# Door County Bicycle, Pedestrian and Recreational Facilities Master Plan

## January 2014

**PREPARED BY:**
Alta Planning + Design
Portland, OR / Madison, WI
(503) 230-9862

Wisconsin Bike Fed
409 East Main Street, Suite 203
Madison WI 53703

alta PLANNING + DESIGN

WISCONSIN BIKE FED

# Acknowledgments

Door 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. The plan was prepared with cooperation and coordination with WisDOT, WDNR and the Door County Highway Committee and Door County Board of Supervisors. In addition, the following residents, staff, and other agency and organization members contributed regularly to the Door County Bicycle, Pedestrian and Recreational Facilities Master Plan.

## Door County Plan Workgroup

Amy Bauer, Thumbs Up Riders of Glacial Drumlin Horse Trail Association

Ben Meyer, County Board Supervisor

Bob Dickson, The Shallows

Brian Merkel, NorDoor Sport & Cyclery

Bryan Troutman, Bayshore Property Owners

Jack Moneypenny, Door County Visitors Bureau

John Kolodziej, Door County Highway Department

Leif Hagman, Nor Door Sport & Cyclery

Mariah Goode, Door County Planning Department

Mary Malik, former Washington Island Parks Committee Chair

Randal Sahs, Door County Silent Sports Alliance

Rebecca Kerwin, Door County Planning Department

Sam Perlman, Door County Economic Development Corporation

## *Alta Planning + Design, Wisconsin Bicycle Federation*

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

The Wisconsin Bike Fed is the country's largest, statewide bicycle organization. We work with people from all around Wisconsin to make bicycling convenient, safe, accessible and fun.

# Executive Summary

The Door County Bicycle, Pedestrian and Recreational Facilities Master Plan is intended to guide the development of a network of bicycle routes linking towns and villages within the County as well as to the larger regional network. The improved network will not only make bicycling and walking a more viable mode of transportation, but will contribute to economic development opportunities and enhanced quality of life for county residents.

Door County is a narrow peninsula located in the northeast quadrant of the state, with boundaries adjacent to the waters of Green Bay to the west and Lake Michigan to the east, and Kewaunee County to the south. Bicycle and pedestrian destinations in the county include incorporated areas (e.g., the city of Sturgeon Bay, Villages of Sister Bay and Egg Harbor), unincorporated areas and civic destinations (e.g., Peninsula State Park, Whitefish Dunes State Park etc.)

# Vision

***Door County will enhance transportation choices by developing a continuous network of on-street and off-street bicycle and pedestrian facilities that provide connections to destinations throughout the county. Through these efforts, Door County will encourage healthy transportation choices and establish bicycling as a key recreational choice for residents and visitors alike.***

- Vision Statement of the Door County Bicycle, Pedestrian and Recreational Facilities Master Plan

## Why Bicycling?

Bicycling is a low-cost means of transportation that is non-polluting, energy-efficient, versatile, healthy and fun. It is a simple way to help build physical activity into daily life while reducing traffic congestion and air pollution and saving money. The many advantages bicycling include:

- Bicycling is good for the economy. Bicycling makes up $133 billion of the US economy, funding 1.1 million jobs.[1]
- Bikeable and walkable neighborhoods are more livable and attractive, increasing home values property tax revenue.[2]
- Bicycling can save families money. By replacing short car trips, bicycling can help lessen personal transportation costs.[3]
- Bicycling is 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 bicycling or walking increases 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]

[1] Flusche, Darren for the League of American Bicyclists. (2009). The Economic Benefits of Bicycle Infrastructure Investments.

[2] Cortright, Joe for CEOs for Cities. (2009). Walking the Walk: How Walkability Raises Home Values in U.S. Cities.

[3] Center for Neighborhood Technology. (2005). Driven to Spend: Pumping Dollars out of Our Households and Communities.

[4] Feifei, W., McDonald, T., Champagne, L.J., and Edington, D.W. (2004). Relationship of Body Mass Index and Physical Activity to Health Care Costs Among Employees. Journal of Occupational and Environmental Medicine. 46(5):428-436

[5] Jacobsen, P.L. (2003). Safety in numbers: more walkers and bicyclists, safer walking and bicycling. Injury Prevention 9:205-209.

## Public Involvement

Door County residents, community groups and public agency staff helped guide the development of this Plan. Public input about the opportunities and challenges for better bicycling and recreational opportunities in the county was obtained in several ways, including three public information meetings, and six project meetings with the plan Workgroup and county staff between March 2012 and October 2013.

## Existing Conditions

Door County's designated bikeway network today is small, made up of a few bike facilities in Sturgeon Bay and the Ahnapee State Trail.

This Plan seeks to leverage opportunities, and to overcome barriers to accommodating and encouraging bicycle trips.

**Opportunities include**:

- The potential to extend the Ahnapee trail to span the length of Door County would greatly expand the recreational network. The existing trail corridor already provides numerous opportunities for off-street travel, for a multitude of user types.
- Several local communities have already created Bicycle and Pedestrian Plans. As these plan recommendations are implemented, additional bicycle and pedestrian facilities could be added to connect these communities.

**Constraints include:**

- While bicyclists in Door County benefit from the existence of some on- and off-street bicycle facilities, they do not offer continuous travel opportunities throughout the entire county. There is a distinct lack of connections via the lower traffic coastal roads as they are discontinuous in many locations.
- Lack of wayfinding tools along existing bikeway networks.

## Implementation

The recommended bikeway network will result in a county where biking for recreation and transportation is an everyday, safe activity that is 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 Door County Plan Workgroup, stakeholder groups, and county residents. The implementation strategy presents a targeted methodology for how Door County can institutionalize bicycle improvements into local and regional planning processes and projects.

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

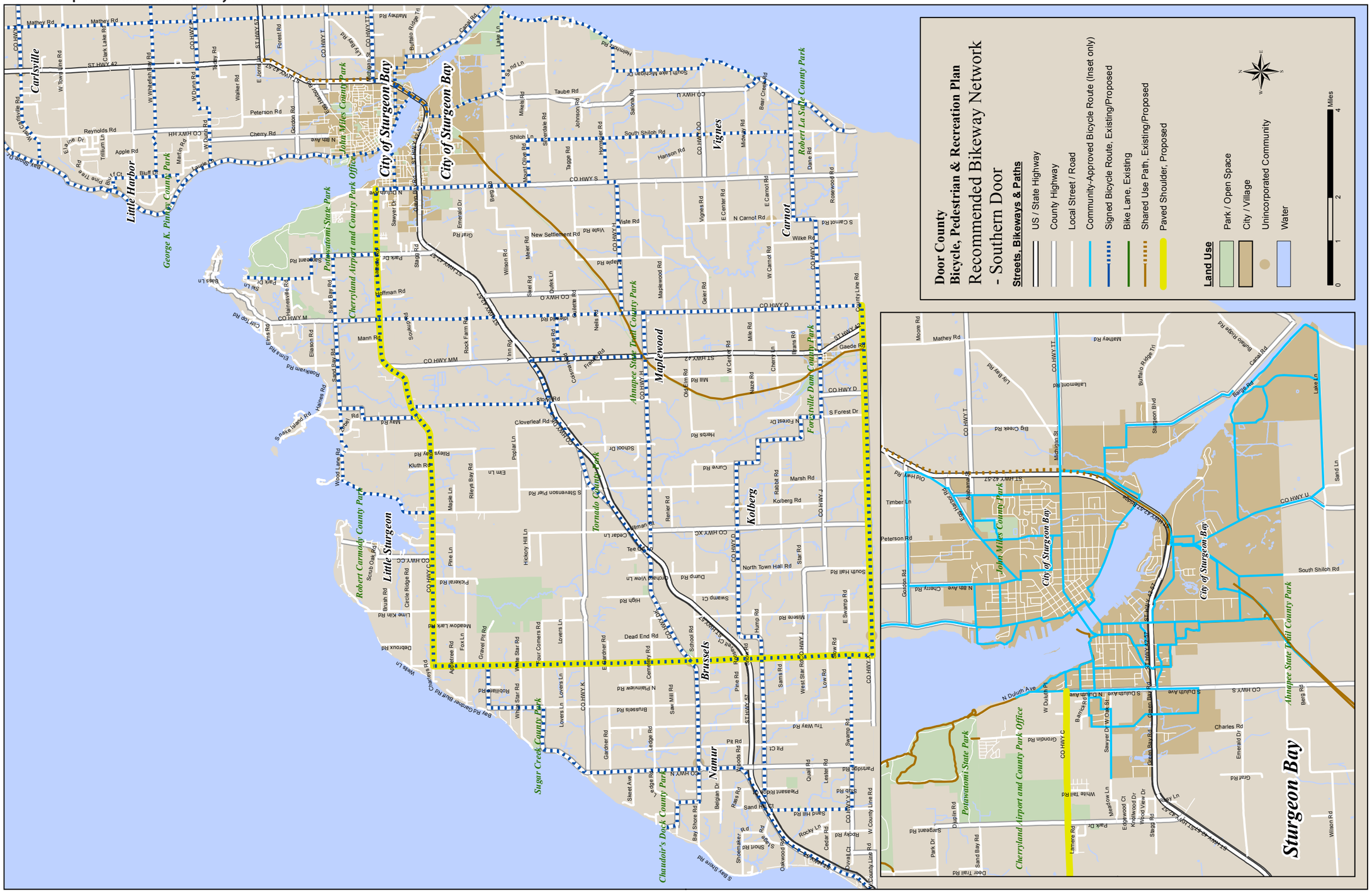
### Key Programs and Policies

- Consider establishing a county-wide Complete Streets policy.
- Establish a permanent Bicycle and Pedestrian Advisory Committee (BPAC) to focus on nonmotorized transportation in the public right of way. Formalizing the BPAC emphasizes the County's 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
- Partner with municipalities, bicycle and other user groups to implement programs across the county.

### Key Short and Long Term Projects

- Paved shoulders on CTH Q from CTH 57 into the Village of Ephraim.
- Paved Shoulders on CTH PD from CTH C to Potawatomi State Park.
- Analysis of the potential alternatives for a CTH A bikeway.
- Initial feasibility and analysis and discussion of a northern extension of the Ahnapee State Trail.

**Map 1: Recommended Bikeway Network - Southern Door**



**Map 2: Recommended Bikeway Network - Northern Door**

# Table of Contents


**1 Introduction ..... 1**

Contents of the Plan ..... 1

Goals and Objectives ..... 2

Public Involvement ..... 3

Plan and Policy Review ..... 4

**2 Economic Benefits of Bicycling and Walking ..... 5**

The Value of a Bicycle and Pedestrian Friendly Environment ..... 6

The Value of a Recreation Friendly Environment ..... 11

**3 Encouraging Bicycle Tourism ..... 13**

Key Partners ..... 14

Beirle's Key Steps For Success in Relation to Door County ..... 15

Sample Bicycle Tourism Websites ..... 18

**4 Existing Conditions ..... 19**

Existing Bicycle Facilities ..... 19

US Bicycle Routes (USBR) System ..... 21

Car-Bicycle Crash Data Map ..... 21

Existing Equestrian Routes ..... 27

Assessment ..... 27

**5 Recommended Bikeway Network ..... 35**

Introduction ..... 35

Facility Definitions for the Door County Bikeway Network ..... 35

Bicycle Facility Selection ..... 41

On-Street Bikeway Recommendations ..... 41

Shared-Use Path Recommendations ..... 51

**6 Recommended Policies ..... 53**

The La Crosse County Experience ..... 53

A Complete Streets Policy for Door County ..... 55

**7 Implementation ..... 57**

Infrastructure Project Phasing ..... 59

Priority Project Sheets ..... 75

Cost Estimates ..... 78

Funding Sources ..... 78

Private Foundations ..... 86

**Appendix A: Plan and Policy Review**

**Appendix B: Complete Streets, Land Use and Design, and Mode Choice**

**Appendix C: High to Low Speed Transition Areas**

**Appendix D: US Bicycle Routes System Brief**

**Appendix E: Demand and Benefits Model**

**Appendix F: Bicycle and Pedestrian Design Guidelines**

**Appendix G: Ahnapee Trail Extension Feasibility Study**

**Appendix H: Education and Encouragement Strategies**

**Appendix I: CTH A Bike Route Analysis**

**Appendix J: Online Survey Results**

**Appendix K: 2013 Estimated Bicycle Tourism Events Financial Impact**

# List of Maps

Map 4-1: Existing Conditions - Southern Door ..... 23
Map 4-2: Existing Conditions - Northern Door ..... 24
Map 4-3: Car-Bicycle Crash Data – Southern Door ..... 25
Map 4-4: Car-Bicycle Crash Data - Northern Door ..... 26
Map 4-5: Opportunities and Constraints - Southern Door ..... 33
Map 4-6: Opportunities and Constraints - Northern Door ..... 34
Map 5-1: "Bike the Door" Tourism Loops - Southern Door ..... 39
Map 5-2: "Bike the Door" Tourism Loops - Northern Door ..... 40
Map 5-3: Recommended Bikeway Network - Southern Door ..... 49
Map 5-4: Recommended Bikeway Network - Northern Door ..... 50
Map 7-1: Proposed Project Phasing - Southern Door ..... 73
Map 7-2: Proposed Project Phasing - Northern Door ..... 74

