Acknowledgments

Shawano County appreciates the efforts of the numerous residents and enthusiasts who participated in the development of this plan. Their creativity, energy, and commitment were the driving force behind this effort. In addition, the following residents, staff, and other agency and organization members contributed regularly to the Shawano County Bicycle and Pedestrian Master Plan.

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Alta Planning + Design is firmly committed to the development of a sustainable global community and planet by enhancing transportation options, investing in local communities and reducing our carbon footprint in our personal and professional lives. For more information visit: www.altaplanning.com
Executive Summary

Shawano County is in an excellent position to capitalize on existing bicycle- and pedestrian-friendly attributes in the area, like the Mountain Bay Trail and the Wiowash Trail and a walkable and bikeable downtown in Shawano as well as walkable and bikable villages and hamlets scattered around the county. This plan will help to increase the number of residents and visitors who walk and bicycle not just for recreation but also for transportation.

The Shawano County Bicycle and Pedestrian Master Plan builds on efforts by the community to improve transportation options and the quality of life in the Shawano County area. The Master Plan guides the development of a network of bicycle routes linking activity centers within the County as well as to the larger regional network. The improved network will not only make bicycling a more viable mode of transportation, but will contribute to economic development opportunities and enhanced quality of life for the community. Pedestrian policies are discussed to assist the County in making it easier and more pleasant to walk for transportation and recreation.

Why Bicycling and Walking?

Bicycling and walking are low-cost means of transportation that are non-polluting, energy-efficient, versatile, healthy and fun. Both modes can help build physical activity into our daily lives while reducing traffic congestion and air pollution and saving money. The many advantages to walking and bicycling include:

- Bicycling and walking are good for the economy. Bicycling makes up $133 billion of the US economy, funding 1.1 million jobs.\(^1\)
- Walkable and bikeable neighborhoods are more livable and attractive, increasing home values property tax revenue.\(^2\)
- Walking and bicycling can save families money. By replacing short car trips, bicycling and walking can help lessen personal transportation costs.\(^3\)
- Walking and bicycling are good for public health. Bicycling for exercise can reduce the cost of spending on health care by as much as $514 per person every year.\(^4\)
- More people walking and bicycling increase safety for others. In a community where twice as many people walk, a person walking has a 66 percent reduced risk of being injured by a motorist.\(^5\)


Vision

Shawano County will enhance transportation choices by developing a network of on-street and off-street bicycle and pedestrian facilities that provide connections to destinations throughout the County.
**Existing Conditions**

The Shawano County area is home to two trails of statewide significance and miles of town and county roads that carry very little traffic through beautiful northern Wisconsin landscapes. This Plan seeks to leverage opportunities and to overcome barriers to accommodating and encouraging bicycle and pedestrian trips.

**Opportunities include:**

- A pedestrian- and bicycle-friendly downtowns in the cities, villages and unincorporated hamlets of Shawano County;
- Existing walk- and bicycle-friendly streets in some parts of the County;
- The Mountain Bay Trail and the WIOWASH Trail, providing miles of off-road riding and walking experience;
- Space in many locations to provide low-cost bicycle improvements; and
- A very energetic volunteer group in Shawano Pathways (SPOKES)

**Constraints include:**

- Major highways, the Wolf River and railroads impede local street connectivity;
- Lack of wayfinding tools along existing walkway and bikeway networks;
- Intersection of the Mountain Bay or WIOWASH Trail with busy roads; and
- Uncomfortable walking and bicycling environments along high-volume roadways.

**Public Involvement**

Shawano County area residents, community stakeholder groups and public agency staff helped guide the development of this Plan. Public input about the opportunities and challenges to better bicycling and walking in the Shawano County area was obtained in several ways, including two public input workshops (July 2012 and November 2012), and through several project meetings with Shawano Pathways (SPOKES) from March of 2012 to February of 2013.

**Implementation**

The Shawano County Bicycle and Pedestrian Master Plan is a 20-year plan for completing the system of bikeways, shared-use paths and spot improvements in Shawano County. The completed network will result in a Shawano County where biking and walking for transportation and recreation are every day, safe activities that are enjoyed by residents and visitors alike. The recommended network builds upon previous and on-going local and regional planning efforts and reflects the input offered by county staff, the project Steering Committee – Shawano Pathways, bicycle and stakeholder groups, and Shawano County residents. Implementation of the plan will take place over many years. The implementation strategy presents a targeted methodology for how Shawano County can institutionalize bicycle and pedestrian improvements into local and regional planning processes and projects.

The following strategies and action items are provided to guide Shawano County toward the vision identified in the plan:

- Establish a Permanent Pedestrian and Bicycle Advisory Committee.
- Implement the Park to Park walking loops by publishing a brochure and signing where necessary.
- Strategically pursue infrastructure projects by obtaining capital improvement and grant funding as well as incorporating projects into upcoming public works projects, especially the short-term bicycle improvements.
• Regularly revisit project priorities in the plan as projects are completed, conditions change and new projects are needed.
• Implement education, encouragement and enforcement activities to encourage more walking and bicycling in Shawano County.

**Short-term Project List**

<table>
<thead>
<tr>
<th>Type</th>
<th>Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trail Crossing</td>
<td>East Green Bay Street / Mountain Bay Trail</td>
</tr>
<tr>
<td>Bike Lane Installation</td>
<td>Lake Drive</td>
</tr>
<tr>
<td>Trail Infill</td>
<td>Mountain Bay Trail Gap Closure</td>
</tr>
<tr>
<td>Trail Crossing</td>
<td>Hwy 29 / Wiouwash Trail</td>
</tr>
<tr>
<td>Short Term Lake Routes</td>
<td>Signed Bicycle Loop</td>
</tr>
<tr>
<td>Quilt Route</td>
<td>Joe Bikeler - NW (33.3 Miles)</td>
</tr>
<tr>
<td>Quilt Route</td>
<td>Joe Bikeler - SW (16.8 Miles)</td>
</tr>
<tr>
<td>Signed Connection</td>
<td>Hillside Drive/CTH TK A (1.8 Miles)</td>
</tr>
<tr>
<td>Signed Connection</td>
<td>CTY TK A (0.5 Miles)</td>
</tr>
<tr>
<td>Signed Connection</td>
<td>North Cecil Street (0.6 Miles)</td>
</tr>
</tbody>
</table>

**Developing the Network of Bikeways and Shared-Use Paths**

The recommended bikeways connect key destinations in and around Shawano County. The recommended improvements are designed to overcome barriers bicycling, including providing several north to south routes and east to west routes around the County.

Improvements vary from low-cost measures yielding immediate results – like adding wayfinding signs to low volume roads – to longer-term strategies for transforming Shawano County into a more bicycle- and pedestrian-friendly community, like larger-scale trail construction or adding paved shoulders to busier highways. The highest priority projects outlined in this Plan provide improved options for transportation and recreation and could be implemented in the near future.

The infrastructure recommendations fall into four categories:

• Priority bikeway improvements that focus on low-cost treatments on key corridors that provide an interconnected network that links communities, schools, parks, commercial areas, paths and other attractions, such as Shawano Lake, and the Mountain Bay Trail.
• Key shared-use path improvements designed to fill gaps in the path network, such as the Mountain Bay Trail, just west of Shawano and connecting the trail to nearby communities.
• A proposal for the Shawano Lake Loop Route, visioning a long-term loop closely following the Shawano Lake shoreline. This route consists of both on road segments and shared-use paths.
• Spot improvements at trail crossings, designed to increase safety and clarify proper use where trails cross major roadways.
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1. Introduction

Shawano County is located in the northeast quadrant of the state, with boundaries adjacent to Oconto and Brown counties to the east, Menominee and Langlade counties to the north, Marathon County to the west and Waupaca and Outagamie counties to the south. The county covers 909 square miles, with a population of 41,950 (2010), representing an approximately five percent increase from 2000. The area surrounding Shawano Lake has the highest population density outside of incorporated areas while the western portion of the county is characterized by low density, rural and agricultural development patterns. Bicycle and pedestrian destinations in the county include incorporated areas (e.g., Shawano and Marion), villages (e.g., Wittenberg and Bonduel), numerous towns (e.g., Green Valley and Navarino) and civic and natural resource destinations (e.g., Shawano County Fairgrounds and Shawano Lake).

The county’s topography is comprised of a rolling landscape of farms and lakes, and with its low volume paved rural roads and scenic vistas, it’s a great place to bicycle. The largest body of water is Shawano Lake; centrally located in the county, it is a destination for outdoor enthusiasts year round. The lake and the rural landscape of Shawano County provide a perfect setting for bicycle touring.

Contents of the Plan

The Shawano County Bicycle and Pedestrian Master Plan provides a path forward for expanding and enhancing the existing bicycling network, and guides the county toward a solid policy basis for pedestrian focused improvements. The Plan is organized as follows:

- **Chapter 1: Introduction**, provides an overview of this plan and its purpose.
- **Chapter 2: Existing Conditions**, describes Shawano County’s existing bikeway and path network and summarizes strengths and weaknesses of the system.
- **Chapter 3: Recommended Bicycle Network**, depicts the recommended system of bikeways and facility types to provide opportunities for cycling throughout the county.
- **Chapter 4: Recommended Pedestrian Policies**, makes the case for a strong Complete Streets policy to support development of the pedestrian environment.
- **Chapter 5: Recommended Programs: Education and Encouragement Strategies**, describes education, encouragement, enforcement and evaluation measures Shawano County and/or other local agencies should implement to promote bicycling, increase bicyclist safety, and increase the awareness of bicycling as a viable travel mode.
- **Chapter 6: Implementation** presents evaluation criteria for facilities and programs and details several top-priority projects. This chapter provides cost opinions for the recommended bicycle and trail projects and programs, and identifies potential funding strategies and supporting policies.
“Shawano County will enhance transportation choices by developing a network of on-street and off-street bicycle and pedestrian facilities that provide connections to destinations throughout the County.”

The SPOKES (Shawano Pathways) vision for the Shawano County Bicycle and Pedestrian Master Plan
Goals and Objectives

**Goal 1. Support bicycling and walking as viable transportation modes in Shawano County.**

Objective 1.1. Implement the Shawano Bicycle and Pedestrian Master Plan facility recommendations to provide bicycling and walking routes to key destinations.

Objective 1.2. Seek new funding sources and strategies to support the implementation of the Shawano Bicycle and Pedestrian Master Plan.

Objective 1.3. Improve bicyclists’ and pedestrians’ safety and comfort by accommodating these modes during construction or facility repair activities.

**Goal 2. Promote bicycling and walking in Shawano County by improving awareness of bicycle and pedestrian facilities and opportunities.**

Objective 2.1. Improve public awareness of the bicycle network and presence of bicyclists.

Objective 2.2. Support education and encouragement efforts in Shawano County.

Objective 2.3. Create a bicycle and pedestrian wayfinding system that is legible for all users.

**Goal 3. Integrate bicycle and pedestrian planning into Shawano County’s Planning Processes.**

Objective 3.1. Institutionalize bicycle and pedestrian planning into all of the Shawano County planning efforts, including transportation planning, park planning and land use planning.

Objective 3.2. Require inclusion of bicyclists and pedestrians in countywide planning efforts.

These goals and objectives were formed from a “Best Practices” review of plans in Wisconsin and of similarly sized counties across the country. The full review is provided in Appendix A: Best Practices Review of Vision, Goals and Objectives.

**SPOKES Priorities**

At the kickoff to the planning process the SPOKES committee prioritized the relative value of the “Five Es” of non-motorized transportation planning: Engineering, Education, Encouragement, Enforcement and Evaluation. Their ranking informs implementation priorities in this plan, as described in Chapter 6 Implementation. Their ranking from highest priority to lowest is as follows:

1.) Engineering
2.) Education
3.) Encouragement
4.) Evaluation
5.) Enforcement
Public Involvement

The planning process included many opportunities for residents of Shawano County to share their experiences and knowledge of biking and walking in Shawano County. Many people shared detailed information on where they bike and walk, things they would like to see improved and their program ideas to encourage more people to bike and walk. The information gathered from residents inspired the recommendations for both on-road and trail improvements, and ideas for programs to encourage citizens to use active transportation modes and to educate them on how to do so safely. This information has helped to create a better plan. The meeting dates are provided below.

SPOKES Advisory Committee

The SPOKES team followed the plan development closely, and met 5 times throughout the planning process. The committee met on April 24, July 24 and November 13 in 2012 and February 12, and March 11 in 2013.

Public Information Meetings

Two public meetings formed touchstones of direct outreach with the public for the Shawano County Bicycle and Pedestrian Master Plan. The meetings were on July 24 and November 13, 2012.

On-Line Survey

Shawano County residents participated in an on-line survey to identify key issues, vision ideas, barriers to biking and walking, and key strategies. Findings from the survey informed the final content of the Plan, and are available in full in Appendix L: Online Survey Form Results and Analysis.
Plan and Policy Review

Over ten years’ worth of state and county planning and policy documents were reviewed as part of this effort. Some documents provide a policy basis for the Shawano County Bicycle and Pedestrian Master Plan; others influence specific design and safety objectives that influence the Plan recommendations. The following plans were reviewed for this analysis.

Appendix B: Plan and Policy Review contains a review of each document and identification of issues that impact the findings of the Plan.

Statewide Planning Documents

- Administrative Code Trans 75: BIKEWAYS AND SIDEWALKS IN HIGHWAY PROJECTS (2009)
- Bicycle Crash Analysis for Wisconsin Using a Crash Typing Tool (PBCAT) and Geographic Information System (GIS) (2006)
- Wisconsin County Bicycle Maps (2009)
- Wisconsin Department of Transportation Guide for Path/Street Crossings (2011)
- Wisconsin State Bicycle Transportation Plan 2020 (1998)

County-Scale Planning Documents

- Shawano County Comprehensive Plan (2009)
- Wiouwash State Trail Master Plan (1995)
- Mountain Bay State Trail Master Plan (1998)
2. Existing Conditions

Existing Bikeways and Shared-Use Paths

Federal and state bicycle planning and design guides define bikeways as preferential roadways accommodating bicycle travel through the use of bicycle route designations, bike lane striping, or shared-use paths to physically separate cyclists from motorists.

