswalk marking patterns.
- Remark all crosswalks at least annually; semi-annual remarking may be necessary in high traffic areas.
- Evaluate installing a Rectangular Rapid Flash Beacon (RRFB) as the crosswalk northwest of the intersection of South Avenue and 16th Street South prior to the South Avenue reconstruction project.
- Provide wider sidewalks than standard along South Avenue.
- Replace damaged sidewalk segments and curb ramps.
- Continue to provide curb ramps that are compliant with current Americans with Disabilities Act (ADA) guidelines at all intersections.
- Improve snow removal expectations and enforcement by private property owners.
- Install sidewalk curb extensions on adjacent side streets to decrease crosswalk distances, moderate vehicular speeds, provide increased sidewalk space, and define on-street parking bays.
- Extend pedestrian signal timing for all signalized crossings in study area
- Ensure that sidewalks are installed on at least one side of all streets, and both sides of all collector and arterial streets. More information about sidewalk installation is provided below.

Pedestrian Priority Projects

Sidewalk Installation

The City has a policy to install sidewalks based on the following priorities:

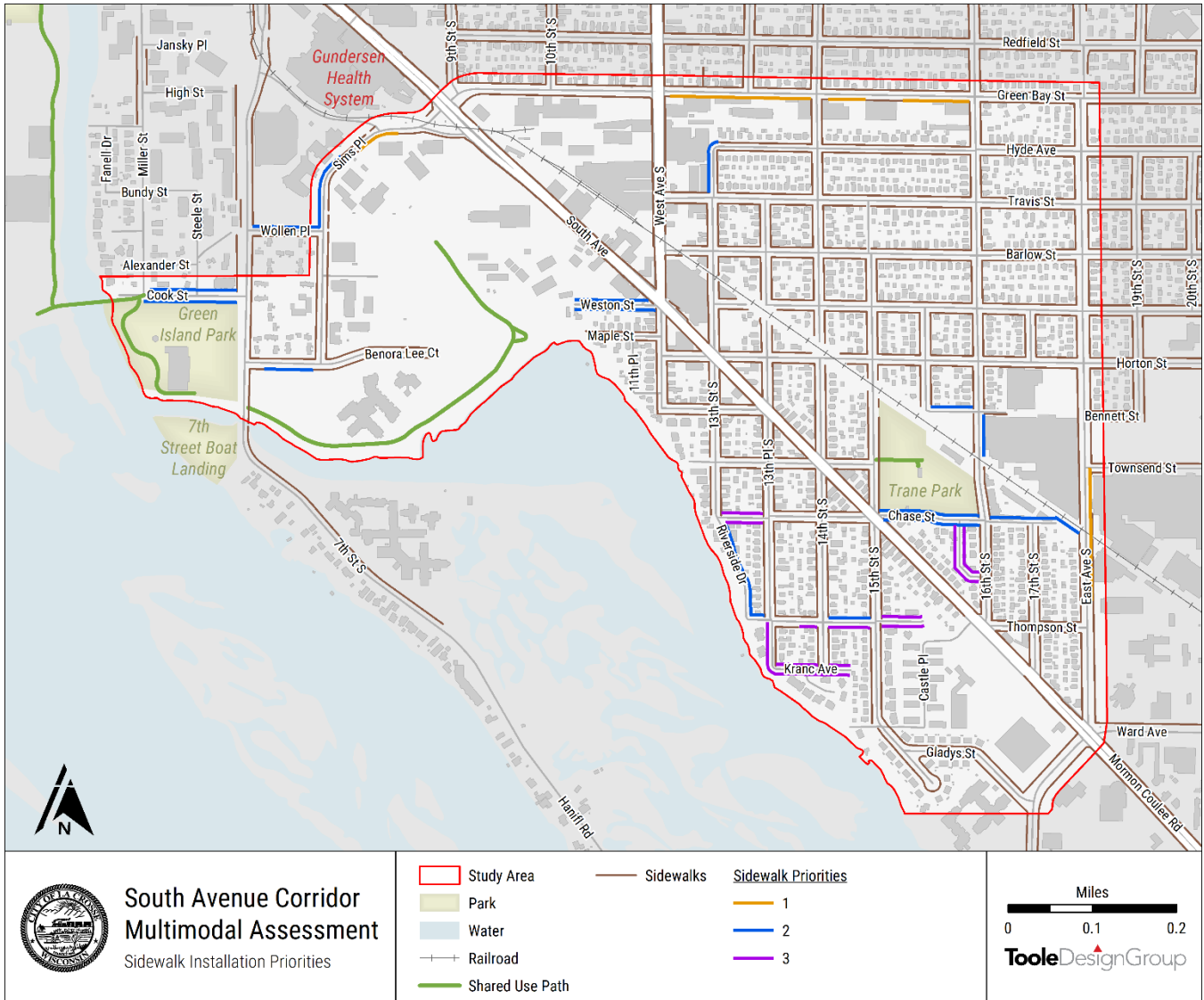
1. Install sidewalks on routes to schools and leading to city bus stops.
2. Install sidewalks adjacent to or along any worn path in grass or dirt on city property.
3. Install sidewalks on all arterial and collector streets.
4. Fill in sidewalks where blocks have partial sidewalks.
5. Install sidewalks on streets where no sidewalks exist on their side of the block only where more than fifty (50) percent of the owners request the sidewalk.