# List of Tables

Table 5-1: Bike the Door Recreational Loops ..... 37
Table 5-2. Reccommended Shared Use Paths ..... 42
Table 5-3. Reccommended Paved Shoulders ..... 42
Table 5-4. Reccommended Signed Bike Routes ..... 43
Table 7-1: Recommended Programs and Projects Implementation Summary ..... 57
Table 7-2. Bicycle Facility Phasing Criteria ..... 59
Table 7-3. Proposed Project Phasing - Shared Use Paths ..... 60
Table 7-4. Proposed Project Phasing - Paved Shoulders ..... 60
Table 7-5. Proposed Project Phasing - Signed Bike Routes ..... 61
Table 7-6: Cost Assumptions ..... 78
Table 7-7 Summary of Potential Funding Sources ..... 87

*Door County will enhance transportation choices by developing a continuous network of on-street and off-street bicycle and pedestrian facilities that provide connections to destinations throughout the county. Through these efforts, Door County will encourage healthy transportation choices and establish bicycling as a key recreational choice for residents and visitors alike.*

- Vision Statement of the Door County Bicycle, Pedestrian and Recreational Facilities Master Plan

# 1 Introduction

## Setting

Door County is a narrow peninsula located in the northeast quadrant of the state, with boundaries adjacent to the waters of Green Bay to the west and Lake Michigan to the east, and Kewaunee County to the south. The County is comprised of 488 sq. miles of land and over 300 miles of coastal shoreline. The 2010 population of 27,785 showed a 0.5% percent decrease from 2000. Northern Door County has the highest seasonal population density, outside of incorporated areas, while the southern portion of the county is characterized by lower density development patterns. Bicycle and pedestrian destinations in the county include incorporated areas (e.g., City of Sturgeon Bay, Villages of Sister Bay and Egg Harbor), unincorporated areas and other destinations (e.g., Peninsula State Park, Whitefish Dunes State Park etc.)

## Contents of the Plan

The Door County Bicycle, Pedestrian and Recreational Facilities Master Plan provides a path forward for developing a functional bicycling and recreational network across the county. The Plan is organized as follows:

**Chapter 1: Introduction,** provides an overview of this plan and its purpose, and the planning context within Door County and Wisconsin.

**Chapter 2: Economic Benefits of Bicycling and Walking,** discusses the broad range of benefits bicycling and walking for individuals and their communities.

**Chapter 3: Encouraging Bicycle Tourism,** focuses on the range of strategies for promoting tourism by bike and potential benefits to Door County from a strong successful effort.

**Chapter 4: Existing Conditions**, describes Door County's existing bikeway network and summarizes strengths and weaknesses of the system.

**Chapter 5: Recommended Bikeway Network** depicts the recommended system of bikeways and facility types to provide opportunities for cycling and recreation throughout the county.

**Chapter 6: Recommended Policies,** makes the case for a strong Complete Streets policy to support development of the bicycling environment.

**Chapter 7: Implementation,** presents evaluation criteria for facilities and programs and details top-priority projects. This chapter provides cost opinions for the recommended bikeway projects and programs, and identifies potential funding strategies and supporting policies.

# Goals and Objectives

The Vision, Goals, and Objectives of the Door County Bicycle, Pedestrian and Recreational Facilities Master Plan are principles that guide the development and implementation of the plan for the next 20 years. Goals and objectives direct the way the public improvements are made, where resources are allocated, how programs are operated, and how County priorities are determined. They were developed with input from the Door County Plan Workgroup and agency staff.

## Goals and Objectives

**Goal 1. Support bicycling and walking as viable transportation modes in Door County.**
Objective 1.1. Implement the Door County Bicycle, Pedestrian and Recreational Facilities Master Plan recommendations to provide bicycling and walking routes to key destinations.

Objective 1.2. Seek new and stable funding sources and strategies to support the implementation of the Door County Bicycle, Pedestrian and Recreational Facilities 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 Door 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 the County.

Objective 2.3. Continually demonstrate the economic impact of bicycling and other recreational activities to the County.

**Goal 3. Integrate bicycle and pedestrian planning into Door County's planning processes.**
Objective 3.1. Institutionalize bicycle and pedestrian planning into all of Door County's planning efforts.

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

Objective 3.3. Develop a project level Complete Streets checklist that can be used to guide the development of appropriate bicycle and pedestrian facilities.

## Public Involvement

The planning process included many opportunities for residents of Door County to share their experiences and knowledge of biking in the area as described below. Many people shared detailed information on where they ride, things they would like to see improved and program ideas to encourage more people to bike and recreate. The information gathered from residents inspired the recommendations for both on-road and off-road improvements, and ideas for programs to encourage citizens to use active transportation modes and to educate them on how to do so safely.

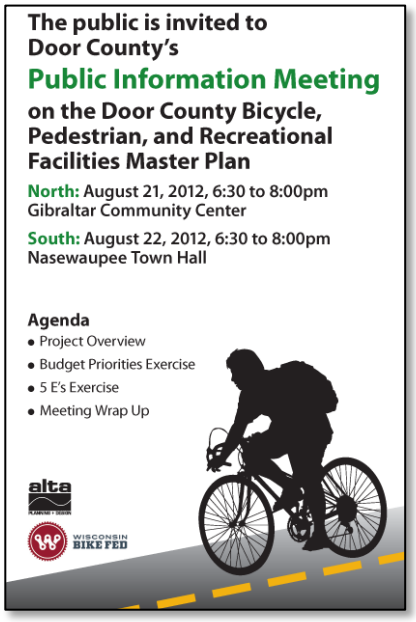



Figure 1-1: The public information meeting was marketed broadly to reach the public.

### Plan Workgroup

The Workgroup guided the plan development, and met 6 times throughout the planning process:

March 27, 2012
May 22, 2012
August 21, 2012
December 4, 2012
May 13, 2013
October 7, 2013

### Public Information Meetings

Three public meeting series were held throughout the planning process, each held in both Northern and Southern Door County to minimize travel time for participants. Meetings were held on the following dates:

May 22 & 23, 2012

August 21 & 22, 2012

May 13 & 14, 2013

Additionally, an online survey was used to gather additional public input. Results from the survey can be found in Appendix J: Online Survey Results.

## Plan and Policy Review

Over 10 years of plans and policy documents relevant to the Door County Bicycle, Pedestrian and Recreational Facilities Master Plan were reviewed to support the creation of the Plan. The review focused on plans and studies prepared by the Wisconsin Department of Transportation (WisDOT), as well as relevant information from Door County and the Cities, Towns and Villages within.

The following plans were reviewed for this analysis. A detailed description of each plan is included in Appendix B: .

**Statewide Documents**

- Administrative Code Trans 75: BIKEWAYS AND SIDEWALKS IN HIGHWAY PROJECTS (2009)
- Wisconsin State Bicycle Transportation Plan 2020 (1998)
- Wisconsin Pedestrian Policy Plan 2020 (2002)
- Advisory on Installation of Bicyclist Compatible Rumble Strips (2011)
- Wisconsin Department of Transportation Guide for Path/Street Crossings (2011)
- Developing a Model for Reducing Bicycle/Motor Vehicle Crashes (2006)
- Wisconsin Rural Bicycle Planning Guide (2006)
- Wisconsin County Bicycle Maps (2009)
- Wisconsin Bicycle Planning Guidance (2003)
- Wisconsin Bicycle Facility Design Handbook (2004)
- Wisconsin Guide to Pedestrian Best Practices (2010)

**Regional and County Focused Documents**

- Bay Lake Regional Bike Plan (2002)
- Door County Bicycle Transportation Capital Improvement Plan (2003)
- Door County Visitor Bureau Bicycle & Other Silent Sports Map (2008)

**Local City, Town, and Village Planning Documents**

- Village of Egg Harbor Bicycle and Pedestrian Plan (2010)
- Town of Gibraltar 2010 Bicycle and Pedestrian Plan (2010)
- Town of Liberty Grove 2010 Bicycle Plan (2011)
- City of Sturgeon Bay Bicycle Master Plan (2011)
- Town of Baileys Harbor 2011 Bicycle Plan (2011)

# 2 Economic Benefits of Bicycling and Walking

Bicycling and walking are low-cost, efficient means of transportation that are non-polluting, energy efficient, healthy, and fun. All people are pedestrians at some point during their day, when walking to a parked car, taking a lunch break, or accessing transit. Bicycles provide a low-cost mobility option to the public as well. Bicycling and walking as means of transportation have been growing in popularity as communities across the country strive to create more balanced transportation systems. In addition, more people are willing to cycle more frequently if better bicycle facilities are provided.[6]

Although bicycling is affiliated more with environmental and health benefits, it also has tangible economic benefits. The League of American Bicyclists reported that bicycling makes up $133 billion of the US economy and funding 1.1 million jobs in 2004.[7] The League also estimates bicycle-related trips generate another $47 billion in tourism activity. Many communities have enjoyed a high return on their investment in bicycling: the Outer Banks of North Carolina spent $6.7 million to improve local bicycle facilities, and gained the benefit of $60 million of annual economic activity associated with bicycling.[8] Multiple studies show that walkable and bikeable neighborhoods are more livable and attractive, increasing home values, [9] resulting in increased wealth for individuals and additional property tax revenue.

Bike facilities can improve retail businesses directly by attracting customers and indirectly by supporting the regional economy. Patrons who walk and bike to local stores have been found to spend more money to visit local businesses than patrons who drive.[10] Other studies show that walkable, bikeable communities attract the young creative class,[11] which can help cities gain a competitive edge and diversify the economic base. By replacing short car trips, bicycling can help middle-class families defray rising transportation costs. Families who drive less spend 10 percent of their income on transportation, compared to 19 percent for households with heavy car use,[12] freeing additional income for local goods and services.

Bicycling can also improve one's quality of life. Since bicycling is among the most popular forms of recreational activity in the U.S.,[13] when bicycling is available as a daily mode of transportation, substantial health benefits

---

[6] Pucher, J., Dill, J. and Handy, S. (2010). *Infrastructure, programs, and policies to increase bicycling: An international review.* Preventative Medicine 50:S106-S125.

[7] Flusche, Darren for the League of American Bicyclists. (2009). *The Economic Benefits of Bicycle Infrastructure Investments.*

[8] N.C. Department of Transportation, Division of Bicycle and Pedestrian Transportation. *The Economic Impact of Investments in Bicycle Facilities.* atfiles.org/files/pdf/NCbikeinvest.pdf

[9] Cortright, Joe for CEOs for Cities. (2009). *Walking the Walk: How Walkability Raises Home Values in U.S. Cities.*

[10] The Clean Air Partnership. (2009). *Bike Lanes, On-Street Parking and Business: A Study of Bloor Street in Toronto's Annex Neighborhood.*

[11] Cortright, Joe for CEOs for Cities. (2007). *Portland's Green Dividend.*

[12] Center for Neighborhood Technology. (2005). *Driven to Spend: Pumping Dollars out of Our Households and Communities.*

[13] Almost 80 million people walking and 36 million people bicycling for recreation or exercise nationally, and 27.3 percent of the population over 16 bicycling at least once over the summer. (National Sporting Goods Association survey, 2003)

result. The health benefit of bicycling for exercise can reduce the cost of health care by as much as $514 per year, which provides a financial incentive to businesses that provide health coverage to their employees.[14]

A 2012 article in the "Door County Peninsula Pulse" cited the numbers of silent sports participants in recent Door County activities and their specific impact on the community[15]. For example:

- There were 251 more participants in the 2012 Ride for Nature than in 2011
- There is an anticipated increase of 8,000 participants in silent sports events in Door County from 2011 to 2012
- 92% of Door County Half Marathon participants reside outside of the County and 46% of those people stayed at a Door County hotel, Bed and Breakfast or campground during their visit
- 84% of the half marathon participants ate or drank at a local establishment after the race

In 2013, just two events, the Door County Century and the Door County Triathlon, were estimated to add $1,127,442 to local tourism and lodging, based on participant surveys. Results of the survey and fiscal impact can be found in Appendix K: 2013 Estimated Bicycle Tourism Events Financial Impact. Implementing the recommendations of the Door County Bicycle, Pedestrian and Recreational Facilities Comprehensive Plan will help the County to maximize the multiple benefits of improving conditions for walking and biking, as well as for other forms of recreation.