Map 2-1 shows the existing bikeway network in Shawano County, which consists of on- and off-street segments of the Mountain-Bay and Wiouwash Trails.

Existing On-Street Bikeways

On-street bikeways can take several forms, depending on the speed and volume of traffic on the roadway, space available to accommodate bicyclists, and type of users expected on the facility. Currently, signed bicycle routes are the only implemented bikeway type in Shawano County. The Shawano County Bicycle and Pedestrian Master Plan recommends a variety of on-street bikeway facility types, including conventional bike lanes and paved shoulders. These bikeway types are described briefly below, and are discussed in detail in Appendix E: Bicycle and Pedestrian Design Guidelines.

- **Paved Shoulders**: Typically found in rural areas, shoulder bikeways are paved roadways with striped shoulders wide enough for bicycle travel. Shoulder bikeways vary in width from 3’ to 5’. Shoulder bikeways benefit not only cyclists, but also pedestrians by providing space to walk, motorists by providing additional maneuvering room, and agricultural workers by providing space to operate machinery. Paved shoulders extend the lifetime of the roadway and reduce maintenance costs.

- **Bike Lanes**: Designated exclusively for bicycle travel, bike lanes are separated from vehicle travel lanes with striping and also include pavement stencils. Bike lanes are most appropriate where higher traffic volumes and/or speeds warrant greater separation of bicyclists and motor vehicles.

- **Shared Lane Markings** (Sharrows): Shared-lane markings (sometimes referred to as “sharrows”) are pavement markings that help position bicyclists within the travel lane. These markings are often used on streets where bike lanes are desirable but are not possible due to physical constraints. Shared lane markings are placed strategically in the travel lane to alert motorists to bicycle traffic, while also encouraging cyclists to ride at an appropriate distance from the “door zone” of adjacent parked cars. Shared lane markings encourage cyclists to ride in a straight line so their movements are predictable to motorists.

- **Signed Bicycle Route**: Bike routes are streets and roadways that are identified as bicycle routes through signage. These routes may be on low traffic roads that do not require special roadway design as cyclists and motor vehicles can share the same space. Routes on busier roads may also include one of the other facility types. All bicycle routes should include wayfinding signage that clearly identifies direction and distance to nearby attractions.

- **Bicycle Boulevards**: Bicycle boulevards are developed through a combination of traffic calming measures and other streetscape treatments, and are intended to slow vehicle traffic while facilitating safe and convenient bicycle travel. Appropriate treatments depend on several factors including traffic
volumes, vehicle and bicycle circulation patterns, street connectivity, street width, physical constraints, and other parameters. Treatments can include pavement markings, signage, traffic calming (e.g. speed bumps, chicanes, curb extensions, etc.), and traffic diversion.

- **Cycle Tracks:** A cycle track is a hybrid type bicycle facility combining the experience of a separated path with the on-street infrastructure of a conventional bike lane. Cycle tracks provide exclusive space for bicycles that is physically separated from pedestrians and motorized traffic. Cycle tracks are appropriate on streets with higher traffic volumes where greater separation is needed, and where cross-traffic is limited. Cycle tracks require special attention at intersections.

There are approximately 14.2 miles of existing bike routes, shown on Map 2-1.

The on-street routes provide connectivity between off-street portions of the Mountain-Bay and Wiouwash Trails.

**Existing Off-Street Bikeways**

Off-Street Bikeways, commonly called shared-use paths (also referred to as “trails” and “multi-use paths”) are often viewed as recreational facilities, but they are also important corridors for utilitarian trips. Off-street facilities that accommodate bicycle travel can be categorized into the following typologies: shared-use path, a facility that has an exclusive right-of-way; side path, a two-way trail on one side of the road located within the road right-of-way; and park trail, a shared-use facility located within a park.

The following section briefly describes these off-street facilities.

**Shared-Use Path:** Shared-use paths have exclusive right-of-way and are not directly adjacent to a roadway (e.g., following a railway alignment). Shared-use paths are frequently used by cyclists riding long distances. In addition to fast-moving cyclists, recreational riders use the shared-use paths for family outings or more leisurely rides. An overview of State Trail conditions is discussed in more depth in Appendix D: State Trails Crossing Improvement Toolkit.

**Side Paths:** Some shared-use paths in Shawano County are directly adjacent to roadways and within the street right-of-way, such as West Oshkosh Street in the City of Shawano. These side paths serve both bicyclists and pedestrians and are wider than a standard sidewalk. Side paths provide commuter routes between residential areas and employment centers, as well as to retail areas. They are used by recreational riders mainly to access the state or regional trail network. The high frequency of street crossings limits fast and continuous riding, making them less preferred to on-street bikeways for transportation oriented riders.

**Park Trails:** Several parks in Shawano County provide trails that bicyclists can use for recreation and to connect to the network. As these trails are usually short and may loop on themselves, they are less significant to the bicycle transportation network.
As shown on Map 2-1, the current off-street bikeway network is comprised of 1.4 miles of paved trail (part of the Mountain-Bay Trail in the City of Shawano) and 71.7 miles of gravel trail including:

- Mountain-Bay Trail - 49.3 miles
- Wiouwash Trail - 14.7 miles
- Nicolet State Trail - 5.6 miles

**US Bicycle Routes (USBR) System**

In 2008 AASHTO established a national corridor plan for U.S. Bicycle Routes to facilitate travel between the states over routes which have been identified as being suitable for cycling. USBR routes usually use roads and streets suitable for bicycle traveler with separated trails incorporated where appropriate. Facility construction/upgrade is not required but is encouraged over time as roads are maintained and upgraded.

Within Shawano County, USBR 20 runs east-west, and the recommended alignment is along the Mountain Bay Trail. On street alignment alternative is available. These routes can be seen in Figure 2-2 below.

These USBR recommended routes are an important starting point for communities, and form one foundational element of the recommended bikeway network in this plan. Comprehensive details about the U.S. Bicycle Routes System are available in Appendix C: US Bicycle Routes System Brief.

![Figure 2-2: Recommended US Bicycle Routes System in Shawano County](image)

**Car-Bicycle Crash Data Map**

According to national surveys, safety concerns are the most commonly cited reason that people do not bicycle more often. In the US, most reported motor vehicle / bicycle crashes occur at major arterial intersections and
involve a disproportionate number of younger adults and children. While analysis of motor vehicle / bicycle crashes can yield valuable information, care should be taken when describing trends. Bicycle crashes are relatively uncommon, and therefore data available for rigorous analysis is limited. Also, many crashes go unreported and it is also difficult to measure cyclist exposure in the absence of counts (which would yield a number of crashes by mile).

A dataset including bicycle crashes within Shawano County between 2007 and 2011 was provided by the Traffic Operations and Safety (TOPS) Laboratory at University of Wisconsin-Madison. These are displayed on Map 2-2: Car-Bicycle Crash Data. Of thirteen reported bicycle / motor vehicle crashes that occurred over the reported period, six occurred within the City of Shawano. Two crashes were reported on Main Street while two more occurred on East Green Bay Street. Almost all reported crashes occurred on state or county highways and involved male cyclists; young and elderly cyclists were disproportionately represented. Three of these reported crashes resulted in a fatality, while the others resulted in a non-fatal injury. While the rate of reported fatalities is high, the other findings are consistent with national trends. The higher rate of fatalities could be associated with typical roadway character in Shawano County, where posted speeds are higher than most urban areas.

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Bicycling Constraints and Opportunities

**Constraints**

Bicyclists in Shawano County face a variety of challenges. Major barriers include a lack of cycling infrastructure, and challenging intersections identified in greater detail on the Opportunities and Constraints Map.

**Limited Bikeway Network**

The existing network of bicycle routes is limited in scope, and does not comprehensively cover the county as would be necessary to provide full access to common destinations. The limited corridors of existing bikeways poorly serves recreational riders who want to quickly connect into the regional trail system for long recreational rides. The system also does not serve utilitarian cyclists who want to ride to a workplace or shopping center. A complete network of on- and off-street bikeways would provide routes for cyclists of all abilities and trip purposes.

**Challenging Intersections**

Major intersections can be challenging for cyclists riding on the bikeway network. These challenges include:

- Intersections of trails at major roadways that do not provide marked crossings (Figure 2-3), such as the Mountain-Bay Trail at STH 47/55 (East Green Bay Street).
- Intersections where on-street bikeways do not provide well signed connections to adjacent facilities (e.g., are terminated in advance of the intersection or trail connection)

![Figure 2-3: Trail Crossing at STH 47/55 in the City of Shawano](image-url)
Gaps

While bicyclists in Shawano County benefit from the existence of some on- and off-street bicycle facilities, these facilities do not offer continuous travel opportunities throughout the entire county. In addition, even small network gaps between facilities require bicyclists to either ride on the road or on a sidewalk to access another bikeway.

Lack of Wayfinding

The Shawano County bikeway system could benefit from signage and additional wayfinding to orient users and direct them to and through major destinations like downtowns, schools, parks, and commercial areas. As the on-street network is being developed, cyclists should be directed to key destinations along the bikeway, to raise awareness of the new facilities and to encourage more residents to try bicycling to different destinations around the county.

Side Path Safety Concerns

The AASHTO Guide for the Development of Bicycle Facilities generally recommends against the development of trails adjacent to roadways. Also known as “side paths,” these facilities create a situation where a portion of the bicycle traffic rides against the normal flow of motor vehicle traffic. Key concerns about shared-use paths directly adjacent to roadways (e.g., with minimal or no separation) are:

- When the path ends, cyclists riding against traffic tend to continue to travel on the wrong side of the street, as do cyclists going to the path. Wrong-way bicycle travel is a major cause of crashes.
- At intersections, motorists crossing the path may not notice bicyclists approaching from certain directions, especially where sight distances are poor.
- Ambiguity as to expected user behavior at the crossings of paths, streets, and driveways.\(^7\)
- Stopped vehicles on a cross-street or driveway may block the path.
- Because of the closeness of vehicle traffic to opposing bicycle traffic, barriers are often necessary to separate motorists from cyclists. These barriers serve as obstructions, complicate facility maintenance and waste available right-of-way.
- Paths directly adjacent to high-volume roadways diminish users’ experience by placing them in an uncomfortable environment. This could lead to a path’s underutilization.

When implementing a side path, special attention should be paid to the design of intersections and driveway crossings to mitigate the concerns noted above.

When designing a bikeway network, the presence of a nearby or parallel path should not be used to preclude adequate shoulder or bike lane width on the roadway, as the on-street bicycle facility will generally be

---

\(^7\) Wisconsin DOT published the Wisconsin Department of Transportation Guide for Path/Street Crossings in 2011 to help clarify path/street crossing ambiguities, though user awareness of this guidance may be limited.
superior to the side path for experienced cyclists and those who are cycling for transportation purposes. Bike lanes should be provided as an alternate (more transportation-oriented) facility whenever possible.

**Limited Roadway Network Connectivity Near Shawano Lake**

The unincorporated area around Shawano Lake has a roadway network that provides limited east/west connectivity on the north side of the lake. Providing high-quality, connected bike routes in this area will be complicated by lack of choices.

**Driver Behavior/Lack of Awareness of Bicycling Facilities**

In Shawano County, motorists often disregard marked crosswalks and warning devices. At trail crossings, this lack of compliance requires trail users to wait until the road is clear before proceeding across the street. One specific example of where this commonly occurs is the intersection of the Mountain Bay State Trail and East Green Bay Street (in the city of Shawano). Motorists’ lack of compliance with posted speeds is another safety concern, particularly to bicyclists riding on the shoulder of major roads.

**Opportunities**

Various characteristics foster an environment where bicycling is safe and enjoyable in Shawano County. These system strengths and related opportunities are described below and identified on the Opportunities and Constraints Map.

**Existing Trail Corridors**

Unlike many jurisdictions across the country, Shawano County already has a relatively complete basic trail network running north-south and east-west. These existing trail corridors provide numerous opportunities for off-street travel. The Plan identifies additional opportunities to connect the system providing a continuous network of safe, convenient and scenic travel routes for off-street travel.

**Opportunities to Connect to the Menominee Reservation**

Currently, the only bicycle and pedestrian connection between Shawano and the Menominee Reservation is CTH 47/55, which is classified by WisDOT as a high-volume roadway that is uncomfortable for most cyclists. The Plan recommends improved facilities to enhance access to the College of Menominee Nation – Keshena.

**Some Roadways that Already Accommodate Cyclists with a Higher Level of Safety and Comfort**

The Shawano County Bike Map prepared by WisDOT in 2009 rates existing state and county roadways as to the level of comfort they provide for an average adult cyclist with some experience operating on higher speed roadways. Routes that rated with the best condition connect many smaller population centers. Examples include CTHs J, M, C, CCC and T. These roadways are typically two lane, lower speed roadways or higher speed roadways with a continuous paved shoulder.
Public and Jurisdictional Support for Bikeway Improvements

Although there are few existing bikeways in Shawano County, long range plans envision a more complete network. The Comprehensive Plan calls for the development of on-street facilities on the CTH system.

Gentle Terrain

Shawano County topography consists of gently rolling hills with few challenging hills to deter bicycling. The gentle rolling terrain allows for long sight distances providing ample time for motorists to react to the sighting of bicyclists on the road.