The 2012 Bicycle and Pedestrian Master Plan identified locations where sidewalks are missing and classified them as first, second, and third priority for installation. Since the 2012 plan, the City has installed sidewalk segments in the study area, but a number of areas still lack sidewalks; these segments are displayed in Map 13. The sidewalk installation priorities from the 2012 Bicycle and Pedestrian Master Plan have been carried over here, except that the following locations have been upgraded to first priority for sidewalk installation:

- The south side of Green Bay Street between approximately West Avenue and 16th Street South
- East Avenue from the railroad tracks to approximately Townsend Street

The City should continue to install sidewalks as opportunities arise, particularly in conjunction with any street paving or reconstruction projects.

Map 13: Sidewalk installation priority areas based on the 2012 Bicycle and Pedestrian Master Plan



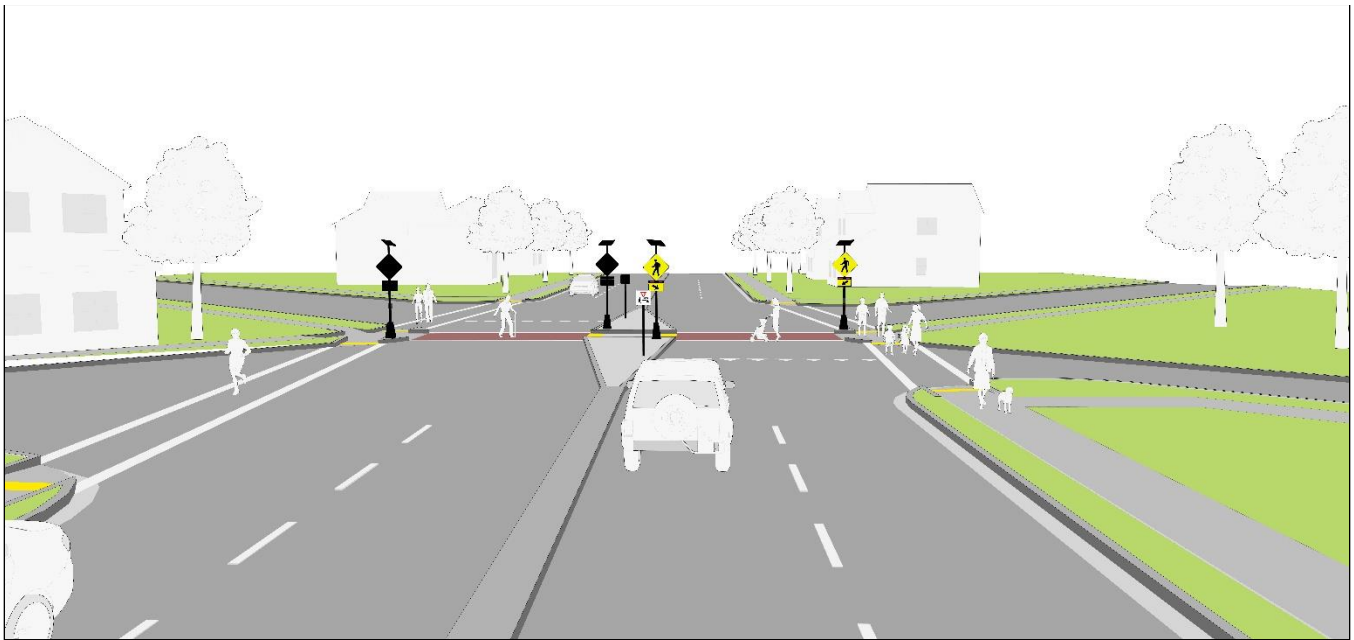
Enhanced South Avenue Streetscape

The reconstruction of South Avenue presents an opportunity to make the street significantly more inviting to pedestrians while also visually improving the street for motorists. An improved streetscape can contribute to increased pedestrian traffic, more vibrancy along the street, improved property values, and a more identifiable and attractive entrance into La Crosse. State enhancement funds are available as part of the reconstruction project, although it is likely that the City will have to contribute additional funds to provide an active and attractive streetscape. The following recommendations are made to enhance the attractiveness, vibrancy, and safety of South Avenue:

- Use high visibility cross walks at all crossings of South Avenue.