## The Value of a Bicycle and Pedestrian Friendly Environment

When considering the level of dedication of time and resources that it takes to create a walkable and bikeable communities, it is also important to assess the immense value of bicycle and pedestrian focused transportation. There are **economic benefits, quality of life benefits, health benefits, environmental benefits** and **transportation benefits** to creating communities that strongly support multi-modal transportation and recreation choices.

Walking helps to improve health and fitness, enhances environmental conditions, decreases traffic congestion, and contributes to a greater sense of community as there is increased opportunity for social interaction.

In a 2011 Community Preference Survey conducted by the National Association of Realtors (NAR), 66% of respondents selected being within walking distance of stores and other community amenities as being important. When given an opportunity to select which community they would most like to live in, a community described as:

"*a mix of single family detached houses, townhouses, apartments and condominiums on various sized lots, with almost all streets having sidewalks, destinations such as shopping, restaurants, a library, and a school are within a few blocks of your home, and where parking is limited when you decide to drive to local stores, restaurants and other places*"

ranked higher and was found to be more desirable than a community described as:

[14] Feifei, W., McDonald, T., Champagne, L.J., and Edington, D.W. (2004). *Relationship of Body Mass Index and Physical Activity to Health Care Costs Among Employees.* Journal of Occupational and Environmental Medicine. 46(5):428-436

[15] Peninsula Pulse, By the Numbers, June 27, 2012

*"only single family houses on large lots, with no sidewalks, destinations such as shopping, restaurants, a library, and a school are within a few miles of your home, limiting your transportation choices to mainly the automobile, but there is enough parking when you drive to these destinations and public transportation, such as bus, subway, light rail, or commuter rail, is distant or unavailable".*

## Economic Benefits

Walking and biking are affordable forms of transportation. Living in a walkable community directly affects transportation costs of residents. According to the Pedestrian and Bicycle Information Center (PBIC), of Chapel Hill, North Carolina, the cost of operating a car for a year is approximately $5,170, while the cost of owning a bicycle is approximately $120/year and walking is virtually free. The PBIC explains, "When safe facilities are provided for pedestrians and bicyclists, more people are able to be productive, active members of society. Car ownership is expensive, and consumes a major portion of many Americans' income." A study cited by the Victoria Transport Policy Institute's 2011 "Transportation Affordability" found that households in automobile-dependent communities devote 50% more to transportation (more than $8,500 annually) than households in communities with more accessible land use and more multi-modal transportation systems (less than $5,500 annually). Walking becomes even more attractive from an economic standpoint when the rising price of oil (and decreasing availability) is factored into the equation. The unstable cost of fuel reinforces the idea that local communities should be built to accommodate people-powered transportation, such as walking and biking. Replacing automobile trips with either walking or bicycling trips, even if infrequently, will reduce overall gas consumption and save money. The recent success of numerous bike share programs across the country further indicates the growing popularity of biking as a way to reduce costs associated with automobile ownership and operation.

There are also economic benefits of a bikeable and walkable community from a real estate standpoint. The study by CEOs for Cities "Walking the Walk: How Walkability Raises Home Values in U.S. Cities" estimates how much market value homebuyers implicitly attach to houses with higher "Walk Scores". The study looked at data for more than 90,000 home sales in 15 different markets around the Nation. While controlling for key characteristics known to influence housing value, the study illustrated a positive correlation between walkability and housing prices in 13 of the 15 housing markets examined.[16]

For example, in Wisconsin, a 1998 study found that lots located adjacent to the Mountain Bay Trail in Brown County sold for an average of 9% more and more quickly than lots that were not adjacent.[17] Within a newer development in Apex, North Carolina, new lots situated on greenways were priced $5,000 higher than comparable lots off the greenway. In Charlotte, North Carolina, national builders typically charge premiums ranging from $1000 to $5000 for $120,000-$200,000 homes bordering open space and greenways".[18]

Trails play a part in making communities more bikeable and walkable, and thus have a positive economic impact in a community. In a survey of homebuyers by the National Association of Realtors and the National Association of Home Builders, trails ranked as the second most important community amenity out of a list of 18 choices.[19] Additionally, the study found that 'trail availability' outranked 16 other options including

[16] CEOs for Cities. (2010) *Walking the Walk: How Walkability Raises Home Values in U.S. Cities*.
[17] Runge, Cole. *Fox River Trail Study*, Prepared for the Brown County Planning Commission, December 2002.

[18] Greenways Inc., *Mecklenburg County Greenway Master Plan 1999*, pg. 4

[19] National Association of Realtors and National Association of Home Builders . (2002). *Consumer's Sur vey on Smart Choices for Home Buyers.*

security, ball fields, golf courses, parks, and access to shopping or business centers. Findings from the American Planning Association[20] , the Rails-to-Trails Conservancy[21], and the Trust for Public Land[22] further corroborate the positive connection between walkability and bikeability, and property values across the country.

According to the Federal Highway Administration in 2008, the basic cost of a single mile of urban, four-lane highway was between $20 million and $80 million. In urban bottlenecks where congestion is the worst, common restrictions such as the high costs of right of ways and the needs to control high traffic volumes can boost that figure to $290 million or more. [23] By contrast, the costs of bicycle and pedestrian facilities range anywhere from a few thousand dollars per mile to rarely more than $1 million, with great variability between types of infrastructure and local circumstances. [24]

## Transportation Benefits

According to the U.S. Environmental Protection Agency, fewer children walk or bike to school than did so a generation ago. In 1969, 48% of students walked or biked to school, but by 2001, less than 16% of students between 5 and 15 walked or biked to or from school. [25] These numbers continue to decrease as more and more children are driven to school. The National Household Travel Survey also found that roughly 40% of all trips taken by car are less than two miles.[26]

Nearly two-thirds of all households say they have satisfactory shopping available within walking distance of their home and 57% of parents with children 13 years or younger live within one mile of a public elementary school. [27] By replacing short car trips with bicycle or walking trips, residents can have a significant positive impact on local traffic and congestion. Traffic congestion reduces mobility, increases auto-operating costs, adds to air pollution, and causes stress in drivers. Furthermore, every car trip replaced with a pedestrian or bicycle trip reduces U.S. dependency on fossil fuels, which is a national goal. Currently, out of every dollar drivers spend on gasoline, at least $0.35 flows into foreign economies. [28]

---

[20] American Planning Association, *How Cities Use Parks for Economic Development*, 2002

[21] Rails to Trails Conservancy, *Economic Benefits of Trails and Greenways*, 2005

[22] Trust for Public Land, *Economic Benefits of Parks and Open Space*, 1999

[23] Active Transportations for America, *The Case for Increased Federal Investment in Bicycling and Walking*, 2008

[24] Active Transportations for America, *The Case for Increased Federal Investment in Bicycling and Walking*, 2008

[25] *National Household Travel Survey*. NHTS Version 1.0 CD (Preliminary Release). Bureau of Transportation Statistics, Washington, D.C., Jan. 2003.

[26] *National Household Travel Survey*. NHTS Version 1.0 CD (Preliminary Release). Bureau of Transportation Statistics, Washington, D.C., Jan. 2003.

[27] (U.S. Census Bureau, American Housing Survey for the United States: 2005. 2006)

[28] Active Transportation for America: *The Case for Federal Investment in Bicycling and Walking*. Rails to Trails Conservancy and Bikes Belong Coalition 2008

According to the Brookings Institution, the number of older Americans is expected to double between 2000 and 2025. [29] The majority of seniors will confront an array of medical and other constraints to their mobility even as they continue to seek both an active community life and the ability to age in place. Trails built as part of the pedestrian transportation network generally do not permit motor vehicle use. However, they do accommodate motorized wheelchairs, which is an important asset for the growing number of senior citizens who deserve access to independent mobility.

Built environments that foster aging in place have repeatedly been associated with more walking, bicycling and transit use, more overall physical activity, and lower body weights; lower rates of traffic injuries and fatalities, particularly for pedestrians; lower rates of air pollution and greenhouse gas emissions; and better mobility for non-driving populations.

Creating a walkable and bikeable community provides greater and safer mobility for all residents, especially the non-driving population. According to the U.S. Census Bureau, there are more than 60 million Americans who do not drive because they are not old enough. An additional 30 million adults are not licensed to drive for a variety of reasons including economics, age, disability and choice. Eight million Americans above the age of 60 do not have a driver's license, and there are other licensed drivers who just choose not to drive. [30]

Providing places to walk or bike in order to increase mobility for these 90+ million citizens enhances environmental conditions, decreases traffic congestion, improves overall health and contributes to a greater sense of community.

## Health Benefits

Participation in physical exercise is an effective way of managing a person's mental, emotional and physical state. Pedestrian activities are some of the most highly recommended types of exercises to incorporate a daily schedule, due to ease of accommodation.

In a December 2010 article published by the Mayo Clinic, it is suggested that, "walking, like other exercise, can help you achieve a number of important health benefits such as:

- Lowered low-density lipoprotein (LDL) cholesterol (the "bad" cholesterol)
- Higher high-density lipoprotein (HDL) cholesterol (the "good" cholesterol)
- Lowered blood pressure
- Reduced risk of or managing type 2 diabetes
- Improved mood
- Feeling strong and fit

Research shows that regular, brisk walking can reduce the risk of heart attack by the same amount as more vigorous exercise, such as jogging. In addition to research by the Mayo Clinic, a growing number of studies show that the design of communities—including neighborhoods, towns, transportation systems, parks, trails and other public recreational facilities—affects people's ability to reach the recommended daily 30 minutes of moderately intense physical activity (60 minutes for youth). In short, a diverse bicycle and pedestrian network can create better opportunities for active lifestyles by providing places to both walk and bike.

---

[29] Brookings Institution. 2003. *The Mobility Needs of Older Americans: Implications for Transportation Reauthorization*.

[30] U.S. DOT "Distribution of Licensed Drivers 2001

The increased rate of disease associated with inactivity reduces quality of life for individuals and increases medical costs for families, companies, and local governments. The CDC determined that creating and improving places to be active could result in a 25% increase in the number of people who exercise at least three times a week.

This is significant considering that for people who are inactive, even small increases in physical activity can bring measurable health benefits. The establishment of a safe and reliable network of sidewalks and trails can have a positive impact on the health of nearby residents. The Rails-to-Trails Conservancy puts it simply: "Individuals must choose to exercise, but communities can make that choice easier". [31]

## Environmental Benefits

When people choose to get out of their cars and walk or bike, they make a positive environmental impact. They reduce their use of gasoline, which then reduces the volume of pollutants in the air. Appendix E: Demand and Benefits Model specifically quantifies these environmental benefits for Door County. Other environmental impacts can be improvements in local water quality as fewer automobile-related discharges wind up in the local rivers, streams, and lakes.

Trails and greenways are part of the bicycle and pedestrian network, conveying their own unique environmental benefits. Greenways protect and link fragmented habitat and provide opportunities for protecting plant and animal species. They also reduce air pollution by protecting large areas of plants that create oxygen and filter air pollutants such as ozone, sulfur dioxide, carbon monoxide and airborne particles of heavy metal. Finally, greenways improve water quality by creating a natural buffer zone that protects streams, rivers and lakes, preventing soil erosion and filtering pollution caused by agricultural and road runoff.

## Quality of Life Benefits

Many factors go into determining quality of life for the citizens of a community: the local education system, prevalence of quality employment opportunities, and affordability of housing are all items that are commonly cited. Increasingly however, citizens claim that access to alternative means of transportation and access to quality recreational opportunities such as parks, trails, greenways, and bicycle routes, are important factors for them in determining their overall pleasure within their community. Communities with such amenities can attract new businesses, industries, and residents, and more specifically in the case of Door County – more tourists.