Strong Support for Bicycling and Walking Programs including Safe Routes to School (SRTS)

The Comprehensive Plan calls for a SRTS plan to enhance connectivity between neighborhoods and schools. SRTS programs promote healthy lifestyles, independence and improve air quality near and around schools by reducing the number of motor vehicles around a school. Several interested parties including the County Health Department, the police department, and school principals support the program and have sponsored recent encouragement and education programs.
3. Recommended Bikeway Network

This chapter lays out a 20-year plan for completing the system of bikeways, shared-use paths and spot improvements in Shawano County. The recommended network builds upon previous and on-going local and regional planning efforts and reflects the input offered by county staff, the project Steering Committee – SPOKES, bicycle and stakeholder groups, and Shawano County residents.

The recommended bicycle and trail network includes bicycle and path facilities connecting key destinations in and around Shawano County. System improvements include establishing a formalized on-street bikeway system, upgrading intersections for safer path and designated bicycle route crossings, improvements to specific bicycle facilities and projects to enhance safety and encourage bicycling. Suggested improvements include low-cost measures yielding immediate results, such as re-striping of streets to accommodate bike lanes, bike map development and low cost wayfinding signage. Other improvements, such as expanding the local path system and paving shoulders, represent longer-term strategies for transforming Shawano County into a truly bicycle-friendly community.

The Shawano County Comprehensive Bicycle and Pedestrian Plan will allow Shawano County to focus and prioritize implementation efforts where they will provide the greatest community benefit.

Facility Definitions for the Shawano County Bikeway Network

Many on-street bicycle facilities can be developed inexpensively with paint and signs. The Proposed Bikeway Network for Shawano County recommends four of the facility types described in Chapter 2 and illustrated below: signed bike routes, paved shoulders, bike lanes, and shared-use paths.
Implementing Bike Lanes and Paved Shoulders

On some streets, bike lanes or shoulders will fit within the current street width. On others, the street will need to be widened to accommodate the bikeway. Many of the recommended bike lanes and shoulders in the proposed network are for streets slated for reconstruction in upcoming construction cycles. Future roads should be constructed with sufficient right-of-way to accommodate bicyclists via the use of bike lanes.

Bicycle Facility Selection

Identification of bicycling conditions on rural roadways is a critical part of this plan. Many rural roads in the county have low or very low volumes of traffic, which makes them suitable for cycling with minimal roadway changes. The Wisconsin Rural Bicycling Planning Guide uses the following table to summarize the rating thresholds used to determine suitability for cycling on rural roads. This system was used to generate the Wisconsin Bike Map. The two main factors in determining suitability for this system are traffic per day and roadway width. A more detailed model that also incorporates truck traffic and percent solid yellow, an indicator of the number of hills and curves present on a roadway, can also be used. Details on this model can be found in the Wisconsin Rural Bicycle Planning Guide published by WisDOT.
On-Street Bikeway Recommendations

The following list of recommended on-street bikeways was developed based on public comments, street widths, and a vision of providing an interconnected network that links communities, schools, parks, commercial areas, paths and other attractions, such as the Navarino Nature Center. Wherever possible, paved shoulders and bike lanes were recommended, as they provide both bicyclists and motor vehicle operators with a higher level of comfort by increasing separation between users. However, a few urban streets are not wide enough to provide this facility. In those cases, wayfinding with directional signage is recommended.

The proposed network provides some sort of bicycle facilities for traveling north to south across the county as well as east to west with connections to the villages, towns, and parks of Shawano County. The completion of the proposed network will greatly increase the visibility of existing routes. When combined with the existing and proposed shared-use paths, the on-street bikeways will provide a comprehensive network connecting all parts of the County.

Shawano County is in the process of developing several bike route rides that will highlight the numerous Barn Quilts located throughout the region. The routes were created and tested by the SPOKES committee, in preparation for an official Bike the Barn Quilts ride to be held in 2013. There are currently several Barn Quilt loops located in the central and eastern part of the county. Of varying distances and difficulty, they will accommodate a wide variety of cyclists looking for a great country ride. These routes will be updated and finalized prior to September 2013, when the first Annual Barn Quilt ride is expected to be held. A detailed table of proposed Barn Quilt Routes is listed in Appendix F: Barn Quilt Routes and routes are shown on Map 3-2.

Table 3-1, Table 3-2, Table 3-3 and Table 3-4 list recommended on-street paved shoulders, the signed Barn Quilt routes, general signed bike routes and proposed shared-use paths respectively. Table 3-5 and Table 3-6 list recommended short and long term improvements to the Shawano Lake Loop. Map 3-1 provides an overview of the proposed network and Figure 3-4 illustrates the proposed Shawano Lake Loop.

Short Term Mountain Bay Trail Connection Improvements

The Mountain Bay Trail has a gap to the west of the City of Shawano, where trail users are expected to navigate along City and County streets to make the connection between off-street segments. In the long-term, the off-street connection should be completed, but short-term improvements may also be made to improve the current wayfinding signs.
Frequent, legible signing is important to help guide users along the connection route. Today, some portions of the connection are signed adequately for easy navigation, but many turns and route changes are lacking sufficient clarity. Some of the issues with current wayfinding include:

- Existing sign poles may be rotated incorrectly, such that signs are oriented incorrectly.
- Signs may be present only one side of the road, offering guidance for users traveling in one direction only.
- Sign design is inconsistent. Some signs are conventional green signs with arrows; other signs use wooden arrow indicators.
- Some critical route turns are lacking signs completely.

To resolve these issues, Shawano County should pursue a wayfinding signing project to offer clear, easy to follow direction for trail users traveling in both directions. Brief guidance and a signing example is presented below. See Appendix E: Bicycle and Pedestrian Design Guidelines for more detailed guidance on wayfinding sign types and placement. To sign for a direct route connection, two sign types are commonly used: Turn Signs and Confirmation Signs.

**Turn Signs** Indicate where a bikeway turns from one street onto another street. These signs include destinations and arrows. Turn signs should be placed on the near-side of intersections where bike routes turn (e.g., where the street ceases to be a bicycle route or does not go through). Pavement markings can also indicate the need to turn to the bicyclist.

**Confirmation signs** indicate to bicyclists that they are on a designated route and make motorists aware of the bicycle route. These signs can include destinations and distance/time, but do not include arrows. Confirmation signs should be placed every \( \frac{1}{4} \) to \( \frac{1}{2} \) mile on off-street facilities and every two to three blocks along on-street bicycle facilities. Confirmations signs should be placed soon after turns to confirm destination.
Table 3-1: Proposed Paved Shoulders

<table>
<thead>
<tr>
<th>Street</th>
<th>From</th>
<th>To</th>
<th>Miles</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTY TK D / CTY TK M</td>
<td>Stony Hill Road</td>
<td>Mill Creek Road</td>
<td>0.73</td>
</tr>
<tr>
<td>CTY TK CC / CTY TC CCC / CTY TK T / McDonald Road</td>
<td>Cloverleaf Lake Road</td>
<td>Lindsten Road</td>
<td>7.32</td>
</tr>
<tr>
<td>HY 47 - 55</td>
<td>Shawano County Boundary</td>
<td>Lake Drive</td>
<td>4.42</td>
</tr>
<tr>
<td>CTY TK A</td>
<td>Hillside Drive</td>
<td>0.05 miles west N Schmidt Lane</td>
<td>1.27</td>
</tr>
<tr>
<td>CTY TK D / CTY TK M</td>
<td>Stony Hill Road</td>
<td>Mill Creek Road</td>
<td>0.73</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>13.74</strong></td>
</tr>
</tbody>
</table>

Table 3-2: Proposed Barn Quilt Signed Bike Routes

<table>
<thead>
<tr>
<th>Route</th>
<th>Barn Quilt Route Name</th>
<th>Miles</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Joe Bikeler - NW</td>
<td>36.47</td>
</tr>
<tr>
<td>2</td>
<td>Joe Bikeler - SW</td>
<td>16.47</td>
</tr>
<tr>
<td>3</td>
<td>Embarrass - Option 1</td>
<td>24.23</td>
</tr>
<tr>
<td>4</td>
<td>Embarrass - Option 2</td>
<td>11.59</td>
</tr>
<tr>
<td>5</td>
<td>Lumberyard - Mountain Bay Trail Parking Area</td>
<td>14.01</td>
</tr>
<tr>
<td>6</td>
<td>White Clay Lake Lodge</td>
<td>19.74</td>
</tr>
<tr>
<td>7</td>
<td>Angelica Park and Ride</td>
<td>11.46</td>
</tr>
</tbody>
</table>

Detailed street-by-street listings of the Barn Quilt Routes are available in Appendix F: Barn Quilt Routes.

Table 3-3: Proposed Signed Bike Routes

<table>
<thead>
<tr>
<th>Street</th>
<th>From</th>
<th>To</th>
<th>Miles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ash Circle</td>
<td>5 Airport Drive</td>
<td>HY 22</td>
<td>3.06</td>
</tr>
<tr>
<td>Castle Road / Hillcrest Drive</td>
<td>CTY TK E</td>
<td>CTY TK B</td>
<td>2.52</td>
</tr>
<tr>
<td>Church Road</td>
<td>Green Valley Road</td>
<td>Flat Rock Road</td>
<td>2.00</td>
</tr>
<tr>
<td>Cloverleaf Lake Road</td>
<td>HY 22</td>
<td>CTY TK CC</td>
<td>5.83</td>
</tr>
<tr>
<td>CTY TK A</td>
<td>0.05 Miles north of Sunrise Road</td>
<td>Little Road</td>
<td>0.44</td>
</tr>
<tr>
<td>CTY TK B</td>
<td>CTY TK K</td>
<td>CTY TK T</td>
<td>2.01</td>
</tr>
<tr>
<td>CTY TK CC / CTY TC CCC / CTY TK T / McDonald Road</td>
<td>Cloverleaf Road</td>
<td>Lindsten Road</td>
<td>7.05</td>
</tr>
<tr>
<td>CTY TK D</td>
<td>North Avenue</td>
<td>CTY TK N</td>
<td>6.05</td>
</tr>
<tr>
<td>Street</td>
<td>From</td>
<td>To</td>
<td>Miles</td>
</tr>
<tr>
<td>--------</td>
<td>------</td>
<td>----</td>
<td>-------</td>
</tr>
<tr>
<td>CTY TK D / CTY TK M</td>
<td>North Branch Road</td>
<td>Mill Creek Road</td>
<td>2.48</td>
</tr>
<tr>
<td>CTY TK G</td>
<td>Grant Road</td>
<td>CTY TK M</td>
<td>2.09</td>
</tr>
<tr>
<td>CTY TK M</td>
<td>W College Avenue</td>
<td>CTY TK P</td>
<td>5.35</td>
</tr>
<tr>
<td>CTY TK M</td>
<td>CTY TK P</td>
<td>Riverview Lane</td>
<td>6.61</td>
</tr>
<tr>
<td>CTY TK M</td>
<td>Menzel Road</td>
<td>CTY TK G</td>
<td>7.98</td>
</tr>
<tr>
<td>CTY TK M / Swannke Street /</td>
<td>Riverview Lane</td>
<td>Menzel Road</td>
<td>1.80</td>
</tr>
<tr>
<td>CTY TK N</td>
<td>Trout Lane</td>
<td>Maple Road</td>
<td>6.36</td>
</tr>
<tr>
<td>CTY TK N</td>
<td>Maple Road</td>
<td>CTY TK D</td>
<td>1.00</td>
</tr>
<tr>
<td>CTY TK Q</td>
<td>Old Q Road</td>
<td>CTY TK D</td>
<td>0.99</td>
</tr>
<tr>
<td>CTY TK T</td>
<td>Lime Kiln Road</td>
<td>McDonald Road</td>
<td>5.02</td>
</tr>
<tr>
<td>CTY TK Z</td>
<td>Hummingbird Lane</td>
<td>Maple Road</td>
<td>6.50</td>
</tr>
<tr>
<td>CTY TK Z</td>
<td>Maple Road</td>
<td>4th Street</td>
<td>1.06</td>
</tr>
<tr>
<td>Deer Drive</td>
<td>Willow Road</td>
<td>Green Valley Road</td>
<td>2.00</td>
</tr>
<tr>
<td>E Red River Road</td>
<td>Elm Road</td>
<td>Line Road</td>
<td>4.00</td>
</tr>
<tr>
<td>Elm Road</td>
<td>CTY TK M</td>
<td>Nightingale Road</td>
<td>2.00</td>
</tr>
<tr>
<td>Elm Road</td>
<td>Park Road</td>
<td>E Red River Road</td>
<td>1.00</td>
</tr>
<tr>
<td>Flat Rock Road</td>
<td>Church Road</td>
<td>Holy Hill Road</td>
<td>0.49</td>
</tr>
<tr>
<td>Grant Road / North Branch Road</td>
<td>CTY TK G</td>
<td>CTY TK D</td>
<td>3.91</td>
</tr>
<tr>
<td>Green Valley Road</td>
<td>Deer Drive</td>
<td>HY 160</td>
<td>0.99</td>
</tr>
<tr>
<td>Green Valley Road</td>
<td>Shawano Line Road</td>
<td>Deer Drive</td>
<td>11.46</td>
</tr>
<tr>
<td>Hemlock Road</td>
<td>Hummingbird Road</td>
<td>Robin Road</td>
<td>2.39</td>
</tr>
<tr>
<td>Hemlock Road</td>
<td>Nightingale Road</td>
<td>Wiouwash State Trail</td>
<td>1.27</td>
</tr>
<tr>
<td>Hillside Drive / CTY TK A</td>
<td>Hillside Drive 0.6 miles South of CTY TK A</td>
<td>0.5 mile west of N Schmidt Lane</td>
<td>1.88</td>
</tr>
<tr>
<td>Hillside Drive / CTY TK A</td>
<td>Lane</td>
<td>1.88</td>
<td></td>
</tr>
<tr>
<td>Hofo Park Road / Hofo Park Drive</td>
<td>Hill Road</td>
<td>Lane Road</td>
<td>6.10</td>
</tr>
<tr>
<td>Holy Hill Road</td>
<td>Flat Rock Road</td>
<td>Oconto River Park</td>
<td>2.51</td>
</tr>
<tr>
<td>Homewood Avenue</td>
<td>N. Airport Road</td>
<td>Pine Mead Avenue</td>
<td>0.50</td>
</tr>
<tr>
<td>Hummingbird Road</td>
<td>HY 45</td>
<td>Hemlock Road</td>
<td>2.01</td>
</tr>
<tr>
<td>HY 156 / Lessor-Navarino Road / Birch Road / Hofo Park Road</td>
<td>Navarino Road</td>
<td>Hill Road</td>
<td>5.98</td>
</tr>
<tr>
<td>HY 47 - 55</td>
<td>Shawano County Boundary Line</td>
<td>Lake Drive</td>
<td>4.42</td>
</tr>
<tr>
<td>Kolpack Road</td>
<td>Line Road</td>
<td>CTY TK D</td>
<td>5.29</td>
</tr>
<tr>
<td>Lake Drive / N Lake Drive</td>
<td>CTY TK HH</td>
<td>N HY 22</td>
<td>2.77</td>
</tr>
<tr>
<td>Lindsten Road / Birch Road / Navarino Road / Wilber Road</td>
<td>McDonald Road</td>
<td>HY 156</td>
<td>3.37</td>
</tr>
<tr>
<td>Maple Road</td>
<td>Evergreen Road</td>
<td>CTY TK Z</td>
<td>1.50</td>
</tr>
<tr>
<td>Maple Road</td>
<td>CTY TK N</td>
<td>CTY TK Q</td>
<td>3.52</td>
</tr>
<tr>
<td>Mill Creek Road</td>
<td>CTY TK M</td>
<td>Range Line Road</td>
<td>2.67</td>
</tr>
<tr>
<td>N Airport Drive</td>
<td>Homewood Avenue</td>
<td>E Green Bay Street</td>
<td>0.70</td>
</tr>
<tr>
<td>N Cecil Street</td>
<td>0.05 Miles north of Mutzy Lane</td>
<td>E Green Bay Street</td>
<td>0.55</td>
</tr>
<tr>
<td>Nightingale Road</td>
<td>Elm Road</td>
<td>Hemlock Road</td>
<td>1.50</td>
</tr>
<tr>
<td>Old Lake Road</td>
<td>Woods Road</td>
<td>Lake Drive</td>
<td>2.83</td>
</tr>
<tr>
<td>Old Lake Road / Pine Meadow Avenue / Homewood Avenue</td>
<td>Lake Drive</td>
<td>North Airport Drive</td>
<td>0.00</td>
</tr>
<tr>
<td>Onesti Road</td>
<td>CTY TK Q</td>
<td>0.45 miles north of School House Road</td>
<td>0.53</td>
</tr>
<tr>
<td>Park Ave</td>
<td>Woods Road</td>
<td>Lake Drive</td>
<td>0.99</td>
</tr>
<tr>
<td>Park Road</td>
<td>CTY TK D</td>
<td>Elm Road</td>
<td>1.00</td>
</tr>
<tr>
<td>Pine Meadow Avenue</td>
<td>Homewood Avenue</td>
<td>Old Lake Road</td>
<td>0.62</td>
</tr>
<tr>
<td>Range Line Road</td>
<td>Mill Creek Road</td>
<td>River Bank Road</td>
<td>2.82</td>
</tr>
<tr>
<td>River Bank Road</td>
<td>Rangeline Road</td>
<td>Pioneer Road</td>
<td>2.46</td>
</tr>
<tr>
<td>Robin Road / CTY TK Q</td>
<td>Hemlock Road</td>
<td>S Mission Street</td>
<td>2.18</td>
</tr>
<tr>
<td>Sandy Drive</td>
<td>E Sandy Drive</td>
<td>HY 22</td>
<td>1.07</td>
</tr>
<tr>
<td>Short Lane / Eland Road / CTY TK Q</td>
<td>Hummingbird Road</td>
<td>Old Q Road</td>
<td>5.99</td>
</tr>
<tr>
<td>Willow Road / Lakney Road / Main Lane Drive</td>
<td>Deer Drive</td>
<td>Hofo Park Drive</td>
<td>4.48</td>
</tr>
<tr>
<td>Woods Road / Lulu Lake Drive / CTY TK HH</td>
<td>Old Lake Road</td>
<td>Lake Drive</td>
<td>5.83</td>
</tr>
</tbody>
</table>
Shared-Use Path Recommendations