- Provide attractive streetlighting that provides appropriate lighting of pedestrian areas.
- Provide a distinctive monument or branding at the South Avenue / East Avenue / Ward Street intersection to indicate to people that they are entering a distinct area of La Crosse.
- Provide street trees that will eventually grow into a substantial tree canopy; avoid small decorative tree varieties.
- Provide wider than standard sidewalks on both sides of the street.
- Provide shelters at all MTU stops along South Avenue.
- Provide a grass terrace along the length of South Avenue; paved terrace areas should be minimized or eliminated.
- Underground all overhead utility lines.
- Provide street furniture and bicycle racks where appropriate in the public right-of-way that carry a distinctive and unified style.

Figure 10: Illustration of an enhanced pedestrian crossing of South Avenue using Rectangular Rapid Flash Beacons



Transit Improvements

Transit viability and land use are strongly interconnected, with denser residential, employment, and commercial development better supporting frequent transit service than less dense or dispersed development. At the same time, frequent transit access can support development with lower amounts of motor vehicle parking, which lowers development costs. As the City of La Crosse plans for future land use and specific developments, emphasis should be placed on supporting and incentivizing dense mixed-use development along existing transit corridors, including South Avenue.

The project area is served by two bus lines, with Route 1 providing regular service on South Avenue and to and from downtown and the Gunderson Medical System campus. Changes to MTU routing and frequency were not examined for this Assessment. However, recommendations are provided below for enhancements to existing bus stops and access to transit. Most of these recommendations can be carried out in conjunction with WisDOT's South Avenue reconstruction project.

- Plan for and support land uses that support increased transit use including higher density housing, employment, and nodes of commercial development.
- Relocate the inbound Route 1 bus stop from west of 16th Street to near 17th Street on South Avenue to provide closer access for users accessing Riverfront's facility; this stop relocation should occur in conjunction with installation of a high visibility crosswalk across South Avenue.
- Provide high quality bus stops at South Avenue and 15th Street following the development of Trane Park.
- Install transit benches or shelters and kiosks with route maps and timetables at select locations based on MTU boarding data.
- Provide concrete pads at all bus stops for front and back door loading and unloading.
- Provide enhanced streetlighting at all bus stops.
- Work with developers, employers, and institutions to increase the transit mode share.

5. Land Use / Redevelopment Strategy

South Avenue is the primary thoroughfare into La Crosse from the South, but it lacks a distinct character. The South Avenue reconstruction project offers an opportunity to redefine the character of South Avenue, offer new uses, and provide a more cohesive appearance to the corridor.

Design Concept

The Pulse Node concept provides a guide for the redevelopment of South Avenue. Pulse Nodes can be envisioned as a string of high energy mixed-use and commercial areas that serve the neighborhoods and broader community within, thereby affecting local transportation patterns with more bike and walk friendly adjacencies between residential and service uses and transit viability with mixed density residential development between nodes that provide a transit consumer base. Less intense land uses, such as mixed density residential and open space are located between, and provide a buffer between the more active nodes.

Pulse Nodes

South Avenue presents an opportune location to implement the Pulse Node concept – areas ripe for redevelopment near some of the larger intersections are interspersed with intact blocks of medium density single family housing. Two pulse nodes on South Avenue were identified for this Assessment: the areas surrounding the intersection with East Avenue South and West Avenue South. Both of these intersections will be reconstructed as roundabouts as part of WisDOT’s 2022 South Avenue reconstruction project. Each Pulse Node is approximately one-half mile long and extends one block off of South Avenue in either direction. Map 14 displays the approximate location of the two Pulse Nodes.

Land in each of the Pulse Nodes is ripe for redevelopment, with underutilized buildings, non-compliant uses, or vacant land. This Assessment did not perform a market study to determine the demand for and financial feasibility of redevelopment in these areas, but analyzed the current land uses, proximity to major destinations, and integration into the transportation system. Redevelopment in these areas is likely to occur over the long term.

Within the study area, denser residential development, retail establishments, and office space should be consolidated within these transit-accessible nodes. When combined with attractive building designs, a walkable streetscape, and access to transit, this concentration of services, employment, and residences can create a vibrant neighborhood center that not only serves people living and working in the area, but also becomes a destination for other people in the region.