Members of, and visitors to, a community who walk or bike to a destination are more likely to meet or make friends or other social or commercial contacts than people who drive to a destination. Provided there are viable alternatives to driving, "Americans are willing to change their travel habits, as the dramatic increases in gas prices in 2008 have shown. Every day, more commuters switch to public transportation, bicycling and walking in places where prior infrastructure investments have made these options safe and convenient". [32]

Other impacts include a reduction in overall neighborhood noise levels. According to the National Center for Safe Routes to School, "Walking or biking to school gives children time for physical activity and a sense of

[31] U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. (2002). Guide to Community Preventive Services.

[32] Active Transportation for America: *The Case for Federal Investment in Bicycling and Walking*. Rails to Trails Conservancy and Bikes Belong Coalition 2008

responsibility and independence; allows them to enjoy being outside; and provides them with time to socialize with their parents and friends and to get to know their neighborhoods". [33]

It is particularly important for people who are transportation disadvantaged (people with disabilities, seniors, children, and people with low incomes). Poor walking and biking conditions can contribute to what is considered "social exclusion", that is, the physical, economic and social isolation of vulnerable populations.

In a 2004 Centers for Disease Control and Prevention survey, 1,588 adults answered questions about barriers to walking to school for their youngest child aged 5 to 18 years. [34] The main reasons cited by parents included distance to school, at 62%, and traffic-related danger, at 30%. Strategic additions to municipal trail systems could shorten the distance from homes to schools, and overall pedestrian and bicycle improvements can improve the safety of roadways.

## The Value of a Recreation Friendly Environment

The Door County Bicycle, Pedestrian and Recreational Facilities Master Plan also includes equestrians as a user group. Increasing local and regional opportunities for places to ride may also have a significant impact on the local economy.

In 2007, the Survey Research Center at the UW – River Falls surveyed 10,000 WI residents to estimate the number of horse owners in the state. The following are key observations from the respondents who owned horses.

1. There are between 299,341 and 351,208 horses in the state and their total value is between $998 million and $1.2 billion.

2. The equine industry directly generates $30 million to $35 million in annual revenues and $735 million to $862 million in expenses. The equine industry is, in short, a significant economic sector in the state.
3. The total impact of the equine industry in Wisconsin, including indirect and induced impacts, is estimated to be

    - $1.3 billion and $1.5 billion in sales or total economic impact per year
    - 33,259 to 37,416 jobs that generate between $269 million and $303 million in labor income
    - $351 million and $395 million in total income in Wisconsin
    - $106-$120 million in taxes (local + state + federal) are generated because of the equine industry
4. Most horse owners keep their horses on their own property (81%) and the most common breed is the quarter horse (63% of horse owners have at least one quarter horse). Horses in Wisconsin are primarily used for pleasure/trail riding (78%) or showing/competing (56%), with most owners riding about once a week (52%).

[33] http://www.saferoutesinfo.org/sites/default/files/WTS-talking-points-2009_0.pdf

[34] U.S. Centers for Disease Control and Prevention. *Barriers to Children Walking to or from School United States 2004*, Morbidity and Mortality Weekly Report September 30, 2005.

5. The issues facing Wisconsin's horse owners focus primarily on land use concerns. Housing developments that limit where horses can be ridden (61%) and lack of local trails (50%) were the most commonly cited issues facing the states equestrians. [35]

As is evident from the survey, creating additional opportunities for equestrians to ride has the potential to increase a tourism niche within the County.

[35] Survey Research Center Report 2009

# 3 Encouraging Bicycle Tourism

More and more rural communities are looking to tourism as a priority within their economic development plans, and bicycle tourism is a popular and growing focus area. Door County has unique assets to offer to visitors, as bicyclists seek open spaces, lightly traveled roads and the intimate experience that its many small towns can provide. By efficiently identifying opportunities and creating targeted marketing plans Door County can increase its popularity as a bicycling destination and further reap the benefits of this low-impact and sustainable segment of the tourism industry.

The County should consider convening a subcommittee of interested community representatives and organizations to complete an opportunity analysis and action plan to promote and foster bicycle tourism. The subcommittee members should start by educating themselves on the market sector (what bicycle tourists want; submarkets within the overall niche and how they differ; demographics of bicycle tourists) and developing a shared understanding of the benefits of bicycle tourism. Next, the group should analyze a) current assets, b) current challenges, c) potential improvements, and d) current and potential partners. Finally, an action plan should be created to prioritize efforts that will make the biggest difference, followed by a media outreach strategy to market the region to more potential bicycle tourists. This section provides a list of key partners who should be considered when developing an action plan as well as other potential partners. An analysis of the four key steps to success, as identified in the Beierle Bike Tourism study, is presented here describing Door County's current status as it relates to each key.[36] It concludes with a listing of sample websites that are meant to inspire ideas on how to improve Door County-focused web based information for bicycle tourists.

[36] Beierle, H. (June 2011). Bicycle Tourism As A Rural Economic Development Vehicle. http://www.adventurecycling.org/routes/nbrn/resourcespage/BeierleBikeTourism.pdf

## Key Partners

The key partners to be considered when developing an action plan include the following:

### Door County Visitor Bureau

Located in Sturgeon Bay, this agency provides vital information to many Door County tourists via its website. Its office is often the first stop for visitors to the county.

http://www.doorcounty.com/

### Door County Economic Development Corporation

The Door County Economic Development Corporation works on programs and initiatives to continually improve the local business climate and the area's preparedness for economic development.

http://www.doorcountybusiness.com

### Door County Silent Sports Alliance (DCSSA)

The mission of DCSSA is to promote and enhance participation in silent sports within Door County.

http://www.doorcountysilentsports.org

### Door County Green Fund

A foundation created to help with land acquisition for conservation of key parcels. The foundation has broadened its scope over the years and now funds a wide variety of "green" projects. It should be considered a partner for "green" tourism and travel project ideas.

http://www.greenfund.com

### Wisconsin Department of Tourism

The Department of Tourism website and office is often the first place people go when planning a trip.

http://www.travelwisconsin.com/

### Potential Partners

Other potential partners that might have an interest and role to play include:

- **Towns, villages and the City of Sturgeon Bay** – Local municipalities are important parties in initiating and supporting programmatic efforts.
- **Local walking/bicycling/trails committees** – Communities with bicycle, pedestrian, and/or trails/greenways committees can help coordinate efforts and may be able to connect needs with interested volunteers.
- **State and County Parks**– The state and county parks of Door County are natural partners for building bicycle tourism as they are popular destinations. Peninsula State Park has several miles of great trails within the park and is already a well-known place to enjoy bicycling and walking.
- **YMCA and other youth-oriented service providers** – These groups can partner on programs that benefit children.

- **Cycling and other User Groups** – User groups may be able to provide volunteer support for bicycling programs.
- **Local chambers of commerce, business associations, business improvement districts** – These groups may be interested in supporting initiatives that attract residents and visitors.

## Beierle's Key Steps For Success in Relation to Door County

In June 2011, Heidi Beierle published her work on bicycle tourism titled "Bicycle Tourism as a Rural Economic Development Vehicle". Her study provides an informative overview of what touring bicyclists need and how small communities can cater to them as a tool for economic development. In Section 5 of the study she discusses four key steps to guide program development: assess the potential, plan and organize, prepare, protect and manage and finally, market for success. For each basic step several subcategories expand upon the concept. The table below lists the four key steps, the related subcategories, an explanation of each subcategory, and an analysis of Door County's current status in relation to each key or subcategory. The Working Group Issue Score (A – C) indicates the level of influence and control the Door County Working group felt it might have on each specific sub category.

Table 1. Four Keys Steps to Success to increase Door County Bicycle Tourism

| Key Steps | Key Sub Categories | Background | Door County Status | Working Group Issue Score |
|---|---|---|---|---|
| **Key Step 1: Assess Potential** | | | | |
| | Evaluate cycling assets | Identify Adventure Cycling routes, scenic byways or rustic roads, recreational bike paths or shared use trails, locally popular road routes. | This effort is ongoing with the current Bicycle, Pedestrian, and Recreational Trail planning process. | **A** |
| | Identify the community's or region's uniqueness | Cyclists and other visitors are drawn to unique places, make sure to leverage unique assets of the region. | Door County has successfully marketed itself as a unique place for vacations (e.g., "Cape Cod of the Midwest") and as a place to consider home. Continuing these efforts here and enhancing focus on the bike/walk/horseback riding related assets is essential. | **A** |
| | Evaluate off-season and other assets | Look for assets that synergistically pair cycling to support investments already made. | The growing number of special events in the "shoulder seasons" point to the fact that Door County understands this concept and should continue these efforts. | **A** |

| Key Steps | Key Sub Categories | Background | Door County Status | Working Group Issue Score |
|---|---|---|---|---|
| **Key Step 2: Plan and Organize** | | | | |
| | Space lodging | Beierle suggests spacing lodging 50 miles apart at a maximum and providing both hotels/bed and breakfast and camping options. | Due to its relatively small geographic size, Door County's lodging options are currently well within the suggested range. Door County currently offers a variety of lodging at a variety of price points. | **B** |
| | Cultivate relationships | Build relationships among businesses, cycling organizations or clubs, various government agencies and community organizations. | The Working Group is an excellent example of how to cultivate relationships and should continue and build upon efforts. | **A** |
| | Research and participate in economic development programs | Understanding what is available in the region for business development assistance and grants is useful in building the cycling tourism trade. | The current Working Group has several members with Key Connections to fulfill this Key to Success. | **A** |
| | Use historic resources in business development strategies | Historic preservation helps a community maintain its sense of place and its unique character. | Door County has long supported historic preservation and continues to have strong support throughout the county. | **B** |
| **Key Step 3: Prepare, Protect and Manage** | | | | |
| | Manage, measure and evaluate | Sustain the assets of any one location by understanding how many visitors it can comfortably handle and how many visitors are actually visiting. | One might argue that this is already an issue with some destinations in Door County. Continue to evaluate visitor pressure and strategies to minimize its impacts. | **B** |
| | Create Americans with Disability Act (ADA) accessible destinations | ADA compliance makes it easy for bicyclists, stroller users and others to get to destinations. | Door County communities continue to work on these issues and compliance varies. | **C** |
| | Evaluate surface conditions and infrastructure | Focus on conditions along bike touring routes, plan for signage, regular maintenance and improvements, if needed. | This Key to Success is being addressed during this planning process. Yearly reviews of the plan and evaluation of progress will ensure this key is addressed on a regular basis. | **A** |
| | Evaluate spacing needs of visitor services | Beierle suggests working with local businesses to fill service gaps. | Cafes, wifi access, lodging, and bike shop access are, for the most part, evenly distributed across Door. Gaps may exist on the east side of the peninsula and in southern Door County. Identify the gaps and work with local businesses to address them. | **B** |

| Key Steps | Key Sub Categories | Background | Door County Status | Working Group Issue Score |
|---|---|---|---|---|
| | Interpret and educate | Sharing a community's history, culture and scenery makes a visitor's trip more interesting and drives home the area's uniqueness. | Door County has much to offer in this area. Make sure the interpretation and education opportunities are accessible to bicycle tourists. | **A** |
| **Key Step 4: Market for Success** | | | | |
| | Market destinations and attractions | Evaluate existing destinations and attractions to determine which would be most attractive to bicycle tourists and focus efforts there. | The Working Group has a great deal of knowledge about what Door County has to offer. Use that knowledge base to begin the evaluation efforts. | **A** |
| | Be aware | Touring cyclists are a diverse group, err on the side of sharing too much info about local events. | While this contradicts the above Key to Success, it is important to remember that cycling tourist can be anyone from college students on a shoestring budget to well-off retired couples seeking a weekend getaway. | **A** |
| | Employ positive word or mouth advertising | Bicycle tourists talk to other bicycle tourists and word of mouth is a low-cost high-return form of advertising. | Encourage the use of the social media tools available, make use of them to "talk up" local events. | **A** |
| | Be a friendly community | Friendly interactions with locals are always welcome by travelers. | Door County is known as a tourist destination and already has a reputation as a warm and friendly place. Continue to leverage this existing asset. | **B** |
| | Layer services within businesses | A business that provides bike rentals, wifi, local lodging information, and bike repair services is more likely to survive than one that only provides one of those services. | Continue to work with local business owners to help them understand touring cyclists' needs and to help them understand the economic benefits of meeting those needs. | **B** |
| | Working Group Issue Score notes how much influence or control the group has over each Key Step to Success | | | |
| | A indicates much influence and control | | | |
| | B indicates the group can influence issues but not control them | | | |
| | C indicates not much influence and no control | | | |

## Sample Bicycle Tourism Websites

The internet has become the first place many people utilize to plan a trip. As such, it is best to provide accurate online and detailed information about Door County's bicycling assets, both on-road and off-road. To further that effort, a few examples of excellent bicycle information websites are provided below for consideration.