A number of shared use paths are proposed for Shawano County. These paths mostly serve to connect existing trail segments within the County and to create a continuous Shawano Lake loop. All of these paths serve the same purpose: they increase bicycle access in areas where access does not currently exist or where users would feel more safe or comfort using the trail than using existing streets. Table 3-4: Proposed Shared-Use Paths summarizes proposed shared-use path segments that are not part of the proposed Shawano Lake Loop, those segments are listed later.

Table 3-4: Proposed Shared-Use Paths

<table>
<thead>
<tr>
<th>Path</th>
<th>From</th>
<th>To</th>
<th>Miles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tigerton Wiouwash Connector</td>
<td>Malueg Road</td>
<td>Cedar Street</td>
<td>3.10</td>
</tr>
<tr>
<td>City of Shawano Mountain Bay Trail Connection</td>
<td>Multiple Options</td>
<td></td>
<td>.5 to 2.1 depending on preferred alignment</td>
</tr>
<tr>
<td>Proposed Shawano Lake Loop Trail Segments</td>
<td></td>
<td></td>
<td>2.62 Detailed in Table 3-6</td>
</tr>
</tbody>
</table>

Path segments are located on the Proposed Bikeway Map and are described below. Exact alignments would be pending environmental review.

1. **Tigerton Wiouwash Trail Connection**

This trail extension would connect the existing segments of the Wiouwash State Trail as they approach the Village of Tigerton. This section would be 3.1 miles in length.

2. **Long Term Mountain Bay Trail Connection**

This proposed shared use path will connect to the existing segment that enters Shawano from the northwest and terminates at Maple Avenue. Currently, users are routed on-street to the segment of trail that picks up again near the intersection of CTH M and Rose Brook Road. In order to access the section of trail located near CTH M, cyclists must travel east on Oak Avenue, south on Poplar Road, and south on CTH MM to the trailhead on CTH M. This is not the most direct connection but is the more pleasant route. Connecting the gap between the trail segments would allow for continued, separated travel and would also shorten travel time. There are several options proposed for this connection. The best option will only be determined through further study. Descriptions below move east to west, away from the City of Shawano.

**Option A & B STH 29/Maple**

This option would require working with the DOT to obtain permission to build in the STH 29 right of way. There is precedent for this as is evident with the Fond du Lac bypass trail. Several trail alignments should be considered (see Map 3-3: Long Term Mountain Bay Trail Gap Solutions) but one option would be to follow
the current on-road alignment on CTH MM to Poplar Road, then left (west) on CTH MMM, continue west on Sycamore Road to the cul-de-sac, where a new segment of shared use path would begin. The 2.1 mile shared use path would parallel STH 29 on the north side over Maple Avenue (which will be a challenge to cross) and continue on the old road right of way that connects to Oak Avenue. The trail would then be on road for 0.3 miles (Oak Avenue to Cypress Road) until the trail crosses Cypress Road just north of the Oak Avenue/Cypress Road intersection. (4.52 miles). This is represented as Option A on the map. Another option is to continue the STH 29 trail north on Maple Avenue to align with the existing Mountain Bay Trail segment. The Maple Road segment could either be in its own right of way or be constructed as a sidepath. Additionally, instead of an off-road connection, the shoulders of Maple Road could be widened and paved to fill the gap between the proposed STH 29 trail and the existing segment of the Mountain Bay trail that currently terminates at Maple Avenue (option B).

**Option C & D CTH MMM**

This option directs trail users along CTH MMM which has a paved shoulder its entire length. Current ADT for this road is 4700 in town and 1200 out of town. A new trail segment would be necessary for about 1/2 mile between CTH MMM and Maple Avenue. Most of the new trail would be located on abandoned rail line but the first 800’ would be located next to an active line, preferably on the south side of the active line. ‘Rail with Trails’ is a common facility type and exists today all over the Midwest. Another option which would avoid the active rail section would be to align the trail on road, north on Peach Road to Oak Avenue, and then use Oak Avenue to the intersection of the existing trail (4.36 miles).
3. Shawano Lake Loop Trail Segments

These eight proposed segments would allow for a lake loop that most closely follows the shoreline of Shawano Lake on lower volume roads. These segments can be seen on Figure 3-4: Proposed Shawano Lake Route and are delineated in Table 3-5 and Table 3-6 on the following pages.

Shawano Lake Loop Route Improvements

The following map illustrates the proposed short-term and long-term recommended improvements to the Shawano Lake Loop. In the long term, a combination of bike lanes, shared use roadways and shared-use path segments will allow for a bike route that more closely follows the shoreline of Shawano Lake. Bike lanes will be striped on the newly reconstructed section of CTH H from Edgewood Drive to Old Lake Lane and when the next section of CTH H is reconstructed, from just east of Old Lake Drive to Park Lane, bike lanes will be added. This will allow for significantly improved access to Shawano County Park from the city. In the short term, existing local roads with specific signage will allow cyclists to circle the lake. Roads designated as needing improvement on the map should be signed to alert motorists to the presence of cyclists on the road, at a minimum.

Figure 3-4: Proposed Shawano Lake Route
Table 3-5: Recommended Short Term Improvements to Shawano Lake Loop

<table>
<thead>
<tr>
<th>Path</th>
<th>From</th>
<th>To</th>
<th>Miles</th>
<th>Recommended Improvements/Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTH H</td>
<td>Mountain Bay Trail</td>
<td>Homewood Ave</td>
<td>0.70</td>
<td>Short term: &quot;Bicycles may use full lane&quot; sign (R4-11), post speed at 30mph. Long term: Reconstruct CTH H with bike lanes and replace bridge with one that has bike lanes and sidewalks.</td>
</tr>
<tr>
<td>Homewood Ave</td>
<td>CTH HHH</td>
<td>Unnamed N/S Road</td>
<td>0.50</td>
<td>Wayfinding signs only</td>
</tr>
<tr>
<td>Unnamed N/S Road</td>
<td>Homewood Ave</td>
<td>Pine Mead Ave</td>
<td>0.12</td>
<td>Wayfinding signs only</td>
</tr>
<tr>
<td>Pine Mead Ave</td>
<td>Unnamed N/S Road</td>
<td>Old Lake Road</td>
<td>0.50</td>
<td>Wayfinding signs only</td>
</tr>
<tr>
<td>Old Lake Road</td>
<td>Pine Mead Ave</td>
<td>Woods Road</td>
<td>3.10</td>
<td>Wayfinding signs only</td>
</tr>
<tr>
<td>Woods Road</td>
<td>Old Lake Road</td>
<td>Loon Lake Drive</td>
<td>3.54</td>
<td>Wayfinding signs only</td>
</tr>
<tr>
<td>Loon Lake Drive</td>
<td>Woods Road</td>
<td>N Lake Drive (CTH H)</td>
<td>1.23</td>
<td>Wayfinding signs only</td>
</tr>
<tr>
<td>Lake Drive (CTH H)</td>
<td>Loon Lake Road</td>
<td>Blueberry (CTH R)</td>
<td>2.67</td>
<td>Short term: &quot;Bicycles may use full lane&quot; sign (R4-11), post speed at 30mph. Long term: Reconstruct CTH H with bike lanes or at least 4 foot wide paved shoulders.</td>
</tr>
<tr>
<td>Blueberry (CTH-R)</td>
<td>Lake Drive (CTH- H)</td>
<td>STH 22</td>
<td>0.75</td>
<td>Short term: &quot;Bicycles may use full lane&quot; sign (R4-11), post speed at 30mph. Long term: Reconstruct CTH H with bike lanes or at least 4 foot wide paved shoulders.</td>
</tr>
<tr>
<td>STH 22</td>
<td>Blueberry (CTR R)</td>
<td>E Crystal Street</td>
<td>1.10</td>
<td>Short term: &quot;Bicycles may use full lane&quot; sign (R4-11), post speed at 30mph. Long term: Reconstruct CTH H with bike lanes or at least 4 foot wide paved shoulders.</td>
</tr>
<tr>
<td>E Crystal Street</td>
<td>STH 22</td>
<td>Oakcrest Drive</td>
<td>0.33</td>
<td>Wayfinding signs only</td>
</tr>
<tr>
<td>Buss Drive</td>
<td>Oakcrest Drive</td>
<td>Swan Acre Drive/Labutske Drive</td>
<td>0.38</td>
<td>Wayfinding signs only</td>
</tr>
<tr>
<td>Swan Acre Drive/Labutske Drive</td>
<td>Buss Drive</td>
<td>STH 22</td>
<td>1.95</td>
<td>Wayfinding signs only</td>
</tr>
<tr>
<td>STH 22</td>
<td>Labutske Drive</td>
<td>Mountain Bay Trail</td>
<td>1.96</td>
<td>Short term: &quot;Bicycles may use full lane&quot; sign (R4-11), post speed at 30mph. Long term: Reconstruct CTH H with bike lanes or at least 4 foot wide paved shoulders.</td>
</tr>
<tr>
<td>Mountain Bay Trail</td>
<td>STH 22</td>
<td>CTH HHH</td>
<td>1.46</td>
<td>Wayfinding signs only</td>
</tr>
</tbody>
</table>