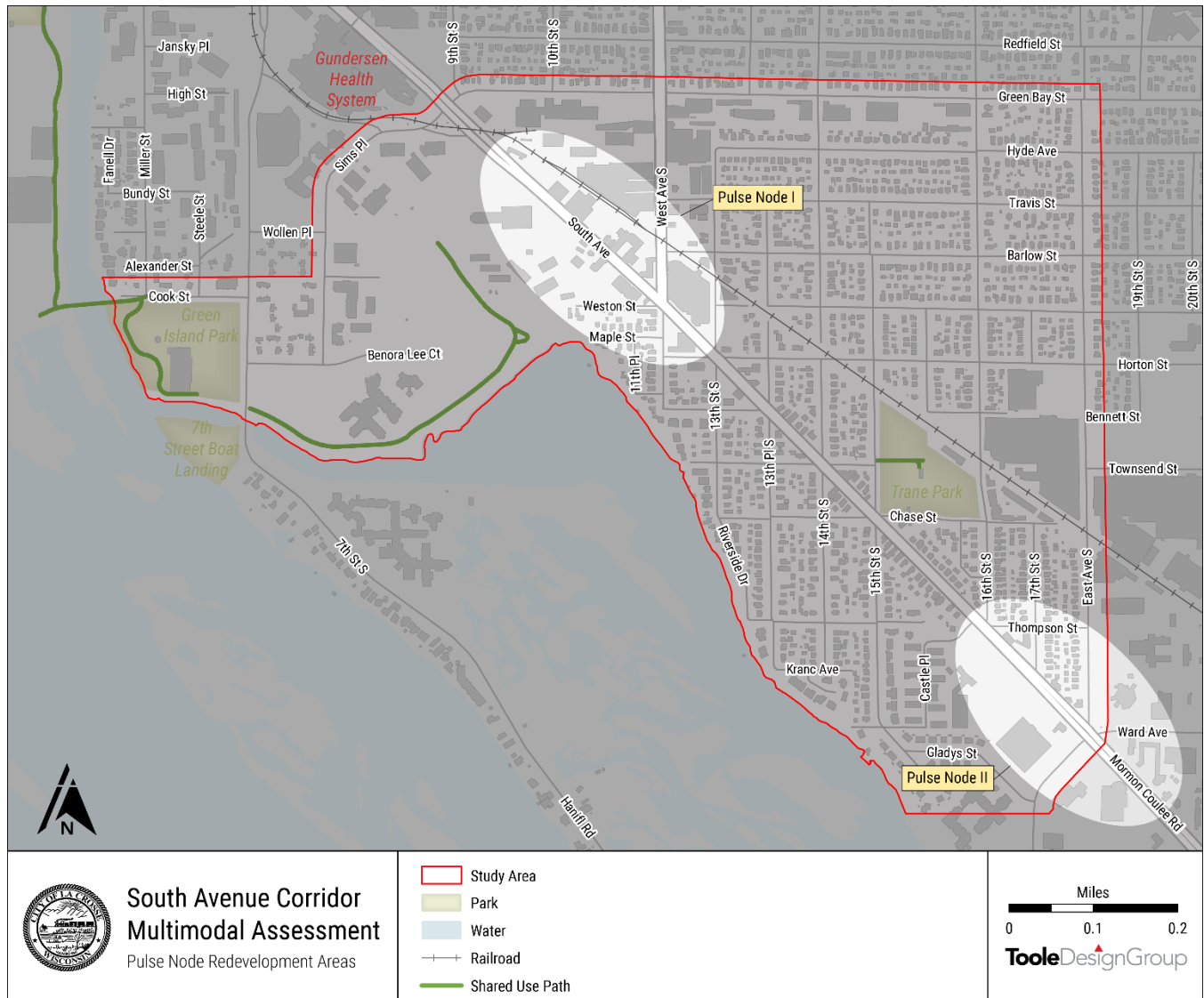
The area between the two nodes on the corridor described here should provide medium and high density residential uses such as workforce housing, while areas off of the corridor transition to mixed and lower density housing. Efforts should be made to preserve the largely intact blocks of residences between Bennett Street and Thompson Street. Where underutilized parcels exist between the nodes, redevelopment efforts should focus on providing medium density multifamily housing or live-work opportunities.

The nodes themselves should blend into the surrounding neighborhoods, with development intensity that ramps up from the edges, and builds toward the center of the node. The nodes and the area of South Avenue connecting them should be pedestrian friendly, with a streetscape that is attractive and comfortable for people to walk along. The reconstruction of

South Avenue presents an opportunity to ensure that the entire corridor provides a high-quality aesthetic, with consistent terraces with street trees, pedestrian-scale lighting, high visibility pedestrian crossings, and other amenities.

Development in the area should be held to a high standard, with buildings that front on the property lines to encourage pedestrian activity and architecture that dominates the street frontage rather than parking lots, parking that is contained within or behind buildings, and high-quality architecture to enhance one of the City's premier gateways, which can have a contagious effect on real estate investment and help the City with its revenue to infrastructure and service costs ratio. The scale and massing of buildings should fit the character of the surrounding neighborhoods, but should be distinctly urban in nature, especially at the nodes.