### Bike the Keweenaw (MI)

With its various categories (events, road, mountain, tours) and its detailed information under each category, this website is an excellent example of how to provide the information bicyclists seek in a clear and useful manner.

http://www.bikethekeweenaw.com/

### Tour de Lane

An example of organizing a signature event for recreational cyclists, this is similar to the Door County Century, but the event spans an entire weekend offering several rides in a variety of lengths and themes.

http://tourdelane.com

### Route Verte

Quebec long ago saw the potential of bicycle tourism as an economic tool. With over 3,000 miles of bicycle route and its "Bienvenue cyclistes" certification program (a way for bike friendly businesses to increase their visibility), Quebec leads the way in North America in terms of utilizing bicycle tourism as a method to encourage economic development.

http://www.routeverte.com/rv/index.php?page=home

### Outer Banks, NC

In the Outer Banks, NC, bicycling is estimated to have an annual economic impact of $60 million with 40,000 plus visitors a year. People choose to vacation there specifically for the bicycling experience offered.

http://www.outerbanks.org/outerbanks-biking/

# 4 Existing Conditions

This chapter describes the current on- and off-street bikeway network in Door County. The chapter begins with an inventory of existing bicycle route and shared use path facilities, followed by an analysis of system strengths and weaknesses which highlights key areas where improvements may be needed.

## Existing Bicycle Facilities

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. The maps on the following pages illustrate the existing bikeway network in Door County, which consists of a few bike facilities in Sturgeon Bay and the Ahnapee State Trail.

### 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, paved shoulders and bicycle lanes are the only implemented bikeway types in Door County.

**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 just 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 also 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 in urban areas on arterial and collector streets, where higher traffic volumes and/or speeds warrant greater separation of bicyclists and motor vehicles.

**Signed Bicycle Routes**: Bike routes are streets and roadways that are identified as bicycle routes using 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 may also be identified on busier roads that also include one of the other facilities identified here. All bicycle routes should include wayfinding signage that clearly identifies direction and distance to nearby attractions.

There are approximately 8.25 miles of existing signed bike routes, shown on Map 4-1 and Map 4-2. The on-street routes provide limited connectivity between different destinations in the county.

### Existing Off-Street Bikeways

Off-Street Bikeways, commonly called shared-use paths (also referred to as "trails" and "multi-use paths" or "off-street trails") 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: multi-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 Trails**: Shared-use trails have exclusive right-of-way and are not directly adjacent to a roadway (e.g., following a railway alignment). Multi-use trails are frequently used by cyclists riding long distances. In addition to fast-moving cyclists, recreational riders use these trails for family outings or more leisurely rides.
- **Side Paths:** Some shared-use paths in Door County are directly adjacent to roadways and within the street right-of-way, such as where the Ahnapee State Trail enters Sturgeon Bay. 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 regional trail networks. 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 Door 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 for the bicycle transportation network.

The Ahnapee State Trail is an example of a shared use trail that accommodates bicyclists and pedestrians, among other users.

As shown on Map 4-1 and Map 4-2, the current off-street bikeway network is comprised of approximately 30 miles of gravel trail (part of the Ahnapee State Trail) and a short segment of paved trail in Sturgeon Bay. Additionally, the following facilities exist in the county:

- Gibraltar School Trail - 500 feet
- Horseshoe Bay Road Trail - 1500 feet
- Sister Bay/HWY 42 Trail – 4450 feet

## US Bicycle Routes (USBR) System

In 2008 the American Association of State Highway and Transportation Officials (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 usually use roads and streets suitable for bicycle travel with separated trails incorporated where appropriate. Facility construction/upgrade is not required but is encouraged over time as roads are maintained and upgraded.

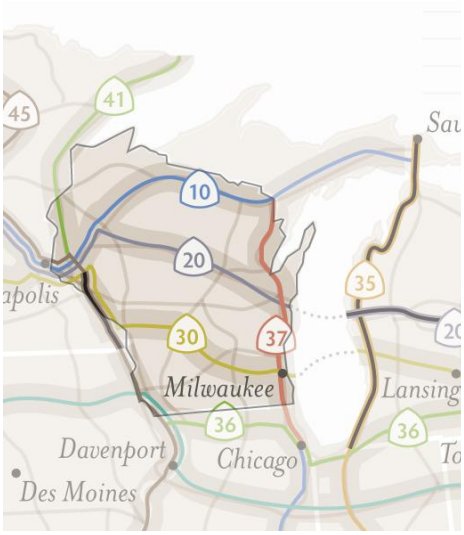



Figure 4-1: AASHTO Recommended US Bicycle Routes System in Wisconsin

As for Door County, USBR 37 runs north-south along an unspecified alignment connecting Milwaukee to Chicago, IL. The proposed Wisconsin alignments can be seen in Figure 4-1. There is a strong possibility to traverse the shoreline as much as possible and extend the route alignment into Door County. WisDOT plans to apply for USBR status for USBR 30 in the Spring of 2014. USBR 37 would be the next trail considered for formal designation and the planning process is expected to begin in late 2014.

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 D: US Bicycle Routes System Brief.

## Car-Bicycle Crash Data Map

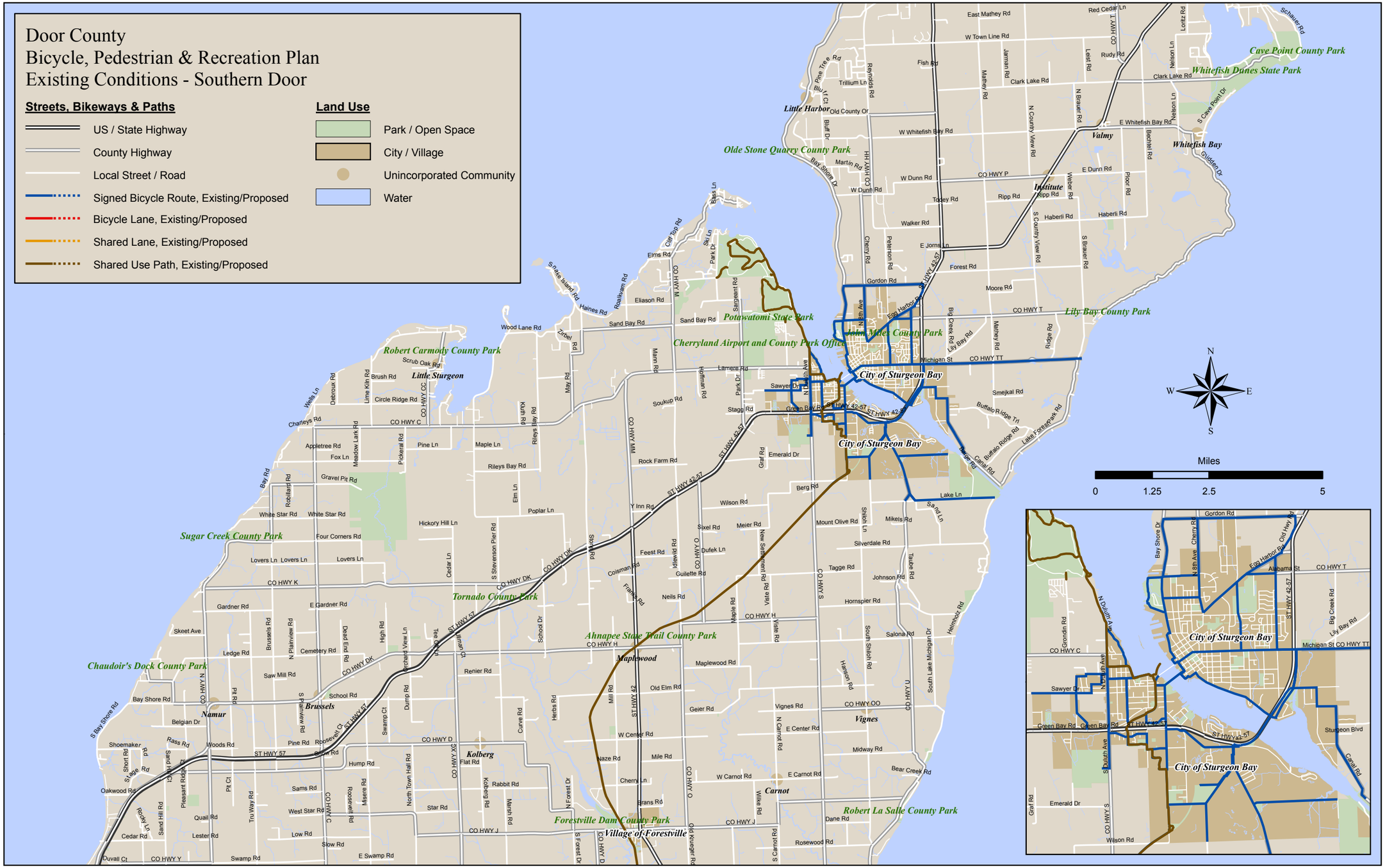
According to national surveys, safety concerns are the most commonly cited reason that people do not bicycle more often. In the US, most reported motor vehicle / bicycle crashes occur at major arterial intersections and involve a disproportionate number of younger adults and children.[37] While analysis 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 Door 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 4-3: Car-Bicycle Crash Data. When possible and relevant, crash data informed Plan recommendations for designated bike routes and infrastructure improvements.

[37] Federal Highway Administration. "Bicycle Type Manual for Bicyclists" (http://www.fhwa.dot.gov/publications/research/safety/pedbike/96104/). n.d. Web. March 1, 2011.

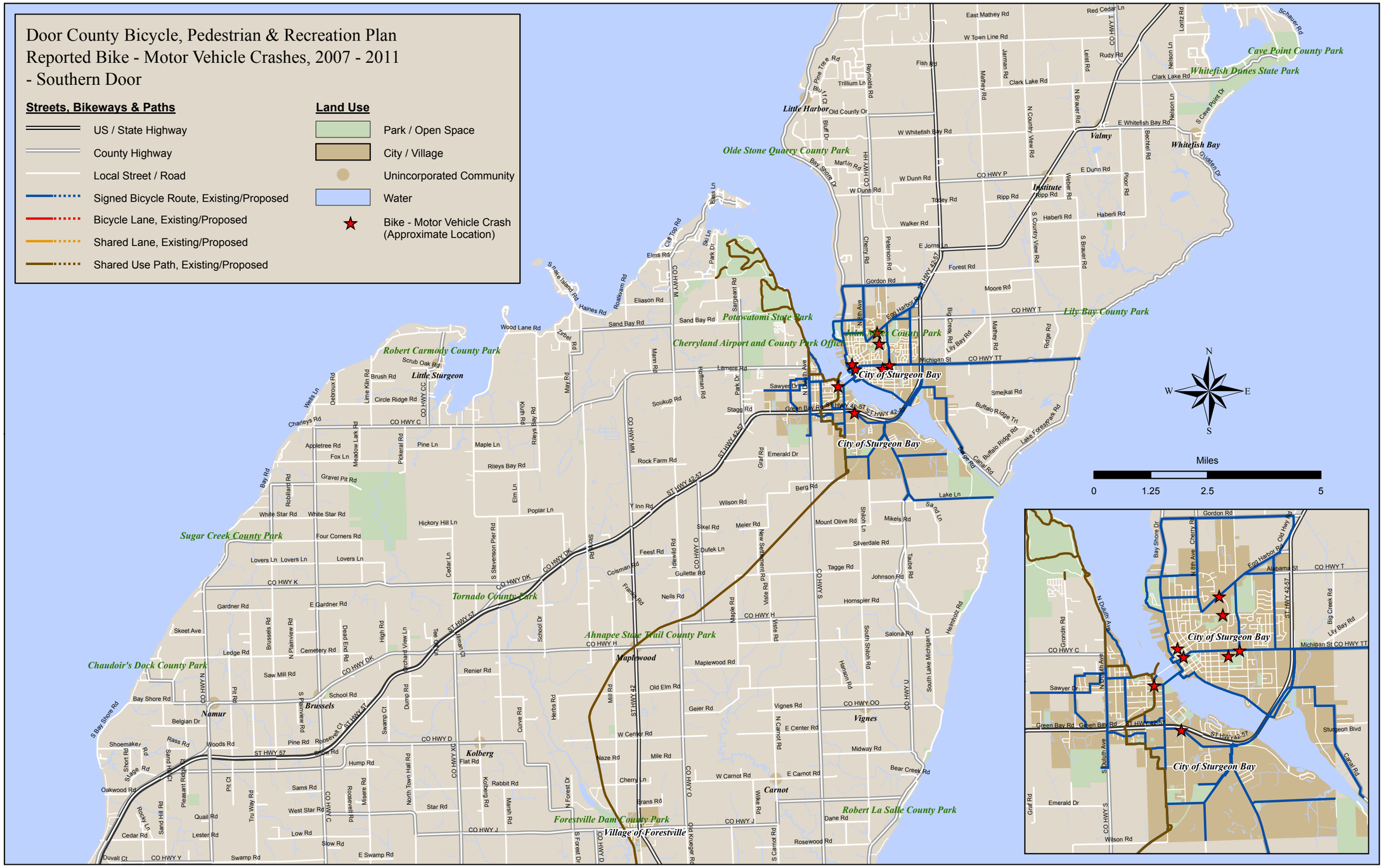
*This Page Intentionally Left Blank*

**Map 4-1: Existing Conditions - Southern Door**



**Map 4-2: Existing Conditions - Northern Door**

**Map 4-3: Car-Bicycle Crash Data - Southern Door**



**Map 4-4: Car-Bicycle Crash Data - Northern Door**

## Existing Equestrian Routes

In Southern Door, the following route is an option for riders to travel from the Ahnapee State Trail to Potawatomi State Park: Idlewild Road to CTH M to Sand Bay Road to CTH PD to Potawatomi State Park.