Total: 20.29
### Table 3-6: Recommended Long Term Improvements to Shawano Lake Loop

<table>
<thead>
<tr>
<th>Name</th>
<th>Road or Trail From</th>
<th>Road or Trail To</th>
<th>Recommended Improvements /Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTH HHH</td>
<td>Gumaer Road</td>
<td>Webers Point Road</td>
<td>Short term: “Bicycles may use full lane” sign (R4-11), post speed at 30 mph Long term: Reconstruct CTH HHH with bike lanes and replace bridge with one that has bike lanes and sidewalks</td>
</tr>
<tr>
<td>Webers Point Road</td>
<td>Cattau Beach Drive</td>
<td>Dead end of Cattau Beach Drive</td>
<td>Wayfinding signs only</td>
</tr>
<tr>
<td>Trail Segment 1</td>
<td>Dead end of Cattau Beach Drive</td>
<td>Shawano Shores Road</td>
<td>0.64 miles</td>
</tr>
<tr>
<td>Shawano Shores Road</td>
<td>North end of Trail Segment 1</td>
<td>Lake Drive (CTH H)</td>
<td>Wayfinding signs only</td>
</tr>
<tr>
<td>CTH H H</td>
<td>Shawano Shores Road</td>
<td>West Sunset Circle</td>
<td>Short term: “Bicycles may use full lane” sign (R4-11), post speed at 30 mph Long term: Reconstruct CTH H with bike lanes and replace bridge with one that has bike lanes and sidewalks</td>
</tr>
<tr>
<td>West Sunset Circle</td>
<td>Lake Drive (CTH H)</td>
<td>Sunset Circle</td>
<td>Wayfinding signs only</td>
</tr>
<tr>
<td>Sunset Circle</td>
<td>West Sunset Circle</td>
<td>Dead end of Sunset Circle</td>
<td>Wayfinding signs only</td>
</tr>
<tr>
<td>Trail Segment 2</td>
<td>Dead end of Sunset Circle</td>
<td>North Shore Drive</td>
<td>Use paint markings on parking lots to provide bicycle route through park. 0.05 miles</td>
</tr>
<tr>
<td>North Shore Drive</td>
<td>East side of Trail Segment 2</td>
<td>East end of North Shore Drive</td>
<td>Wayfinding signs only</td>
</tr>
<tr>
<td>Trail Segment 3</td>
<td>East end of North Shore Drive</td>
<td>West end of White Birch Road</td>
<td>0.25 miles</td>
</tr>
<tr>
<td>White Birch Road</td>
<td>East end of Trail Segment 3</td>
<td>East end of White Birch Road</td>
<td>Wayfinding signs only</td>
</tr>
<tr>
<td>Trail Segment 4</td>
<td>East end of White Birch Road</td>
<td>Stark Road</td>
<td>0.16 miles</td>
</tr>
<tr>
<td>Stark Road</td>
<td>North end of Trail Segment 4</td>
<td>East end of Stark Road</td>
<td>Wayfinding signs only</td>
</tr>
<tr>
<td>Trail Segment 5</td>
<td>East end of Stark Road</td>
<td>West end of W Birchwood Drive</td>
<td>0.05 miles</td>
</tr>
<tr>
<td>West end of W Birchwood Drive</td>
<td>East end of Trail Segment 5</td>
<td>East Street</td>
<td>Wayfinding signs only</td>
</tr>
<tr>
<td>Birchwood Drive</td>
<td>East Drive</td>
<td>East end of Birchwood Drive</td>
<td>Wayfinding signs only</td>
</tr>
<tr>
<td>Trail Segment 6</td>
<td>East end of Birchwood Drive</td>
<td>West end of W Nabor Drive</td>
<td>0.25 miles</td>
</tr>
<tr>
<td>West Nabor Drive</td>
<td>East end of Trail Segment 6</td>
<td>Link Street</td>
<td>Wayfinding signs only</td>
</tr>
<tr>
<td>Link Street</td>
<td>West Nabor Road</td>
<td>W Wallrich Road</td>
<td>Wayfinding signs only</td>
</tr>
<tr>
<td>W Wallrich Road</td>
<td>Link Street</td>
<td>N Meyer ST</td>
<td>Wayfinding signs only</td>
</tr>
<tr>
<td>N Meyer Street</td>
<td>W Wallrich Road</td>
<td>Freeborn St</td>
<td>Wayfinding signs only</td>
</tr>
<tr>
<td>Freeborn Street</td>
<td>N Meyer St</td>
<td>STH 22</td>
<td>Wayfinding signs only</td>
</tr>
<tr>
<td>STH 22</td>
<td>Freeborn Street</td>
<td>Crystal Street</td>
<td>Short term: “Bicycles may use full lane” sign (R4-11), post speed at 30 mph Long term: Reconstruct STH 22 with 5’ wide paved shoulders</td>
</tr>
<tr>
<td>E Crystal Street</td>
<td>STH 22</td>
<td>Oakcrest Drive</td>
<td>Wayfinding signs only</td>
</tr>
<tr>
<td>Buss Drive</td>
<td>Oakcrest Drive</td>
<td>Swan Acre Drive/Labutske Drive</td>
<td>Wayfinding signs only</td>
</tr>
<tr>
<td>Swan Acre Drive/Labutske Drive</td>
<td>Buss Drive</td>
<td>STH 22</td>
<td>Wayfinding signs only</td>
</tr>
<tr>
<td>E Sandy Drive</td>
<td>Swan Acre Drive/Labutske Drive</td>
<td>West end of E Sandy Drive</td>
<td>Wayfinding signs only</td>
</tr>
<tr>
<td>Trail Segment 7</td>
<td>West end of E Sandy Drive</td>
<td>East end of East Sandy Drive</td>
<td>0.05 miles</td>
</tr>
<tr>
<td>West Sandy Drive</td>
<td>West end of Trail Segment 6</td>
<td>West end of West Sandy Drive</td>
<td>Wayfinding signs only</td>
</tr>
<tr>
<td>Trail Segment 8</td>
<td>West end of Sandy Drive</td>
<td>North end of Bischoff Bay Lane</td>
<td>0.07 miles</td>
</tr>
<tr>
<td>Bischoff Bay Lane</td>
<td>South end of Trail Segment 7</td>
<td>STH 22</td>
<td>Short term: “Bicycles may use full lane” sign (R4-11), post speed at 30 mph Long term: Reconstruct STH 22 with 5’ wide paved shoulders</td>
</tr>
<tr>
<td>STH 22</td>
<td>Bischoff Bay Lane</td>
<td>Cedar Ave</td>
<td>Wayfinding signs only</td>
</tr>
<tr>
<td>Cedar Ave</td>
<td>STH 22</td>
<td>Cedar Lane</td>
<td>Wayfinding signs only</td>
</tr>
<tr>
<td>Cedar Ct</td>
<td>Cedar Ave</td>
<td>West end of Cedar Ct</td>
<td>Wayfinding signs only</td>
</tr>
<tr>
<td>Trail Segment 9</td>
<td>West end of Cedar Ct</td>
<td>East end of Gumaer Road</td>
<td>1.07 miles</td>
</tr>
<tr>
<td>Gumaer Road</td>
<td>West end of Trail Segment 8</td>
<td>CTH HHH</td>
<td>There appears to be room for a sidepath along the south side of Gumaer Road, if desired</td>
</tr>
</tbody>
</table>

### Shawano Lake Route Trail Segments

Seven of the nine trail segments (listed above in Table 3-6) necessary to complete the Shawano Lake Loop are privately owned. Only Segment Two and Segment Nine are currently in publically held lands. It will take patience and close work with the landowners to secure the necessary easements. Past experience has proven that personal relationships between local trail advocates, trail managers and landowners are necessary to build the trust needed to make the trails a success. Some of the challenges are described below.
Trail Segment 1 (Terminus of Cattau Beach Drive to Shawano Shores Road) This is a long segment and the sensitive environment of the land (wetlands) will make this trail segment a challenge. Moving the trail alignment further away from the lake and on to higher ground may lessen permitting issues.

Trail Segment 2 (Shawano Lake County Park) One of the two segments on public land, this segment will take careful design consideration in order to bring the trail through a busy boat launch area, parking lot and campground. It may be possible to use existing pavement for most of the distance and delineate the trail using pavement markings.

Trail Segment 3 (East end of North Shore Drive to west end of White Birch Drive) This segment will be a particular challenge as some of the existing roadway is in private ownership. In addition, there is a 150’ waterway to cross between North Shore Drive and White Birch Drive.

Trail Segment 4 (East end of White Birch Drive to Stark Road) This segment will not likely require crossing any wetlands, but it is privately held.

Trail Segment 5 (East end of Stark Road to the west end of West Birchwood Drive) Although there is a public boat launch at the end of Stark Road, this segment presents a special challenge with a 131’ water crossing of the channel to Washington Lake. As this channel hosts significant boat traffic, the bike/ped crossing would need to be designed so as not to interfere with the boat traffic. Additionally, there does not seem to be any public land on the east shore of the channel.

Trail Segment 6 (East end of Birchwood Drive to west end of W Nabor Road - the Mason Woods property) This segment does not have any wetland or water crossing issues, but it is a long segment. Fortunately it is all owned by one person, which might make negotiations easier.

Trail Segment 7 (East Sandy Drive to West Sandy Drive) This short segment (170’) is perhaps one of the easiest to complete. There are no wetland or permitting issues and a dirt path currently exists, most likely created by neighborhood cyclists currently making the connection.

Trail Segment 8 (West Sandy Drive to Bischoff Bay Lane) This is another short segment with few permitting issues. The corridor was cleared for a utility line in the summer of 2012.

Trail Segment 9 (West end of Cedar Court to Gumaer Road) The land needed for this segment is owned by the County as part of the airport property. Permits regarding wetlands and possibly dealing with air traffic will be necessary to build this trail segment, which will be close to one mile in length.

Spot Improvement Recommendations

Recommendations are provided below to improve specific on-street issues.

- At every intersection where either the Mountain Bay or Wiouwash Trail crosses a street, signage or pavement markings should be utilized. Some intersections will require very little improvement, while others will need greater attention. See Appendix D: State Trails Crossing Improvement Toolkit for more detail.
- Improve the intersection crossing of the Mountain Bay Trail and East Green Bay Bay Street in the city of Shawano. Currently, trail users find it difficult to cross. See Chapter 6. Implementation for more detail.
• Provide formalized connections from the Mountain Bay Trail into the communities of Gresham and Bonduel as well as a connection to the North Star Mohican Casino, located in Bowler on CTH A. These connections can be as simple as wayfinding signage directing users to and from the trail within those communities.
4. Recommended Pedestrian Policies

In order to fulfill the vision outlined for this plan and create a safe, connected pedestrian system, an update to County policies should be pursued. Infrastructure design guidance to support the following policy recommendations is provided in Appendix E: Bicycle and Pedestrian Design Guidelines.

The most significant update to County policy to support pedestrian interests would be to establish a Complete Streets policy. This policy would be in support of the State of Wisconsin Complete Street legislation, and further advance the needs of pedestrians and bicyclists in Shawano County. Like statewide policies, County policies set the tone for local jurisdictions to follow. Experience in Wisconsin has shown that county-level complete streets policies can influence and pressure local jurisdictions to pass their own policies, and ultimately provide policy backing at all levels of government.

A Complete Street is a roadway that, in addition to general purpose vehicular travel lanes, includes items such as sidewalks, bike lanes or shoulders, bus lanes, transit stops, crosswalks, median refuges, curb extensions, appropriate landscaping, and other features that add to the usability and livability of the street as determined by context. As of August, 2012, complete streets legislation has been passed in 26 states and more than 325 other jurisdictions throughout the country, and the Safe and Complete Streets Act of 2011 is currently pending in Congress.

In addition to recommended Complete Streets policy, there are opportunities to enhance the County Land Division Ordinance 3-10 to further support the interests of pedestrians. In particular, sections dealing with block size and access provision can be changed to increase the utility of walking trips.

Section 11.03 A2 calls for the option of pedestrian easements through long blocks (900 ft or greater) and at the end of cul-de-sacs. This provision helps create permeability and connectivity for pedestrians, and helps avoid unnecessary out of direction travel. The language is currently positive, but offers weak incentive to implement such access easements. The County should consider using more forceful language to establish access easements for all new residential developments.

Section 11.03 A1 addresses block lengths, and is not supportive of efficient pedestrian circulation. This section cites that “block lengths in residential areas shall not be less than twelve hundred feet.” Taken in conjunction with the access easement provision, pedestrian access on these streets could be provided every 600 feet under the best conditions. Reducing the minimum block length requirement to 900 feet would permit land division in appropriate areas with more pedestrian access opportunities, and increase the connectivity of pedestrian trips.

To support the interests of pedestrians and build “complete networks” in addition to Complete Streets, Shawano County should consider revising these requirements during County ordinance update opportunities.
The La Crosse County Experience

In 2011, La Crosse County became the first county in Wisconsin to adopt a complete streets policy. This major milestone was the natural partner to the state-level Trans-75, and has sparked a series of local policy adoptions across La Crosse County.

Shortly after the county policy adoption, the City of La Crosse adopted its own complete streets policy called the “Green and Complete Streets Ordinance.” This is the first local city-level complete streets policy in the area. Since then, Complete Streets policies were also passed in the City of Holmen and West Salem, and are currently under discussion by the common council of Onalaska. These local jurisdictions would have been unlikely to pass such policies on their own had La Crosse County not led by example.