Map 14: Location of proposed pulse nodes of high energy mixed use development (buildings shown are existing)



Pulse Node I: South Avenue at West Avenue

This node presents an opportunity to create a mixed use area within a short walk of the Gunderson Health System medical campus. Already, new development is occurring just northwest of here along South Avenue, and within this node the Gund Brewery Loft Apartments were redeveloped in recent years. Much of the land on the south side of South Avenue is owned by Gunderson Health System, and they should be an active participant in the redevelopment of this area. Given the proximity to the medical campus, this node is likely to see redevelopment opportunities sooner than Node II, and should be a priority for redevelopment for the city.

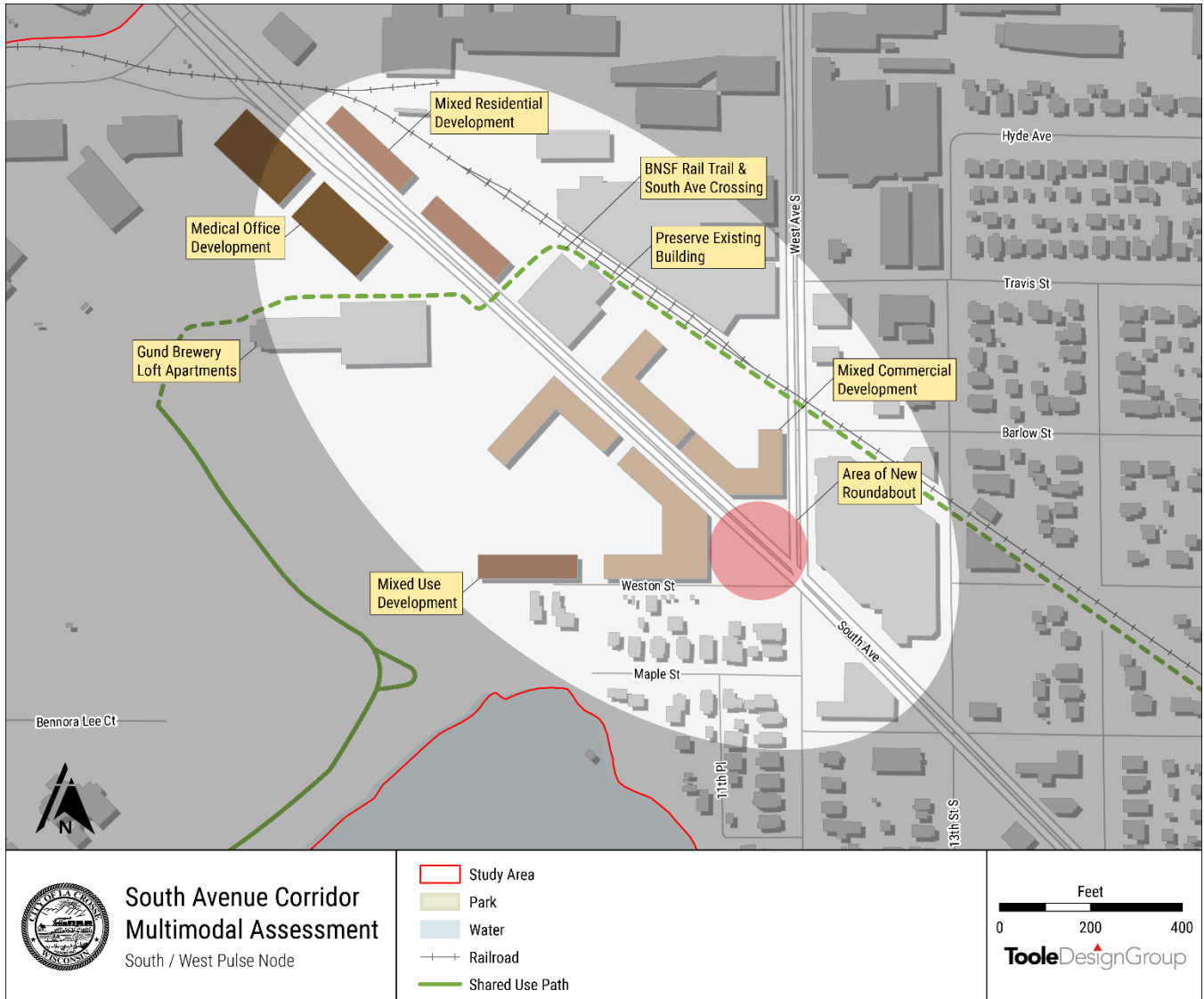
Opportunities

- Entire node is within walking distance to Gunderson Health System medical campus.
- Potential for development of both workforce housing and higher-end housing that appeals to young professionals.
- Newly created connection to the VIP Trail adjacent to the Gund Brewery Loft Apartments provides off-street transportation and recreation options and a connection nearly to downtown.
- Vacant and underutilized properties present an opportunity for redevelopment.
- Area is served by regular transit service to downtown.
- Reconstruction of South Avenue will offer improved streetcape.