There are riders currently using CTH H and Idlewild Road to access the Ahnapee Trail. There are steep ditches that force riders out of the ditch line and onto the road in some places creating safety concerns. Also in Southern Door there is a need for road signs along CTH H from CTH S to STH 57.

Riders accessing the Institute Saloon located at the intersection of CTH P, Dunn Road and STH 57 cross the road multiple times per week. Currently, there is no signage alerting road users to the presence of horses. The Saloon caters to horses and riders by providing a hitching post.

Riders cross CTH B to access Birminghams on CTH B, another business that caters to trail riders. This location provides water for horses. Currently, there is no signage.

CTH I from STH 42 to STH 57 is heavily used by riders. This route has significant motor traffic and is a preferred route for cyclists as it provides access from one side of the county to the other. There is currently no signage alerting motorists to the presence of equestrians.

Other heavily used roads are CTH T from STH 57 to Egg Harbor; CTH V from STH 57 to CTH T, Plum Bottom Road from STH 42 to CTH V, and Sunny Slope Road from STH 42 to CTH T.

The local trail group, the Thumbs Up Riders of G.D.H.T.A, is making progress in obtaining a public trail system between Carlsville and Egg Harbor. Many of the proposed routes are already being used by trail riders but the routes are not yet published or official. Once finalized, these routes should be mapped and signed.

The proposed public horse trail will also include riding along or crossing on Willow Road, Hillside Road, & Division Road just South of Egg Harbor. Door County Kamping Resort is interested in catering to equestrian camping once the public trail is in place. They have verbally provided permission for a trail to run through their property located at the end of Court Road. As the trail moves North from Egg Harbor to Peninsula State Park, it is anticipated that it will cross CTHs E and EE.

The long-term goal of the Thumbs Up Riders is to have a county-wide equestrian trail system for use by local and visiting riders.

## Assessment

### Constraints

Described below, bicyclists in Door County face a variety of challenges. Major barriers include a lack of cycling infrastructure, lack of direct east/west and north/south connectors, and challenging intersections, identified in greater detail on Map 4-5: .

**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 current limited corridors of bikeways do not serve recreational riders who want to quickly connect into the Ahnapee for long recreational rides. The system also does not serve utilitarian cyclists who want to ride to a workplace or shopping center quickly. A complete network of on- and off-street bikeways would provide routes for cyclists of all abilities and trip purposes.

**Gaps**

While bicyclists in Door County benefit from the existence of some on- and off-street bicycle facilities, they 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. There is a distinct lack of connections via the lower traffic coastal roads as they are discontinuous in many locations.

**Lack of Wayfinding Tools**

Existing signage is a remnant of a past effort to create bike routes in the county. The Door County bikeway system could benefit from signage and additional wayfinding tools to orient users and direct them to and through major destinations like town centers, 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.

**Congestion of Local Roads**

The geographical nature of the peninsula limits the transportation network which is often overtaxed during the busy tourist season. Lack of bicycle facilities further complicates this issue.

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

In Door County, motorists often disregard marked crosswalks and warning devices. 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 Door County. These system strengths and related opportunities are described below and identified on Map 4-5: .

**Existing Trail Corridor**

The potential to extend the Ahnapee trail to span the length of Door County would greatly expand the recreational network. The existing trail corridor already provides numerous opportunities for off-street travel, for a multitude of user types. This plan recommends additional opportunities to expand the system providing a continuous network of safe, convenient and scenic travel routes for off-street travel. The Ahnapee Trail Extension Feasibility Study is included in Appendix G: Ahnapee Trail Extension Feasibility Study.

**Opportunities to Develop Enhanced Bicycle Facilities in Targeted Municipalities**

Several local communities have already created Bicycle and Pedestrian Plans. As these plan recommendations are implemented, additional bicycle and pedestrian facilities should be added to connect communities (e.g., off-street trails and bike lanes) to increase the safety and comfort of all system users.

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

The Door County Bike Map prepared by the WisDOT in 2009 rates existing state and county roadways on 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 in Southern Door County include CTH DK, K, Y and N. Northern Door examples include CTHs TT, T and Q. Routes are shown on Figure 4-2 and Figure 4-3. 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 Door County, several local Bicycle and Pedestrian Plans call for the implementation of infrastructure.

**Gentle Terrain**

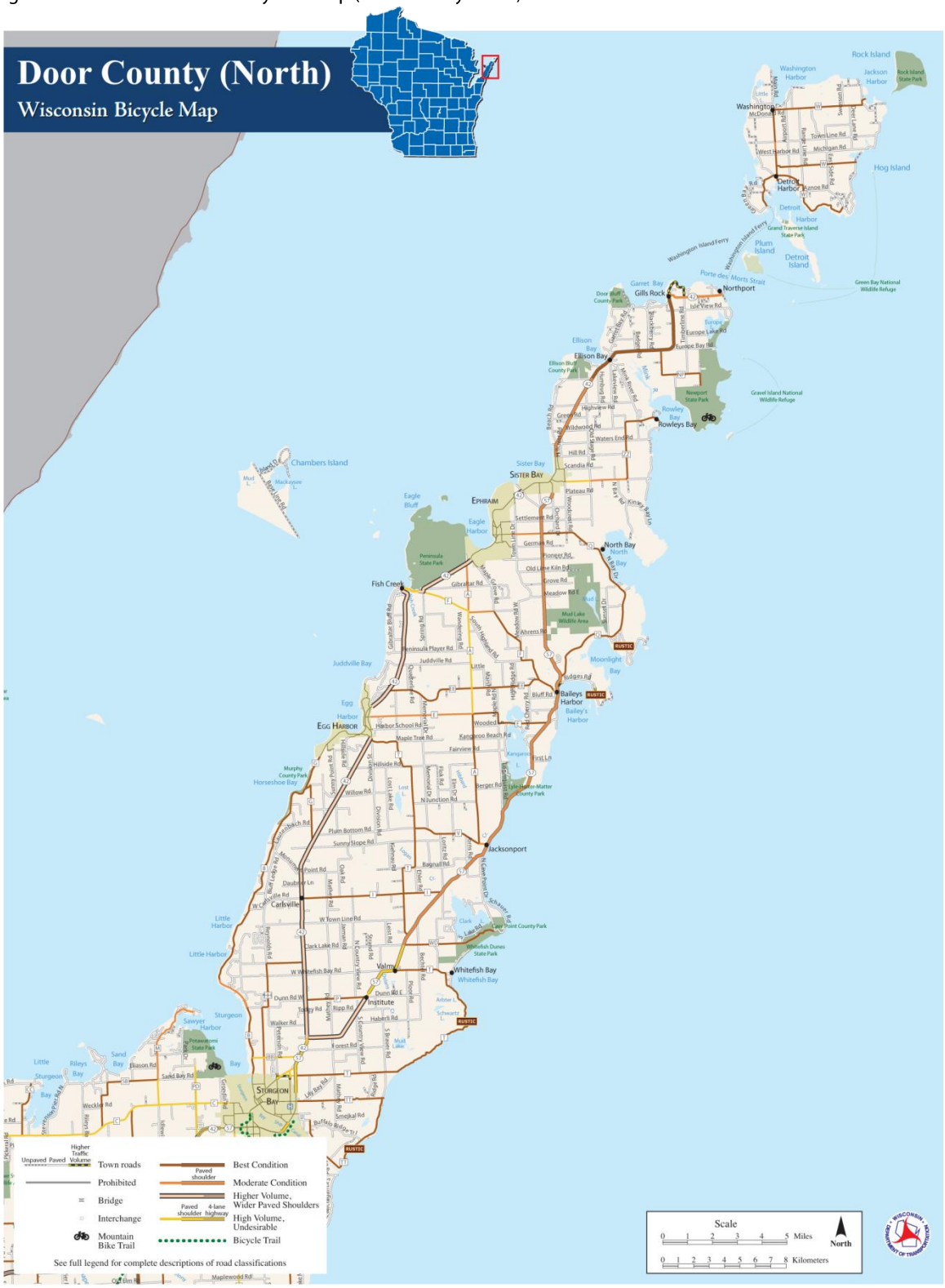
Door County topography consists of gently rolling hills with few challenging hills to deter bicycling. The gentle rolling terrain allows for long sight distances and allows motorists time to react to the sighting of bicyclists on the road.

**Strong Support for Bicycling Supportive Programs including Safe Routes to School (SRTS)**

SRTS plans enhance connectivity between neighborhoods and schools. SRTS programs promote healthy lifestyles and independence, and improve air quality near and around schools by reducing the number of motor vehicles around a school. Sturgeon Bay has adopted a SRTS plan and several other interested parties including the County Health Department, the police department, and school principals support the program.

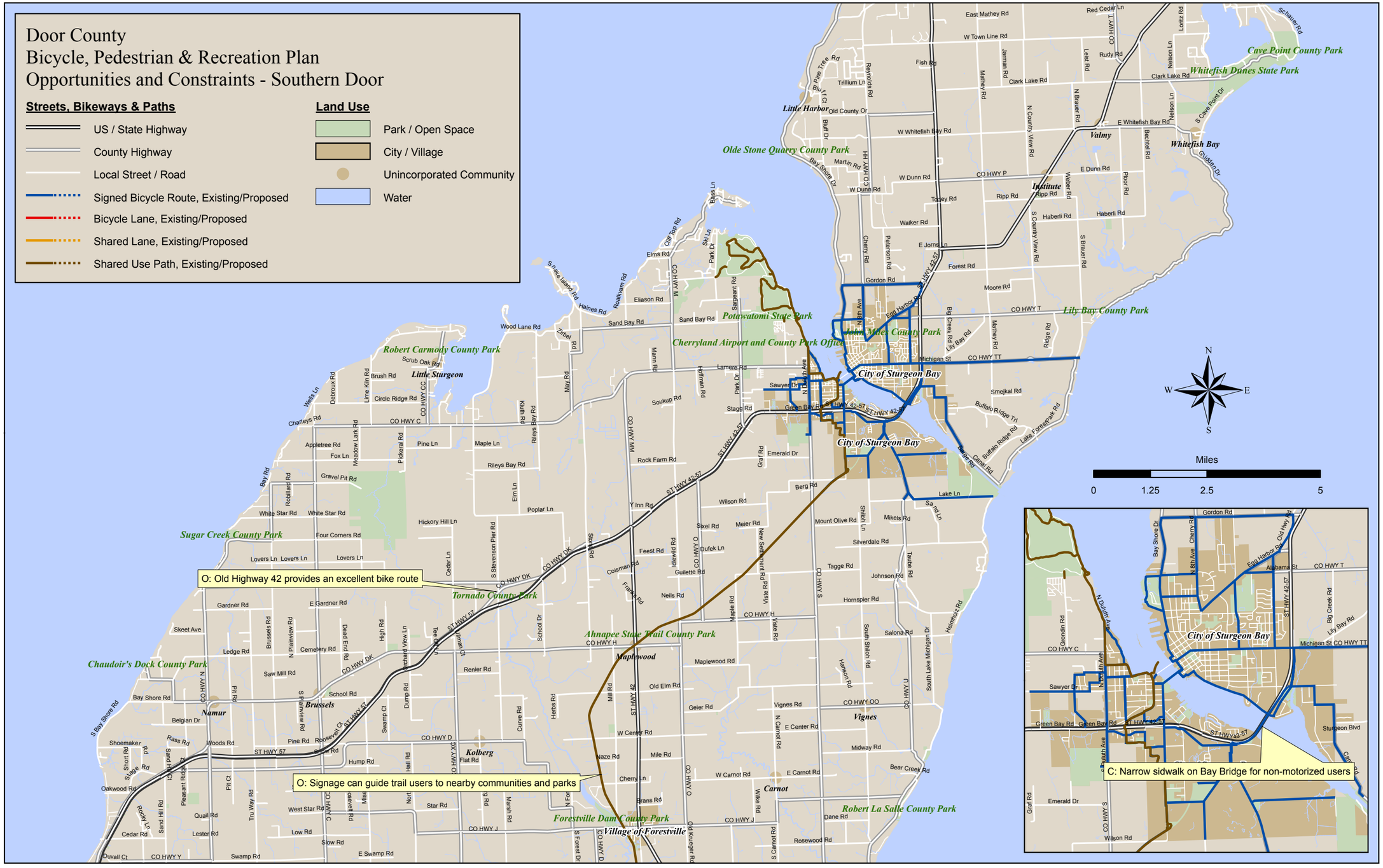
Figure 4-2: Wisconsin DOT County Bike Map (Door County South) identifies routes with the best travel conditions for cyclists.