Figure 4-1 on the following page displays the full text of the policy passed by La Crosse County, and identifies the key elements of this policy. Shawano County should use the language and content of La Crosse County as a starting point for its own Complete Streets policy.
La Crosse County Complete Streets Policy

La Crosse County is committed to develop and maintain a safe, efficient, balanced transportation system to support Active Living – integrating physical activity into daily routines through activities such as biking, walking, or taking transit. The county strives to be a leader in providing opportunities and choices for residents and visitors, and believes that a well-planned transportation system that includes Complete Streets demonstrates this leadership.

Complete Streets is an engineering and planning term describing roadways that are designed and operated to enable safe access and travel for all users including accommodation of pedestrians, bicyclists, motorists and public transit. Given the diversity of the natural and built environment in La Crosse County, flexibility in accommodating different modes of travel is essential to balancing the needs of all users. The county will implement Complete Streets in such a way that respects the character of the project area, the values of the community, and the needs of all users. Therefore, Complete Streets will not look the same in all areas and will not necessarily include exclusive elements for all modes of transportation.

The county will strive to make Complete Streets a high priority to enhance safety, mobility, accessibility and convenience for all corridor users including pedestrians, bicyclists, transit riders, motorists, commercial and emergency vehicles, and for people of all ages and abilities.

The county will work with other transportation agencies to incorporate a Complete Streets philosophy and encourages the State of Wisconsin, municipalities, other counties and regional organizations to adopt similar policies.

La Crosse County will conduct an inventory and assessment of existing corridors, and develop Complete Streets implementation and evaluation procedures. The Complete Streets policy and implementation procedures will be referenced in the Comprehensive Plan and other appropriate plans or documents. Applicable design standards and best practices will be followed in conjunction with construction, reconstruction, changes in allocation of pavement space on an existing roadway, or other changes in a county corridor (Reference Administrative Code Transportation 204, 205, 75 and the WisDOT Facilities Development Manual). The planning, design, and implementation processes for all transit-way and roadway corridors will:

- Involve the local community and stakeholders,
- Consider the function of the road,
- Consider transit-way corridor alignment and station areas,
- Assess the current and future needs of corridor users,
- Include documentation of efforts to accommodate all modes and all users,
- Review of existing system plans to identify Complete Streets opportunities.

La Crosse County will implement Complete Streets to the extent possible, unless one or more of the following conditions are documented:

- The cost of establishing Complete Street elements is excessive in relation to total project cost, or the County Board is unable to provide adequate funding.
- There is evidence of a lack of community support for the improvements in the municipality where the project is to be completed.
- There are safety risks to the improvement that cannot be overcome.
- The corridor has severe topographic, environmental, historic, or natural resource constraints.

The County Highway Commissioner will document all conditions that require any exceptions as part of an annual report to the Public Works and Infrastructure Committee and the La Crosse County Board detailing how this policy is being implemented into La Crosse County road projects.

Figure 4-1. Breakdown of a county-level complete streets policy
A Complete Streets Policy for Shawano County

To achieve a roadway network that is safe, comfortable, and attractive for all users, Shawano County should adopt a Complete Streets policy that is consistent with Trans-75 and considers the following topics:

- Planning
- Design
- Construction
- Operations
- Exceptions

The vision for the Complete Streets policy should live up to the Vision, Goals and Objectives developed for the Shawano County Bicycle and Pedestrian Master Plan. Action items listed below can form the basis for either a formally adopted policy, or an informal action plan.

**Planning**

1. Regularly discuss current roadway projects to provide seamless transitions between existing facilities.
2. Adopt a green transportation hierarchy as a common basis for transportation planning.
3. Review and provide comment on the Transportation Plans of local cities, towns, and villages.

**Design**

1. When appropriate, consider roadway design that slows motor vehicles and/or limits access so as to provide greater safety for cyclists, pedestrians, and motorists (e.g. lane narrowing or the reduction of lanes, reduction of access etc.), especially in village or other population centers.
2. Adopt consistent design principles for cyclists and pedestrians as recommended in this Plan and other statewide planning documents.
3. Evaluate existing and potential on-road bicycle use in all repaving and re-striping projects (i.e. striping of bicycle lanes, wide curb lanes, and paving of roadway shoulders or widening of curb lanes) as well as new roadway construction and reconstruction projects.
4. Evaluate the effectiveness of narrowing pedestrian crossing distances at intersections where high motor vehicle counts and high pedestrian counts are expected.
5. Provide appropriate bicycle accommodation on and along all highway, arterial and collector streets.
6. Maintain the function of existing freight corridors, but evaluate design treatments to improve function of the corridor for cyclists and pedestrians.
7. Provide pedestrian accommodation in the form of sidewalks or shared-use paths adjacent to all arterial, highway and collector streets.
8. Include street trees as a part of sidewalk and shared-use path design wherever possible to create a safer and more pleasant environment for all users.
9. Develop a Complete Streets checklist to guide the development of individual transportation projects.\(^8\)

**Construction**

1. Provide alternate routes for cyclists and pedestrians during construction, reconstruction, and repair of streets.
2. Develop standards to maintain pedestrian and cyclist access during construction activities.

**Operations**

1. Time traffic signals to provide adequate/comfortable pedestrian and cyclist crossing times.
2. In pedestrian areas, provide audible and countdown signal heads. Consider exclusive pedestrian timing or leading pedestrian intervals where appropriate.
3. Provide bicycle signal detection at all actuated signals along bikeways and major roads typically used as cycling routes.
4. Develop a coordinated maintenance schedule or program to address bikeway, sidewalk, and shared use path maintenance needs.
5. Establish performance metrics to track the implementation of this policy. These metrics should be consistent with the Vision, Goals, Objectives developed for the Shawano County Bicycle and Pedestrian Master Plan:
   a. Miles of bikeways, shared use paths, and sidewalks in relation to miles of roadway
   b. Reduced collisions involving cyclists or pedestrians
   c. Improvements to air quality
   d. Reduced transportation system maintenance costs
   e. Increased numbers of people walking and cycling (counted annually)
   f. Increased percentage of traffic signals with countdown signalization and/or bicycle detection

**Exceptions**

Not every street can be ideal for every traveler. However, it is still important to provide basic, safe, and direct access for users regardless of the design strategy used.

Exceptions to the Complete Streets policy should be made by the transportation authority where:

1. A suitable or more desirable alternative is available within a reasonable distance based on public and staff input or criteria defined in Trans-75.
2. The cost of accommodation would be excessively disproportionate to the need or probable use as defined by Trans-75.
3. There is public consensus that the accommodation is unwanted as defined by Trans-75.

\(^8\) A sample checklist from the Metropolitan Transportation Commission in the San Francisco, CA area can be found here: [http://www.mtc.ca.gov/planning/bicyclespedestrians/Routine_Accommodation_checklist_FINAL.pdf](http://www.mtc.ca.gov/planning/bicyclespedestrians/Routine_Accommodation_checklist_FINAL.pdf)
5. Recommended Programs

The infrastructure recommendations in the Plan provide safer, more comfortable places for further growth in bicycling and trail use. While improving infrastructure is critical to increasing walking and bicycling rates, the importance of non-infrastructure strategies should not be underestimated. This chapter contains recommendations for education, encouragement, enforcement, and evaluation programs that should be pursued along with infrastructure investments.

Appendix H: Education and Encouragement Strategies provides more detailed information about the programs identified below, includes more clarification on their purpose, a description of the basic approach and wherever possible, links to model programs.

Summary of Existing Programs

Visitors and residents of Shawano County already benefit from a number of ongoing programs and outreach efforts conducted by county staff, other municipal agency staff, volunteers and cycling enthusiasts. SPOKES is currently involved in a number of projects including Safe Routes to School, administration of programs that promote active living including a Rural Health Initiative grant and an Active Communities to Transform Wisconsin grant, and development of a countywide Barn Quilt program that celebrates the history and heritage of Shawano County. SPOKES has been a significant voice in Shawano’s active transportation community and is well positioned to lead the county in its efforts to become even more bicycle and pedestrian friendly.

Recommended New Education, Encouragement, Enforcement, and Evaluation Programs

The following recommendations expand on existing programmatic efforts. Short-term recommendations focus on increasing capacity by establishing a full- or part-time volunteer coordinator, enhancing communication and building capacity of existing partnerships. Longer-term recommendations focus on providing a more diverse set of programs.

Short Term Recommendations

**Fund a Full or Part Time Volunteer Coordinator**

| Purpose | Help SPOKES and the county direct existing resources and find additional capacity for short and long-term projects |

SPOKES high level of involvement would benefit from a part- or full-time volunteer coordinator who could help identify events and campaigns, work with potential partnering agencies, and solicit and manage volunteers for specific campaigns. This person could also assist with grant writing and other duties as time permits.
Partner with Existing Agencies to Create Mini-Programs

**Purpose**
Provide bicycling related programs to as many people as possible

Distributing the planning and development of bicycle and walking programs across many people and agencies can reduce organizer fatigue and engage a wide range of community volunteers and partners. In order for this model to work, a volunteer coordinator or other designated representative should be responsible for developing an overall schedule, helping to identify and organize volunteers and providing capacity.

Host a Bicycling Resources Website

**Purpose**
Provide enhanced and centralized communication channels for bicycling information

Many residents do not know where to find information about walking and cycling, including laws, events, maps, tips, and biking groups. Shawano County and other municipal partners should collaborate on a “one stop shopping” website aimed at bicyclists. The website should contain links to local community groups, the Shawano County Bicycle and Pedestrian Plan, periodic updates about Plan implementation, simple evaluation metrics tracking community progress towards infrastructure implementation, and information about current projects and how to get involved.

Establish Bicycle and Pedestrian Counts

**Purpose**
Provide evidence of bicycle and pedestrian facility use

Many jurisdictions, including Shawano County, do not perform regular bicycle or trail counts. Regular counts provide a mechanism for tracking bicycle or trail use trends over time, or for evaluating the impact of projects, policies, and programs.
**Establish a Permanent Pedestrian and Bicycle Advisory Committee**

**Purpose**
Advise County on bicycle issues

Shawano County has benefitted from the input into network improvements and programmatic recommendations made by SPOKES, and the project team recommends formalizing this group into a permanent Pedestrian and Bicycle Advisory Committee (PBAC) in order to continue reaping the benefits of this type of citizen involvement. The PBAC should focus on non-motorized transportation in the public right-of-way, including shared use paths. Formalizing this relationship emphasizes the commitment to making walking and bicycling safer and more appealing, and has the potential to assist the County in securing funding for bicycle and pedestrian projects.

**Park-to-Park Loop Route Brochures**

**Purpose**
Encourage walking as an everyday activity by providing short loops that allow participants to enjoy multiple local parks in every season with one trip.

The Park-to-Park Loop concept is a great form of exercise for all ages and abilities. It is low impact and simple to do and requires only a comfortable pair of shoes. SPOKES should work with the City of Shawano Parks staff to develop and market a series of walking or biking loops that take the participant from park to park along existing trails and low-volume streets. Three loops have been identified and are included in Appendix G: Park-to-Park Loop Routes. These are simply general ideas for the loops, further study for the exact routes by people familiar with the City of Shawano parks and trails will be necessary. Park to Park Loop brochures with maps should be developed and distributed to the public to encourage participation.

**Promote a Hotline or Online Forms of Reporting Cycling and Walking Issues**

**Purpose**
Provide a way for bicyclists and pedestrians to report infrastructure issues

Currently, Shawano County does not have a method for citizens to report maintenance issues along bicycle and pedestrian facilities. This type of hotline would allow Shawano County to quickly and efficiently develop and maintain a list of spot locations where a simple fix could significantly improve conditions for bicyclists and pedestrians or mitigate an existing safety concern. This service could be used to collect and address bicycling, sidewalk and trail maintenance and safety concerns, including bike rack installation requests, pothole repair, parking enforcement, sweeping requests, dangerous grates, and pruning. These resources could be advertised on promotional materials, the county website and at events such as Bike to Work Week. Reported issues should be addressed in a timely manner.
Bike to Work Week

Purpose: Encourage bicycling to work through fun, social activities and incentives

Bicycling to work is a great way to get exercise, save money, reduce pollution, and have fun. Cities and towns across the country participate in Bike to Work Week, Month or Day. In Shawano County, previous attempts to successfully implement Bike to Work Week programs have met with limited success due to a small volunteer base. Partnering with local volunteer groups and other interested parties will be critical to increased implementation success. The League of American Bicyclists (LAB) hosts a website for commuters and event organizers. The website contains information on nationwide and local events, an organizing handbook, and tips for commuters. The Wisconsin Bicycle Federation also provides resources for Bike to Work Week, including promotional posters that can be used by local groups.

Develop a Regional Wayfinding Sign Program

Purpose: Help bicyclists and other trail users reach desired destinations

A wayfinding program consisting of signs can significantly enhance the bicycling and path experience in Shawano County. Wayfinding serves a variety of purposes including:

- Helping to familiarize users with the bikeway system and reducing reliance on maps
- Helping users identify the best routes to significant destinations
- Helping to address misperceptions about time and distance;
- Helping to overcome a “barrier to entry” for people who do not bicycle often, but who want to get started

Other Programmatic Recommendations

Report Card

Purpose: Share information about key walking and bicycling metrics

This Plan has developed goals and objectives related to bicycling and greenways. An annual report is a useful benchmarking activity to publish accomplishments and performance relative to these targets.

An annual report should include relevant bicycling metrics (new facility miles, major completed projects, bicycle-involved crashes, number of organized events) and may include information on qualitative data that have been collected related to cycling.

The report can be assembled annually by staff, or volunteers.
RECOMMENDED PROGRAMS

based on information provided by county staff.

**Sunday Parkways, Ciclovias or Open Streets Event**

| Purpose | Provide opportunities for cycling and walking in safe, bicycle friendly environments |

Sunday Parkways (also called Summer Streets, Ciclovias, or Play Streets) are periodic street closures (usually on Sundays) that create a park-like experience on the street, encouraging walking, bicycling, dancing, hula hooping, roller skating, and more. The purpose of the event is to promote walking and biking to the general public by providing a car-free street event, an especially effective strategy in neighborhoods without close access to parks.