Recommendations

- Create catalytic residential development as recommended in the Powell-Hood-Hamilton/ Gundersen Lutheran Medical Center Joint Neighborhood and Campus Plan, through the use of creative regulatory tools, public-private partnerships and financial incentives that offset urban development challenges such as demolition or environmental remediation.
- Provide high quality transit stops within the node including iconic shelters that provide real-time bus arrival information, seating, and lighting.
- Preserve iconic historical buildings including the Gund Brewery Loft Apartments and the building across South Avenue from the Gund Lofts.
- Provide a shared use path connection tying together the VIP Trail and the proposed BNSF Path.
- Provide mixed use commercial development on both sides of South Avenue west of the new roundabout at West Avenue South.
- Provide shared parking with all new development.
- Screen all parking areas from adjacent streets with buildings and landscaping.
- Provide an enhanced pedestrian experience with wider terraces and sidewalks along South Avenue.
- Provide an enhanced pedestrian crossing of South Avenue connecting to the VIP Trail.
- Preserve the intact blocks of residential development along Maple Street and West Avenue South south of South Avenue.

Map 15: Conceptual design of Pulse Node I near the intersection of South Avenue and West Avenue South



Pulse Node II: South Avenue at East Avenue South

This node centers around the intersection of South Avenue, Ward Avenue, and East Avenue South. The node presents an opportunity for redevelopment at a key location for the City of La Crosse: the transition from a wide, high speed suburban highway (Mormon Coulee Road) to a narrower, lower speed urban street (South Avenue). In addition to changes in the roadway, land use changes at this location from suburban, widely spaced, auto-oriented development to closely spaced, residence and businesses that are adjacent to the sidewalk.

The reconstruction of South Avenue, which will include roundabouts at East Avenue South and 16th Street South, provides an opportunity to promote development in this area to better highlight the transition from suburban development patterns to denser, more walkable, urban development. This node conceptualizes redeveloping select underutilized properties while also developing areas currently used for parking. Located farther from the city center and the large employment center of the Gunderson Medical System campus, this node will take longer to redevelop and development will be less intense than at Node I.