Figure 4-3: Wisconsin DOT County Bike Map (Door County North) identifies routes with the best travel conditions for cyclists.



*This Page Intentionally Left Blank*

**Map 4-5: Opportunities and Constraints - Southern Door**



**Map 4-6: Opportunities and Constraints - Northern Door**

# 5 Recommended Bikeway Network

## Introduction

This chapter lays out a 20-year plan for completing the system of bikeways, shared-use paths and priority projects in Door 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 Workgroup, bicycle and stakeholder groups, and Door County residents and visitors.

The recommended bicycle and trail network includes bicycle and path facilities connecting key destinations in and around Door 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 bike map development and low cost wayfinding signage. Other improvements, such as expanding the Ahnapee Trail, represent longer-term strategies for transforming Door County into a truly bicycle-friendly community.

The *Door County Bicycle, Pedestrian and Recreational Facilities Master Plan* will allow Door County to focus and prioritize implementation efforts where they will provide the greatest community benefit.

## Facility Definitions for the Door County Bikeway Network

Many on-street bicycle facilities can be developed inexpensively with paint and signs. The Proposed Bikeway Network for Door County has recommendations for three facility types: signed bike routes, paved shoulders, and shared-use paths. Each facility type is described below.

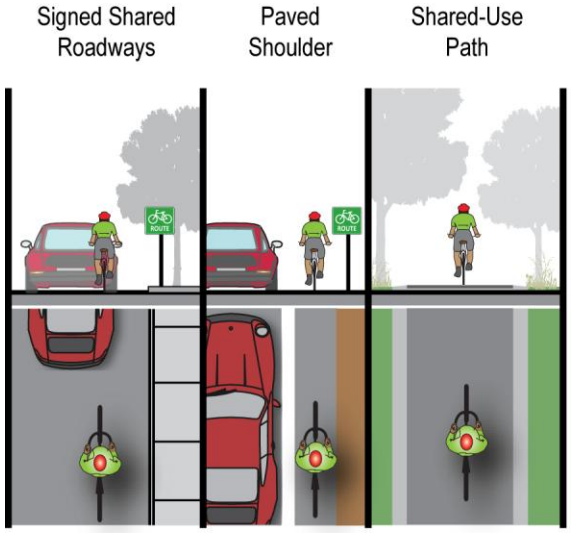



Figure 5-1: Bikeway facility types recommended in the Plan

## Signed Bike Route

Bike routes are streets and roadways that are identified as bicycle routes with the use of signs. These routes may be on low traffic roads where cyclists and motor vehicles can share the same space; routes may also be identified on busier roads that provide one of the other facilities identified below. All bicycle routes should include wayfinding signage that clearly identifies direction and distance to nearby attractions.

## Paved Shoulders

In rural areas, the addition of paved shoulders is often the best way to accommodate bicyclists. The shoulder refers to the part of the highway that is adjacent to the right-most travel lane and is on the same level as the highway. Paved shoulders provide motorists the following benefits: room to maneuver, break-down space clear of the travel lane, additional travel space for farm machinery and increased overall lifecycle for the pavement. Recommendations for the actual paved shoulder width will vary according to the width of the adjacent travel lane, traffic volumes, posted speed limit, and the amount of heavy truck traffic. Generally, however, to accommodate bicycles, a width of 5 feet from the face of a guardrail, curb or barrier, free of rumble strips or other obstructions is recommended. The slope of the roadway should continue across the shoulder to maintain adequate drainage.

Paved shoulders provide numerous safety benefits for motorists as well as benefits for pedestrians. Providing or widening paved shoulders has the following benefits:

- Provides a stable surface off of the roadway for pedestrians to use when sidewalks cannot be provided
- Reduces numerous crash types including the following:
  - Head on crashes (15%–75% reported reduction)
  - Sideswipe crashes (15%–41%)
  - Fixed object crashes (29%–49%)
  - Pedestrian (walking along roadway) crashes (71%)
- Improves roadway drainage
- Increases effective turning radii at intersections
- Reduces shoulder maintenance requirements
- Provides emergency stopping space for broken-down vehicles
- Provides space for maintenance operations and snow storage
- Provides space for variable-message signs
- Provides an increased level of comfort for bicyclists
- Provides room for farm machinery travel

## Shared-Use Path

Shared use paths are off-street facilities designed for use by bicyclists and other non-motorized users. Shared-use paths may be paved or unpaved, but should offer a smooth surface for users. Shared-use paths (minimum width of 10-feet or 12- to 14-feet if heavy traffic is expected) can accommodate a variety of non-motorized traffic such as pedestrians, bicycles, in-line skates, and runners. The shared use trail may be in its own right of way, such as the Ahnapee State Trail, or it may share a right of way with a street or highway. A shared use path that shares right of way with a street or highway has special issues with crossing traffic and careful design is required to provide a safe facility. Even when the shared use path has its own right-of-way, careful design at each street or railroad crossing is necessary to increase user safety. There are multiple locations in the county where the Ahnapee Trail intersects local roads and these intersections are in need of attention.

## "Bike the Door" Tourism Loops

"Bike the Door" would be an ongoing featured event of sorts, establishing twelve recreational loops, located throughout the county that highlight multiple destinations. The event would be comprised of a combination of maps, loop routes of various lengths (all fewer than 30 miles) and a passport book to collect a stamp for each loop upon completion. This is similar to the National Park Passport program. (See http://en.wikipedia.org/wiki/National_Park_Passport_Stamps.)

Loops may include 'dog legs' to provide access for bicyclists to nearby parks, shipwrecks, downtowns, and other attractions. Loops are described on Table 5-1 and illustrated on

Map 5-1 and Map 5-2 . The loops attempt to stay on local or county roads but may use state roads for short distances. Where this happens it would be best to add signage and other safety measures. In addition, where the loops cross STH 42 or 57, additional signage may be used to make drivers aware of bicycle traffic crossing the highway.

Table 5-1: Bike the Door Recreational Loops

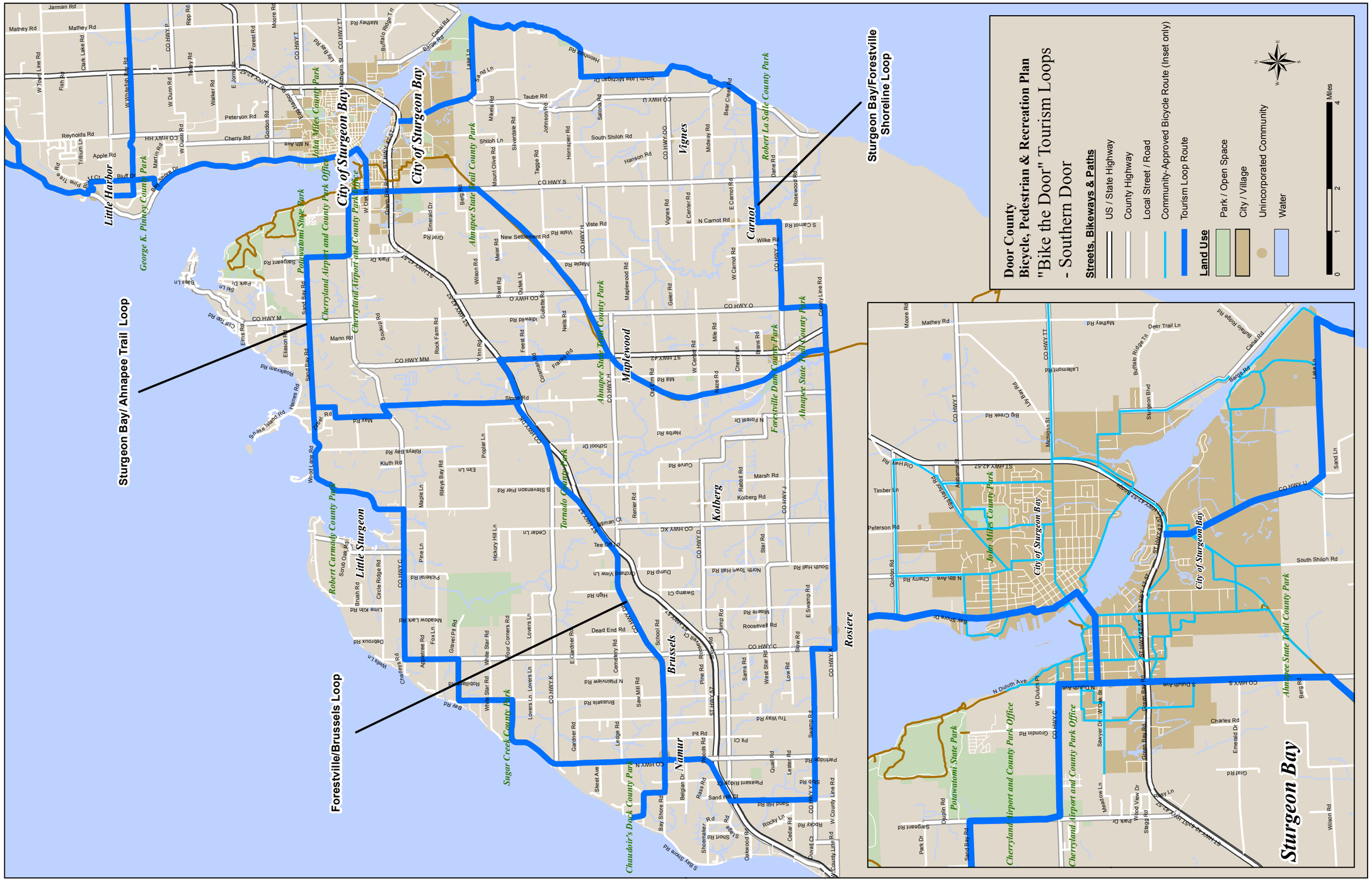
| Loop Name | From /to | Attractions | Notes |
|---|---|---|---|
| Rock Island Loop | Circle tour of the island, starts and ends at the ferry landing | Scenery, lighthouse, swim beaches | This would be a pedestrian only loop |
| Washington Island Loop | Circle tour of the island, starts and ends at the ferry landing | Scenery, commercial area, four parks and a shipwreck | |
| Gills Rock /Newport State Park Loop | Gills Rock to Newport Park and back | Fleetwing shipwreck, Newport State Park | Uses STH 42 for a short segment |
| The Bays Loop | Ellison Bay to Rowleys Bay to Sister Bay | Three communities, plus Meridian shipwreck, Ellison Bluff County Park | |
| Shipwreck Tour | Ephraim to Baileys Harbor to Fish Creek and back to Sister Bay | Four communities, three shipwrecks, and a segment through Peninsula State Park | |
| Fish Creek/Baileys Harbor/Egg Harbor Loop | Fish Creek to Baileys Harbor to Egg Harbor and along White Cliff Road back to Fish Creek | Three communities, views of Kangaroo Lake, shipwreck at Baileys Harbor | May want to consider working with private land owners to construct a "cut through" from Harbor School Road and STH 42 to CTH G; this cut through would avoid having to use STH 42 into Egg Harbor |

| Loop Name | From /to | Attractions | Notes |
|---|---|---|---|
| Egg Harbor/West Jacksonport/Carlsville Loop | Egg Harbor to West Jacksonport via Memorial Drive to Carlsville to Egg Harbor via Bay Shore Road | Three communities, County Park | |
| Jacksonport Loop | Jacksonport to east/west coast of Door with a dog leg to Carlsville, Whitefish Bay and back to Jacksonport | Three communities, shoreline of east and west Door County, Whitefish Dunes State Park, Cave Point County Park and George K. Pinney County Park | |
| Sturgeon Bay/ Ahnapee Trail Loop | Sturgeon Bay to Maplewood and back to Sturgeon Bay | Views of the bridges and canal in Sturgeon Bay, a segment of the Ahnapee State Trail, a shipwreck and Potawatomi State Park | Details of route through Sturgeon Bay need to be determined |
| Sturgeon Bay/ Jacksonport Loop | Sturgeon Bay to Egg Harbor to Jacksonport to Little Harbor to Sturgeon Bay | Bay Shore Drive, four communities, shoreline, Whitefish Dunes State Park | |
| Forestville/Brussels Loop | Forestville to Brussels to Maplewood and back to Forestville | Tour of southern Door County with a stop at Chaudoir's Dock County Park and a segment of the Ahnapee State Trail | |
| Sturgeon Bay/Forestville Shoreline Loop | Sturgeon Bay to Forestville via Ahnapee; Forestville to Sturgeon Bay via South Lake Michigan Drive | Three communities, County Park, State Trail, shoreline views | |