Sunday Parkways have been successful internationally and are rapidly becoming popular in the United States. In Wisconsin, the City of Madison has a bi-annual open street event called Ride the Drive. [http://openstreetsproject.org/madison/](http://openstreetsproject.org/madison/)

**Senior Walking and Bicycling Program**

| Purpose | Share information about walking and bicycling routes, meet potential activity partners |

Many seniors experience limitations in mobility as they age, and are often left out of recreation programs. A Senior Strolls walking or bicycling program will help seniors maintain physical fitness, improve health, and enjoy opportunities for social interaction. Senior walks and rides should be short, easy, organized group events hosted on a regular basis (weekly or biweekly) during pleasant weather months. Walks or rides may originate at senior centers like the Shawano Senior Center or the Marion Senior Center. Walks and rides can have different themes to keep participants interested (e.g. heritage homes tour, Shawano County Quilts or other public art tour), or could have a few set routes, like trail rides that focus on community and wellness.

**Law Enforcement Training**

| Purpose | Provide law enforcement officials with bicycle and pedestrian specific training |

Most law enforcement professionals do not receive training specific to bicycle laws, handling, or safety. Police education courses and/or training videos can help officers improve public safety and enforce existing laws more effectively by providing them with the training they need. This is particularly important after laws are changed or added that pertain to bicycle safety. In 2012 Wisconsin Department of Transportation (WisDOT) sponsored a series of workshops on bicycle safety education aimed at children, adults and law enforcement professionals.
6. Implementation

Plan Implementation Timeframe and Actions

The Shawano County Bicycle and Pedestrian Master Plan is a 20-year plan that county residents and decision makers can use to guide Shawano’s progress towards becoming a great place to walk and bike. This chapter highlights short-term infrastructure recommendations and associated costs, discusses programmatic actions that should be implemented first and provides a suggested timeframe for various actions recommended in previous chapters. Table 6-1 provides a summary of key recommended Plan actions, implementation timeframes, and notes about likely implementing agencies.

These actions are intended to help Shawano County prepare for application and formal recognition as a Bicycle Friendly Community. A short, user-friendly summary of key short-term steps is included in Appendix K: Bicycle Friendly Communities Worksheet.

Table 6-1: Implementation Summary

<table>
<thead>
<tr>
<th>Task</th>
<th>0 – 5 years</th>
<th>5 -10 years</th>
<th>Long Term</th>
<th>Implementers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Encouragement Program Recommendations</strong></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fund a Full or Part Time Volunteer Coordinator</td>
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<td></td>
<td></td>
<td>Shawano County</td>
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<tr>
<td>Partner with Existing Agencies to Create Mini-Programs</td>
<td>X</td>
<td></td>
<td></td>
<td>Shawano County, SPOKES</td>
</tr>
<tr>
<td>Bicycling Resources Website</td>
<td>X</td>
<td></td>
<td></td>
<td>Shawano County</td>
</tr>
<tr>
<td>Establish Bicycle and Pedestrian Counts</td>
<td>X</td>
<td></td>
<td></td>
<td>Shawano County</td>
</tr>
<tr>
<td>Establish a Permanent Pedestrian and Bicycle Advisory Committee</td>
<td></td>
<td></td>
<td></td>
<td>Shawano County with SPOKES</td>
</tr>
<tr>
<td>Park to Park Route Brochures</td>
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<td></td>
<td></td>
<td>Shawano County, WisDOT, Municipal Partners</td>
</tr>
<tr>
<td>Promote a Hotline or Online Forms of Reporting Cycling and Walking Issues</td>
<td>X</td>
<td></td>
<td></td>
<td>Shawano County</td>
</tr>
<tr>
<td>Bike to Work Week</td>
<td>X</td>
<td></td>
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<td>Shawano County, SPOKES</td>
</tr>
<tr>
<td>Develop a Regional Wayfinding Sign Program</td>
<td></td>
<td>X</td>
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<td>Municipal partners including the Cities of Shawano, Tigerton and others</td>
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<tr>
<td><strong>Other Programmatic Recommendations</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Annual Report Card</td>
<td>X</td>
<td></td>
<td></td>
<td>Shawano County, SPOKES</td>
</tr>
<tr>
<td>Sunday Parkways, Ciclovias or Open Streets Event</td>
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<td></td>
<td></td>
<td>Municipal partners including the Cities of Shawano and Tigerton, SPOKES</td>
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<tr>
<td>Senior Walking and Bicycling Program</td>
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<td></td>
<td></td>
<td>Shawano County with City of Shawano, Tigerton, or other local jurisdictions</td>
</tr>
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</table>
### Task

<table>
<thead>
<tr>
<th>Task</th>
<th>0 - 5 years</th>
<th>5 - 10 years</th>
<th>Long Term</th>
<th>Implementers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Law Enforcement Training</td>
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<td></td>
<td></td>
<td>Shawano County, Shawano County Sheriff’s Office, Other local law enforcement agencies</td>
</tr>
<tr>
<td>Pursue Grant Funding</td>
<td>X</td>
<td></td>
<td></td>
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### Priority Project Recommendations

<table>
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<th>0 - 5 years</th>
<th>5 - 10 years</th>
<th>Long Term</th>
<th>Implementers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wiouwash Crossing at STH 29</td>
<td>X</td>
<td></td>
<td></td>
<td>Shawano County, WisDOT, Village of Wittenberg</td>
</tr>
<tr>
<td>Mountain Bay Trail Crossing at East Green Bay Street</td>
<td>X</td>
<td></td>
<td></td>
<td>Shawano County, WisDOT, City of Shawano</td>
</tr>
<tr>
<td>Lake Drive Restriping to Add Bike Lanes</td>
<td>X</td>
<td></td>
<td></td>
<td>Shawano County</td>
</tr>
</tbody>
</table>

### Other Project Recommendations

<table>
<thead>
<tr>
<th>Task</th>
<th>0 - 5 years</th>
<th>5 - 10 years</th>
<th>Long Term</th>
<th>Implementers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Close Mountain Bay Trail Gap west of the City of Shawano</td>
<td>X</td>
<td></td>
<td></td>
<td>Shawano County, WisDOT, City of Shawano</td>
</tr>
<tr>
<td>Improve Trail Crossings County Wide</td>
<td>X</td>
<td>X</td>
<td></td>
<td>Shawano County, WisDOT, Municipal Partners</td>
</tr>
<tr>
<td>Formalize Quilt Routes</td>
<td>X</td>
<td></td>
<td></td>
<td>Shawano County, WisDOT, Municipal Partners</td>
</tr>
<tr>
<td>Implement Park to Park Routes</td>
<td>X</td>
<td></td>
<td></td>
<td>Shawano County, WisDOT, Municipal Partners</td>
</tr>
<tr>
<td>Lake Routes: Near Term</td>
<td>X</td>
<td></td>
<td></td>
<td>Shawano County, WisDOT, Municipal Partners</td>
</tr>
<tr>
<td>Lake Routes: Long Term</td>
<td>X</td>
<td>X</td>
<td></td>
<td>Shawano County, WisDOT, Municipal Partners</td>
</tr>
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</table>

### Evaluation

<table>
<thead>
<tr>
<th>Task</th>
<th>0 - 5 years</th>
<th>5 - 10 years</th>
<th>Long Term</th>
<th>Implementers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Track Progress and Review Bicycle Friendly Community Worksheet</td>
<td>X</td>
<td></td>
<td></td>
<td>Shawano County, SPOKES</td>
</tr>
<tr>
<td>Apply for Bicycle Friendly Community Status</td>
<td>X</td>
<td></td>
<td></td>
<td>Shawano County</td>
</tr>
<tr>
<td>Evaluate progress to identify new short-term and priority projects</td>
<td>X</td>
<td></td>
<td></td>
<td>Shawano County, SPOKES</td>
</tr>
</tbody>
</table>

### Short-term Facility Recommendation

The Shawano Bicycle and Pedestrian plan provides a comprehensive set of trail and on-street infrastructure recommendations that Shawano County and other project partners can implement, allowing residents and visitors alike to walk and bike more safely and comfortably. In addition to on-street projects that provide connectivity between communities and other important activity centers, the plan organizes many of the infrastructure recommendations by geography, or route types (i.e., Mountain Bay and Wiouwash Trail segments, Selected Quilt Routes and Shawano Short-Term Lake Routes as selected signed connections and identified priority projects discussed later in this chapter). The order in which projects in
this plan are constructed will depend on many factors including budget and grant availability, community support and various county policies.

During the course of this planning process a number of priorities were identified by county residents and SPOKES as high priority projects for short term implementation. These recommended short term priorities are consistent with community feedback and the Plan’s stated Vision, Goals and Objectives. The recommended short-term priorities include spot fixes at intersections to improve safety, formalizing several proposed recreational loops, and improving connections to nearby communities. These projects are recommended as a first step towards implementation of this plan and should be completed within the next five years. At the time of this future review, Shawano County should revisit and assess its progress towards plan implementation and add additional projects to the short-term priority list.

In addition to these short-term recommendations, the County should pursue implementation of the plan opportunistically. For example, if improvements are scheduled for a roadway highlighted as a bicycle route, these improvements should be made at the same time. Additionally, a number of factors can change that may influence the order of project implementation or the County’s capacity to implement projects including:

- Newly identified grant funding sources
- Changes to County/State/Federal policy that could affect how funds can be spent
- New community input, or newly identified safety concerns
- Policy directives from elected officials or the Bicycle and Pedestrian Advisory Committee
- Interest from potential partners (e.g., the City of Shawano) in implementing recommended projects that are completely or partially within their jurisdiction
- Recommended short-term priority projects and cost opinions are illustrated on Map 6-1: Shawano County Short Term Priority Projects and summarized in Table 6-2: Cost Assumption Table.
Map 6-1: Shawano County Short Term Priority Projects

Shawano County Comprehensive Bicycle & Pedestrian Plan
Short Term Priority Projects

Transportation Symbols

Other Symbols

Bikeway Symbols

- US / State Highway
- County Highway
- Local Road/Street
- Railroad
- Municipal Border
- Indian Reservation
- Water
- City / Village
- Parks

Mountain Bay Trail (Existing/Proposed)
Wisouwash Trail (Existing)
Navarino Trail (Existing)
Proposed Project Short-Term Priority
Proposed Project Long-Term Priority
Crossing Improvements

Map prepared by the Wisconsin Bike Fed.
Map data provided by Shawano County.

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Top Priority Infrastructure Project Description Sheets

The following pages provide project description sheets with specific recommendations and maps for the Top-Priority projects, which represent the first stage of Master Plan implementation. Specific recommendations were based on field visits, high-resolution aerial photos, and discussions with local and regional planning staff and system users. Each map depicts the recommended bikeway or trail under focus, as well as selected nearby connections. Please refer to the larger system maps for each project’s context within the overall surrounding bikeway and trail networks.

Detailed cost estimate tables are available in Appendix I: Planning-Level Project Costs.
Description:
The Wiowash State Trail crossing with STH 29 is an important crossing near the junction of the Wiowash State Trail and Mountain-Bay State Trail. The crossing is uncontrolled, and unmarked and crosses the four lane highway at an angle.

Current conditions offer little indication of the presence of the trail crossing, and trail users may be unaware of the prevailing roadway conditions of the road they are crossing. WisDOT reports 2009 traffic volumes of 11,000 cars a day, auto speeds of around 65 mph.

Other crossings throughout the County may have similar conditions and solutions presented here should be considered at other locations where appropriate.

- Right of Way and Wayfinding Signing
  Formalizing the expected stopping behavior and reinforce user expectations. If they do not exist already, STOP signs should be posted for approaching trail user traffic. Identification signs should identify the highway and indicate the trail entrance across the road.

- Safety Informational Signing
  An information sign should warn trail users of the dangers of high-speed crossings, with instructional information on proper crossing behavior.

Planning Level Cost Opinion: $6,000

Example Informational Sign

Trail Crossing
Wait for gap in traffic before crossing
Motor vehicles traveling at 65 miles/hr travel 95 feet per second and requires 340 feet to come to a complete stop

Cross with Care
Description:
Lake Drive, also known as CTH H, begins at the bridge over the Shawano Lake outlet on the western edge of Shawano Lake and circles the lake on the north side until it terminates at CTH R just north of Cecil. Lake Drive carries an average of 6,500 cars per day with heavier traffic on the weekends during the summer. The street has seen two recent reconstruction phases. The reconstruction has resulted in a curb and gutter cross section with a total width of 37'. The width is divided as follows: 7' parking lane on the north side of the road, an 11' wide west bound lane and a 19' wide east bound lane. This cross section runs from Edgewood Drive to Old Lake Lane. All other segments of Lake Drive consist of two 12' wide lanes with one to two foot wide gravel shoulders.

During the planning process Lake Drive was mentioned many times by local residents and Shawano Pathways (formerly known as SPOKES) as a road that they would like to see bicycle accommodations added to. The desire is to circle the lake but the top priority is to make the stretch from STH 22 to Shawano Lake Park more accessible to bicyclists. Alta has designed two options to achieve this goal. Additional engineering study and public input will be needed to determine the best option for Lake Drive’s 37’ wide segments. For its 24’ wide segments, the only option is to widen and pave the shoulders when the road is reconstructed. This solution may be difficult for some segments of Lake Drive where it passes through low lying areas and wetlands.

- **Buffered Bike Lane without Parking**
  Simple two-line buffers provide extra separation between the bike lanes and moving vehicles. Vehicle travel lane remains as 11 ft.