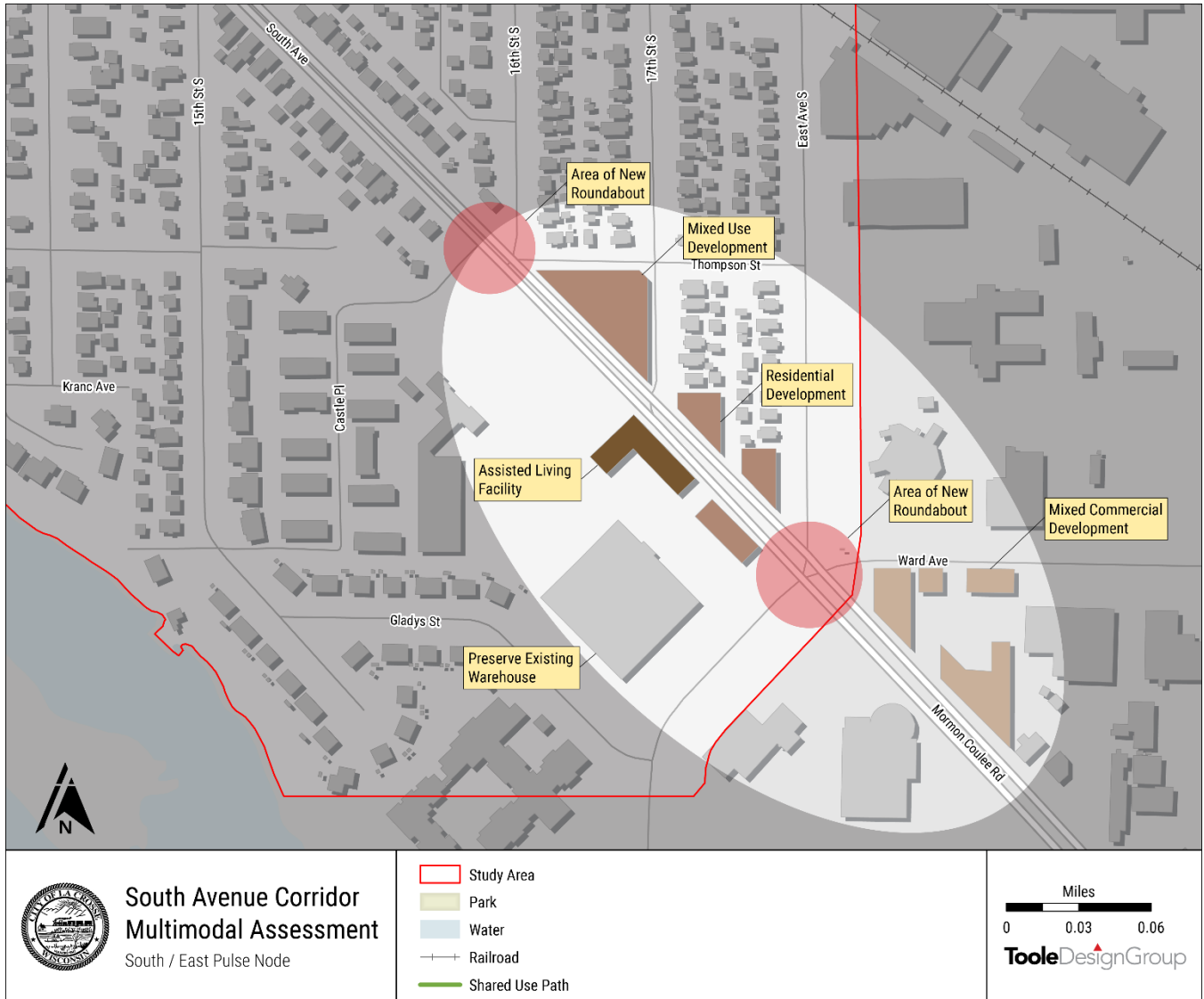
Opportunities

- Reconstruction of South Avenue will offer improved streetscape and new aesthetics with two closely spaced roundabouts.
- Node is within easy walking distance of major employers including Trane.
- Node is within easy walking distance of Trane Park.
- Potential for development of workforce housing.
- Vacant and underutilized properties present an opportunity for redevelopment.
- Area is served by regular transit service to downtown.

Recommendations

- Provide high quality transit stops within the node including iconic shelters that provide real-time bus arrival information, seating, and lighting.
- Preserve iconic historical buildings such as Riverfront's building as well as larger existing buildings such as Jacobon's Moving and Storage.
- Promote in-fill development on existing parking lots and underutilized parcels.
- Provide workforce housing opportunities through the development of mixed and high density residential developments.
- Begin the transition to urban development patterns east of the Ward Avenue intersection which will be converted to a roundabout.
- Provide iconic landscaping or a monument in the roundabout at Ward Avenue welcoming people to La Crosse.
- Provide shared parking with all new development.
- Screen all parking areas from adjacent streets with buildings and landscaping.
- Provide an enhanced pedestrian experience with wider terraces and sidewalks along South Avenue.
- Preserve the intact blocks of residential development along East Avenue South, 17th Street South, and Thompson Street.

Map 16: Conceptual design of Pulse Node II near the intersection of South Avenue and East Avenue South / Ward Avenue



6. Implementation

The South Avenue Corridor Multimodal Assessment identifies transportation and land use changes throughout a sizeable portion of south La Crosse, many of which can be implemented relatively quickly and inexpensively. However, a number of key recommendations require implementation or consent from agencies other than the City of La Crosse, and may be challenging or expensive to implement.

The majority of the recommendations of this report are targeted at making South Avenue less of a barrier in South La Crosse, improving safety along the street, and making the street an area that supports local businesses, offers housing choices, and is safe and comfortable to walk along and across. Many of these changes can occur with the planned reconstruction of the street, but others, particularly those related to land use, will take longer to come to fruition. WisDOT's Preferred Alternative for South Avenue will likely improve safety for people in motor vehicles and will offer an improved streetscape, but it does not go far enough to reduce the barrier effect of South Avenue, slow vehicle speeds, maintain connectivity in the corridor, or serve as a true multimodal street. In particular, the lack of bicycle facilities and the decision not to provide a roundabout at the intersection of South Avenue and 14th Street directly contradict the City's transportation vision. It will be up to City officials and the public to decide if the Preferred Alternative design is acceptable for the next generation, or if changes should be made to the design at the risk of delaying the reconstruction of South Avenue.

In addition to working with WisDOT on the reconstruction of South Avenue, two other significant recommendations require agreement and buy-in from the BNSF Railroad: the BNSF Path and swapping the railroad crossing from 15th Street to 14th Street. Both projects will also require consent from the Wisconsin Office of the Commissioner of Railroads (OCR) and possibly the Federal Railroad Administration (FRA). This coordination can be time consuming. The City should consider reaching out to BNSF in the near term to begin discussions about both of these projects.

Implementation Timeframe

Recommendations are broken into three implementation timeframes: short-term (2018-2020), medium-term (2021-2022), and long-term (2023 and beyond). The recommendations are prioritized by the ease of project implementation and the overall benefit that can be achieved by each project. Many of the projects that require consent or implementation by an agency other than the City are placed in the long-term category. Recommendations related to the reconstruction of South Avenue are placed in the medium-term category, which is when WisDOT is currently scheduling the reconstruction.

Opportunistic Implementation

Opportunities frequently arise to implement projects as part of another project. For example, streets can be reconfigured as part of a standard resurfacing project, or redevelopment of a parcel may allow nearby changes to be implemented. These opportunities should be pursued whenever possible.

Short Term (2018-2020)

Recommendation	Ongoing?	Traffic	Bicycle	Pedestrian	Transit	Land Use	Agencies
Update zoning as necessary to allow denser mixed-use development along South Avenue.		X				X	Planning
Build design standards into the zoning ordinance to clearly define the desired massing and aesthetics of new development in the study area.						X	Planning
Provide comprehensive site plan review for all new development within the study area.	X					X	Planning
Frequently remark all existing crosswalks in the study area.	X			X	X		Engineering
Reduce the speed limit on South Avenue from 30 mph to 25 mph.		X	X	X	X		Engineering WisDOT
Provide bicycle wayfinding signs along the River Route from East Avenue to the VIP Trail.			X				Engineering
Improve bicycle and pedestrian crossing opportunities on South Avenue.	X		X	X			Engineering WisDOT
Implement the bicycle facilities shown on Map 10 of this report.	X	X	X				Engineering
Add bicycle parking in public areas and require private landowners to add bicycle parking at destinations.	X		X			X	Engineering Planning
Encourage the provision of amenities such as showers, locker rooms, and secure bicycle parking for employees with new developments.	X		X			X	Planning
Evaluate installing a Rectangular Rapid Flash Beacon (RRFB) as the crosswalk northwest of the intersection of South Avenue and 16 th Street South.		X		X	X		Engineering WisDOT
Replace damaged sidewalks segments and curb ramps.				X			Engineering
Continue to provide curb ramps that are compliant with current Americans with Disabilities Act (ADA) guidelines at all intersections.				X			Engineering
Improve snow removal expectations and enforcement by private property owners.				X			Planning
Extend pedestrian signal timing for all signalized crossings in study area		X		X			Engineering WisDOT
Ensure that sidewalks are installed on at least one side of all streets, and both sides of all collector and arterial streets.	X						Engineering Planning
Relocate the inbound Route 1 bus stop from west of 16th Street to near 17th Street on South Avenue; simultaneously install a high visibility crosswalk across South Avenue at this location.				X	X		MTU Planning Engineering
Provide high quality bus stops at South Avenue and 15 th Street following the development of Trane Park.				X	X		MTU
Install transit benches or shelters and kiosks with route maps and timetables at select locations based on MTU boarding data.	X			X	X		MTU
Work with developers, employers, and institutions to increase the transit mode share.	X				X		MTU MPO Planning

Medium Term (2021-2022)

Recommendation	Ongoing?	Traffic	Bicycle	Pedestrian	Transit	Land Use	Agencies
As part of the South Avenue reconstruction project:							
Utilize narrow lanes and traffic calming to bring motorist speeds into alignment with posted speed limits.		X					WisDOT
Provide an improved streetscape including grass terraces, street trees, and decorative pedestrian-scale lighting.		X		X	X	X	WisDOT Engineering
Provide a ten foot wide shared use path with access ramps from all connecting streets around all roundabouts installed in the study area.			X	X			WisDOT
Provide wider sidewalks than standard along South Avenue.			X	X	X	X	WisDOT
Provide enhanced streetlighting at all bus stops.					X		WisDOT Engineering

Long Term (2023 Onward)

Recommendation	Ongoing?	Traffic	Bicycle	Pedestrian	Transit	Land Use	Agencies
Provide a new street extension that connects Bennora Lee Court to Weston Street.		X	X	X	X	X	Engineering Gunderson
Reconnect 14 th Street South at the BNSF railroad while closing 15 th Street. Consider connecting 15 th Street South to Chase Avenue, and closing the northside intersection of 15 th Street and Chase Avenue with South Avenue.		X				X	Engineering BNSF OCR FRA
In order to provide better connectivity and a regular street grid, consider proving the following connections if redevelopment occurs in the future:							
Connect 13 th Street South to Green Bay Street (segment from Hyde Avenue to Green Bay Street).		X	X	X		X	Planning Engineering
Connect Hyde Avenue to West Avenue South (segment between 13 th Street South and West Avenue).		X	X	X		X	Planning Engineering
Provide a network of streets in the area bounded by Sims Place, Bennora Lee Court, and South Avenue as conceptualized in the Powell-Hood-Hamilton/Gundersen Lutheran Medical Center Joint Neighborhood and Campus Plan (2013).		X	X	X		X	Planning Engineering
Provide a shared use path in the BNSF railroad corridor from Weston Street to Ward Avenue.			X	X		X	Engineering Planning WisDOT BNSF OCR FRA
Provide a shared use path in the BNSF railroad corridor from South Avenue to Weston Street			X	X		X	Engineering Planning WisDOT BNSF OCR FRA

Funding Opportunities

Under development