- **Bike Lanes with Parking**
  Conventional bike lanes offer dedicated space for bicyclists, separating them from moving vehicles. Additionally, bike lanes may promote usage of on-street parking by provided added shy distance between parked cars and moving vehicles.

Planning Level Cost Opinion:
- Buffered Bike Lane without Parking: $115,000
- Conventional Bike Lane with Parking: $124,000
Description:
During the course of this planning process this existing crossing has been identified by county residents and Shawano Pathways (formerly known as SPOKES) as a high priority project. Alta has developed three potential designs to improve crossing safety for Mountain Bay Trail users and automobile drivers on Green Bay Street. The options and planning level cost estimates are provided below. Additional engineering studies will be necessary to determine which is the best solution and to design the facility for installation.

The Mountain Bay Trail crosses Green Bay Street in the City of Shawano between Lakeland Road and Cedar Drive. The trail crosses the four lane Green Bay Road at an angle increasing the crossing distance for pedestrians, bicyclists and snowmobilers. The trail crossing is marked with a ladder cross walk. Trail users have stop signs at Green Bay Street for both the north and south bound trail users.

Green Bay Street is a busy commercial strip that leads to downtown Shawano. It is a State Trunk Highway and carries about 12,000 cars a day near the trail crossing, just to the west average daily traffic jumps to 14,300, just east it drops to 8,500 cars per day. The trail is regularly used by pedestrians and bicyclists, and carries a high volume of snowmobile traffic in the winter.

Option A: Pedestrian Hybrid Beacon
Option B: Rapid Flash Beacon (RRFB) with Geometric Crossing Enhancements
Option C: Full Signal at Lakeland Road, Realign Trail to Intersection
Option A: Pedestrian Hybrid Beacon Crossing
Realigning the crosswalk to cross the roadway perpendicularly, shortens the crossing distance and promotes visibility. A pedestrian hybrid beacon promotes proper motor vehicle yielding behavior by improving visibility of crossing users.

Planning Level Cost Opinion: $549,000

Option B: Rectangular Rapid Flash Beacon (RRFB) with Geometric Crossing Enhancements.
Widening the roadway and adding a median simplifies the trail crossing. A user actuated RRFB promotes proper motor vehicle yielding behavior, although to a lesser degree than a Pedestrian Hybrid Beacon.

Planning Level Cost Opinion: $325,000

Option C: Full Signal at Lakeland Road, Realign Trail to Intersection
Integration with Lakeland Road reduces the number of crossing locations along the Green Bay Street corridor. A full traffic signal requires motor vehicles to stop for crossing trail users. A path along the road connects to the trail.

Planning Level Cost Opinion: $870,000

Project Sheet: Mountain Bay Trail Crossing at Green Bay Street
Cost Estimates

A project cost for each type of on-street bicycle and trail facility and is shown in Table 6-2 while the total costs for each short-term project is shown in Table 6-3. These cost opinions were developed based on initial planning-level examples of similar constructed projects and industry averages. These costs are fully burdened estimates provided in 2012 dollars rounded to the nearest thousand and do not include costs for right-of-way acquisition, wayfinding signs or other site-specific costs. More detailed cost opinions were developed for the three priority project sheets and are included the refined estimates included in Appendix I: Planning-Level Project Costs.

Table 6-2: Cost Assumption Table*

<table>
<thead>
<tr>
<th>Facility Type</th>
<th>Cost Per Mile</th>
<th>Annualized On-Going Costs*</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signed Route</td>
<td>$7,000</td>
<td>-</td>
<td>Signs every 800’</td>
</tr>
<tr>
<td>Bike Lane/ Shoulder Restriping Only</td>
<td>$44,000</td>
<td>$30,000</td>
<td>Signs every 800’; bike lane marking every 400’</td>
</tr>
<tr>
<td>Bike Lane/ Shoulder Widening and Restriping</td>
<td>$946,000</td>
<td>$30,000</td>
<td>5’ widening on each side. Signs every 800’; bike lane marking every 400’</td>
</tr>
</tbody>
</table>

*Costs include engineering (25%), contingency (15%), and design (20%) allowances.
**Annualized costs assume repainting stripes and pavement markings twice per year.

Maintenance Costs

On-street bikeways and trails require regular maintenance and repair. On-street bikeways are typically maintained as part of standard roadway maintenance programs, and extra emphasis should be placed on keeping bike lanes and roadway shoulders clear of debris and keeping vegetation overgrowth from blocking visibility or creeping into the roadway.

Table 6-3: Short-term Project Cost Summary

<table>
<thead>
<tr>
<th>Type</th>
<th>Project</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trail Crossing</td>
<td>East Green Bay Street / Mountain Bay Trail</td>
<td>$325,000 - $870,000</td>
</tr>
<tr>
<td>Bike Lane Installation</td>
<td>Lake Drive</td>
<td>$115,000 - $125,000</td>
</tr>
<tr>
<td>Trail Infill</td>
<td>Mountain Bay Trail Gap Closure</td>
<td>$26,000 - $2,200,000</td>
</tr>
<tr>
<td>Trail Crossing</td>
<td>Hwy 29 / Wiouwash Trail</td>
<td>$6,000</td>
</tr>
<tr>
<td>Short Term Lake Routes</td>
<td>Signed Bicycle Loop</td>
<td>$160,000</td>
</tr>
<tr>
<td>Quilt Route</td>
<td>Joe Bikeler - NW (33.3 Miles)</td>
<td>$274,000</td>
</tr>
<tr>
<td>Quilt Route</td>
<td>Joe Bikeler - SW (16.8 Miles)</td>
<td>$120,000</td>
</tr>
<tr>
<td>Signed Connection</td>
<td>Hillside Drive/CTH TK A (1.8 Miles)</td>
<td>$17,000</td>
</tr>
<tr>
<td>Signed Connection</td>
<td>CTY TK A (0.5 Miles)</td>
<td>$6,000</td>
</tr>
<tr>
<td>Signed Connection</td>
<td>North Cecil Street (0.6 Miles)</td>
<td>$6,000</td>
</tr>
</tbody>
</table>
Process for Future Prioritization of Facility Recommendations

This Plan is a long-range planning document. While all projects represent important steps for improving Shawano County’s cycling and walking environment, prioritizing projects will allow the County to program limited financial and staff resources in the most strategic way. For this reason, the Plan provides criteria that staff can use to rank the relative benefit derived from projects in a coherent fashion. Table 6-4 shows proposed future project prioritization criteria used to refine the implementation order. The prioritization criteria were recommended by the project team and supported by Shawano County throughout the planning process. The ‘Ranking’ column contains the number of points that would be assigned to each project that meets the measurement (e.g., more than half of funding already secured). The weight of each of the criterion may change annually based on the economic climate or other changes in the areas surrounding each of the projects. Therefore, it is recommended that the evaluation be used to select projects competing for capital funding during every budget cycle, or as grant opportunities arise. This evaluation should be reviewed annually by the BPAC in conjunction with the appropriate County staff.

It should be noted that the purpose of prioritization is to understand the relative priority of projects so that the City, MPO, and/or other agency partners may apportion available funding to the highest priority projects. Longer-term projects are also important, and may be implemented at any point in time as part of a development or public works project, or as additional funds become available. The ranked lists should be considered a “living document” and should be frequently reviewed to confirm they reflect current priorities.

Table 6-4: Recommended Future Project Ranking Criteria

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Ranking</th>
<th>Measurement</th>
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</thead>
<tbody>
<tr>
<td>Budget Need</td>
<td>2</td>
<td>More than half of funding is already secured</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>Less than half of funding is already secured</td>
</tr>
<tr>
<td>Expected Environmental Process or Discretionary Funding</td>
<td>3</td>
<td>Project expected to receive exemption or exclusion (local or state funding)</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Project expected to receive exemption or exclusion (federal funding)</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>Project expected to require minor environmental/discretionary review</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>Project expected to require significant environmental/discretionary review</td>
</tr>
<tr>
<td>Jurisdictional Complexity</td>
<td>3</td>
<td>Project requires departmental coordination with minimal involvement from other agencies</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Project requires coordination with two agencies</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>Project requires coordination with three or more agencies</td>
</tr>
<tr>
<td>Potential to Leverage Other Funding</td>
<td>2</td>
<td>Initiating project now will secure 80% or more of the funds</td>
</tr>
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<td></td>
<td>1</td>
<td>Initiating project now will secure less than 80% of the funds</td>
</tr>
<tr>
<td>Policy Directive</td>
<td>1</td>
<td>Project specified by policy</td>
</tr>
</tbody>
</table>

Funding Sources

Acquiring funding for projects and programs is considerably more likely if it can be leveraged with a variety of local, state, federal and public and private sources. This section identifies potential matching and major
funding sources available for bicycle and trail projects and programs. A detailed description of these funding programs is available in Appendix J: Funding Sources.

**Moving Ahead for Progress in the Twenty-First Century (MAP-21)**

The largest source of federal funding for bicycle and pedestrian projects is the United States Department of Transportation’s (US DOT) Federal-Aid Highway Program, which Congress has reauthorized roughly every six years since the passage of the Federal-Aid Road Act of 1916. The latest act, Moving Ahead for Progress in the Twenty-First Century (MAP-21) was enacted in July 2012 as Public Law 112-141.

MAP-21 authorizes funding for federal surface transportation programs including highways and transit until September 2014. There are a number of programs identified within MAP-21 that are applicable to bicycle and pedestrian projects. These programs include:

- Transportation Alternatives (TAP)
  - Transportation Alternatives
  - Recreational Trails
  - Safe Routes to School
  - Planning, designing, or constructing roadways within the right-of-way of former Interstate routes or divided highways
- Surface Transportation Program (STP)
- Highway Safety Improvement Program (HSIP)
- Congestion Mitigation/Air Quality Program (CMAQ)
- New Freedom Initiative
- Pilot Transit-Oriented Development Planning

**Other Federal Grant Programs**

- Partnership for Sustainable Communities
- Community Development Block Grants
- Community Transformation Grants
- Land and Water Conservation Fund
- Rivers, Trails, and Conservation Assistance Program

Shawano County should track federal communications and be prepared to respond proactively to announcements of grant availability.

**State Funding Sources**

The State of Wisconsin has historically funded bicycle and pedestrian projects above and beyond Federal Transportation Enhancement (TE) dollars through two State grant programs: the Bicycle and Pedestrian Funding Program (BPFP) and the Surface Transportation Program – Discretionary (STP-D). Funding levels
and cycles for both programs has been somewhat sporadic since the early 1990's. In 2002 the Surface Transportation Program – Discretionary (STP-D) was dismantled, but the Bicycle and Pedestrian Funding Program (BPFP) still exists.

**WisDOT Bicycle and Pedestrian Funding Program (BPFP)**

The most recent funding cycle of the BPFP in 2010 provided more than half a million dollars for bicycle and pedestrian planning and design throughout the state. Funding through the program is competitive – a committee ranks projects and makes funding recommendations to the Wisconsin Department of Transportation Secretary.

All BPFP funds have been awarded through FY 2014. Information on the next BPFP funding cycle will be posted on the WisDOT Bicycle and Pedestrian Facilities Program webpage in 2013:

http://www.dot.wisconsin.gov/localgov/aid/bike-ped-facilities.htm

**State Recreation Grant Programs**

The Wisconsin Department of Natural Resources administers several grant programs that may support bicycle and pedestrian facilities that provide a recreational benefit to the state. With the exception of the Recreational Trail Aids program, each program below is part of the Knowles-Nelson Stewardship Program, a fund created by the Wisconsin Legislature in 1989 to “preserve valuable natural areas and wildlife habitat, protect water quality and fisheries, and expand opportunities for outdoor recreation.”

- Acquisition & Development of Local Parks
- Friends of State Lands
- Habitat Area
- Recreational Trail Aids (RTA)
- State Trails
- Urban Green Space
- Urban Rivers

**Transform Wisconsin Fund**

In 2013/14, up to $4.2 million will be provided to community coalitions and partnerships who strive to help Wisconsin residents make healthier choices. 34 grants are available during the first phase of the project for groups and communities focused on promoting healthy lifestyles, including active communities. Visit http://www.transformwi.com/ for more information

**Private Foundations**

Private foundations are an increasingly important source of funds for bicycle and pedestrian planning and implementation. For example, planners in Ozaukee County successfully secured a $10,000 grant from the Bikes Belong Coalition and a $25,000 grant from the Wisconsin Energy Corporation Foundation to partially fund the Ozaukee Interurban Trail.
To read a case study of the Ozaukee Interurban Trail, visit:
http://www.bicyclinginfo.org/library/details.cfm?id=4154

For more information on private foundations, including an extensive list of national foundations visit:
http://www.foundationcenter.org/
Table 6-5: Summary of Potential Funding Sources

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<th>Funding Program</th>
<th>Planning Design and/or Construction</th>
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Appendices

This report references detailed appendix items for additional data and support of Plan recommendations. The following appendices are available:

- **Appendix A: Best Practices Review of Vision, Goals and Objectives**
- **Appendix B: Plan and Policy Review**
- **Appendix C: US Bicycle Routes System Brief**
- **Appendix D: State Trails Crossing Improvement Toolkit**
- **Appendix E: Bicycle and Pedestrian Design Guidelines**
- **Appendix F: Barn Quilt Routes**
- **Appendix G: Park-to-Park Loop Routes**
- **Appendix H: Education and Encouragement Strategies**
- **Appendix I: Planning-Level Project Costs**
- **Appendix J: Funding Sources**
- **Appendix K: Bicycle Friendly Communities Worksheet**
- **Appendix L: Online Survey Form Results and Analysis**

The appendices to this plan may be viewed at:

Shawano County Parks Department Office
W5785 Lake Drive
Shawano, WI 54166

Shawano County Planning and Development Office
311 N. Main St.
Shawano, WI 54166