Several steps will be necessary to implement this concept:

- Formation of a sub-committee to oversee implementation.
- Review and field check of routes to determine suitability; adjust as necessary before mapping the thirteen loops.
- Develop a "style" to be carried throughout the entire package of materials, including maps, passport book, info brochure, and other items.
- Determination of stamping locations such as the Rock Island DNR office, visitor centers, local cafes or gift shops, marinas, etc. Design and distribution of the stamps.
- Marketing strategy and implementation.

**Map 5-1: "Bike the Door" Tourism Loops - Southern Door**

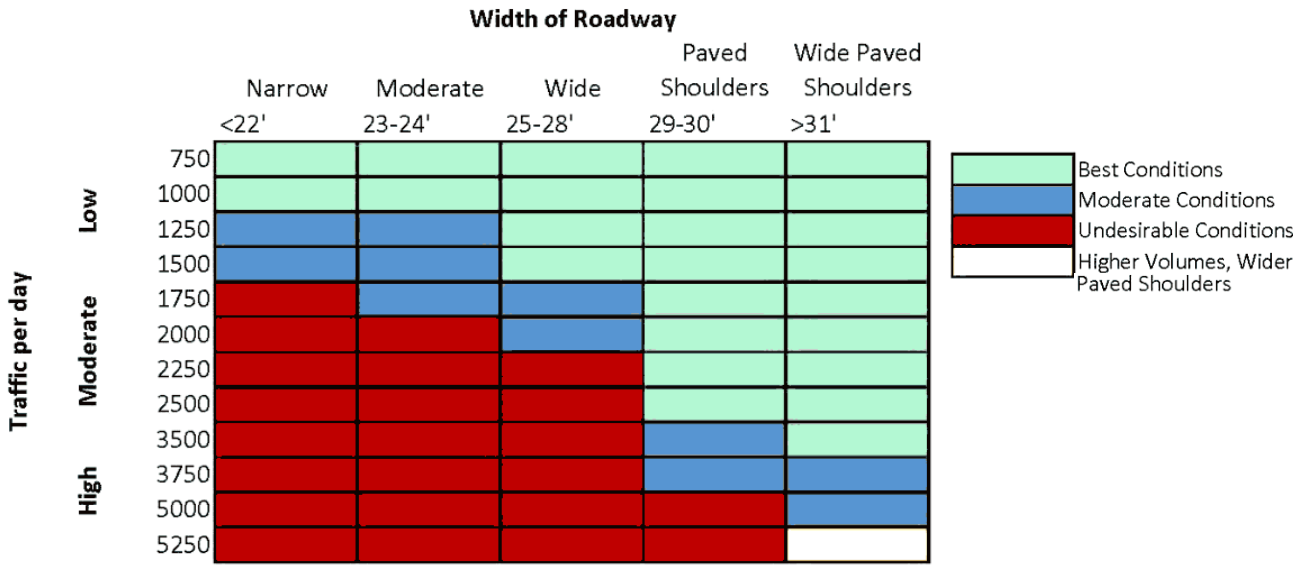


**Map 5-2: "Bike the Door" Tourism Loops - Northern Door**

## Bicycle Facility Selection

Identification of cycling 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 without major roadway changes. The WisDOT 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 Suitability Maps for each county, which are used as the basis for bicycle system planning statewide. Two main factors in determining suitability 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.

**GENERALIZED BICYCLING CONDITIONS**




## On-Street Bikeway Recommendations

A draft list of recommended on-street bikeways was developed based on public comments, street widths, and the County's vision of providing an interconnected network that links schools, parks, commercial areas, paths and other attractions. Wherever possible, paved shoulders are recommended over shared lane markings, as they provide both bicyclists and motor vehicle operators with a higher level of comfort by increasing separation between users. The proposed network provides some type of bicycle facilities in most areas of the County, and will greatly increase the visibility of existing routes.

Combined with existing and proposed shared-use paths described in the next section, the on-street bikeways will provide a comprehensive network connecting all parts of the County. Table 5-2 through Table 5-4 list recommended on-street paved shoulders, shared-use paths and signed bike routes respectively. Map 5-3 and Map 5-4 provides an overview of the proposed network

Table 5-2. Reccommended Shared Use Paths

| Facility/ Street Name | From | To | Length (Mi.) |
|---|---|---|---|
| Fish Creek Library Path | Bluff Ln | State Hwy 42 | 0.37 |
| CTH G | Alpine Rd | CTH T | 0.45 |
| Egg Harbor Connector Path | Horseshoe Bay Rd | Harbor School Rd | 0.18 |
| St Hwy 42 Path | Shore Rd | Shore Rd | 2.78 |
| State Hwy 42 | Gibraltar Rd | CTH A | 1.89 |
| State Hwy 42-57 | Utah St | Jorns Ln | 3.18 |
| Hwy 42 path | Bella Vista Lane | Country Lane | 0.84 |
| CTH A | State Hwy 42 | CTH V | 11.13 |
| | | **Total:** | **20.82** |

Table 5-3. Reccommended Paved Shoulders

| Facility/ Street Name | From | To | Length (Mi.) |
|---|---|---|---|
| State Hwy 42 | CTH T | White Cliff Rd | 0.66 |
| CTH G | Alpine Rd | State Hwy 42 | 0.42 |
| CTH F | Shore Rd | State Hwy 57 | 7.87 |
| CTH Q | State Hwy 42 | N Bay Dr | 4.62 |
| CTH C | CTH X | Duluth Ave | 21.39 |
| CTH NP | State Hwy 42 | N Newport Ln | 2.52 |
| CTH A | CTH V | Peninsula Players Rd | 7.68 |
| State Hwy 42 | CTH E | Church St | 0.41 |
| State Hwy 42 | CTH F | Northeast of Gibraltar Rd | 0.22 |
| CTH W | Main Rd | Jackson Harbor Rd | 3.92 |
| CTH X | CTH C | CTH O | 8.00 |
| | | **Total:** | **57.71** |

Table 5-4. Reccommended Signed Bike Routes

| Facility/ Street Name | From | To | Length (Mi.) |
|---|---|---|---|
| State Hwy 42 | CTH H | State Hwy 57 | 2.63 |
| Stone Rd | State Hwy 57 | Lincoln School Rd | 0.08 |
| State Hwy 57 | Stone Rd | State Hwy 42 | 1.10 |
| Park Dr | CTH C | Olson Dr | 1.50 |
| Olson Dr | Park Dr | Park Dr | 0.50 |
| Oregon St | E Maple St | S 1st Ave | 0.34 |
| Whitefish Bay Rd | Mathey Rd | Glidden Dr | 4.66 |
| S 12th Ave | Memorial Dr | Utah St | 0.07 |
| Quincy St | S 1st Ave | S 3rd Ave | 0.11 |
| S 1st Ave | Oregon St | Quincy St | 0.11 |
| Cove Rd | Canal Rd | Utah St | 0.25 |
| CTH S | CTH H | Hornspier Rd | 0.25 |
| Horseshoe Bay Rd | CTH G | White Cliff Rd | 4.01 |
| CTH T | Hillside Rd | State Hwy 42 | 2.14 |
| Schauer Rd | Cave Point Dr | East of Cave Point Dr | 0.29 |
| State Hwy 57 | CTH WD | CTH T | 0.44 |
| State Hwy 42 | Juddville Rd | Peninsula Players Rd | 0.51 |
| Hwy 42 | Shore Rd | CTH F | 0.34 |
| CTH F | State Hwy 42 | CTH A | 1.97 |
| CTH Q | Town Line Dr | Woodcrest Rd | 2.02 |

| Facility/ Street Name | From | To | Length (Mi.) |
|---|---|---|---|
| Scandia Rd | Birchwood Dr | Woodcrest Rd | 0.10 |
| Birchwood Dr | Scandia Rd | Trillium Ln | 0.25 |
| Trillium Ln | Birchwood Dr | Hill Rd | 0.28 |
| Hill Rd | Hillcrest Rd | Trillium Ln | 0.03 |
| Waters End Rd | State Hwy 42 | Hillcrest Rd | 0.22 |
| State Hwy 42 | Waters End Rd | Beach Rd | 0.01 |
| Cedar Shore Rd | State Hwy 42 | Garrett Bay Rd | 0.30 |
| State Hwy 42 | Lakeview Rd | Timberline Rd | 5.35 |
| State Hwy 42 | Cottage Rd | W Wisconsin Bay Rd | 0.27 |
| Garrett Bay Hill Rd | Garrett Bay Rd | Blackberry Rd | 0.19 |
| State Hwy 42 | Timberline Rd | N Port Des Morts Dr | 1.57 |
| State Hwy 57 | CTH F | State Hwy Q | 0.63 |
| Jackson Harbor Rd | Indian Point Rd | Jackson Harbor Rd | 0.25 |
| State Hwy 42 | White Cliff Rd | CTH E | 0.30 |
| State Hwy 57 | Bluff Rd | CTH F | 0.24 |
| State Hwy 57 | Cave Point Dr | CTH V | 0.55 |
| State Hwy 42-57 | Utah St | Michigan St | 0.52 |
| State Hwy 42-57 | CTH U | Utah St | 1.10 |
| CTH G | Alpine Rd | CTH T | 0.47 |
| Unnamed | State Hwy 57 | North of State Hwy 57 | 0.11 |

| Facility/ Street Name | From | To | Length (Mi.) |
|---|---|---|---|
| Ward St | State Hwy 57 | Bluff Rd | 0.48 |
| Guy St | CTH F | Bluff Rd | 0.25 |
| Park Rd | CTH F | State Hwy 57 | 0.17 |
| State Hwy 42 | Gibraltar Rd | Maple Grove Rd | 2.08 |
| Newport Park Rd | Wilderness Ln | Newport Park Rd | 0.48 |
| North Woodland Dr | Cottage Rd | State Hwy 42 | 0.48 |
| Kenosha Dr | State Hwy 42 | Kenosha Dr | 0.48 |
| CTH X | CTH C | Old Krueger Rd | 8.00 |
| CTH D | State Hwy 57 | Roosevelt Rd | 3.89 |
| CTH D | CTH D | Curve Rd | 3.97 |
| State Hwy 57 | County Line Rd | CTH D | 3.32 |
| State Hwy 57 | CTH D | CTH N | 1.89 |
| CTH N | State Hwy 57 | Chaudoirs Dock Rd | 2.13 |
| State Hwy 57 | CTH N | CTH C | 2.40 |
| State Hwy 57 | CTH C | Tee Off Ln | 2.77 |
| CTH H | State Hwy 57 | CTH HO | 5.54 |
| CTH C | CTH X | Swamp Rd | 0.53 |
| CTH C | CTH D | State Hwy 57 | 1.63 |
| CTH C | State Hwy 57 | Charleys Rd | 5.93 |
| CTH N | State Hwy 57 | CTH C | 7.01 |
| State Hwy 57 | CTH H | Stone Rd | 4.15 |

| Facility/ Street Name | From | To | Length (Mi.) |
|---|---|---|---|
| CTH C | CTH C | N Stevensons Pier Rd | 3.51 |
| CTH C | S Stevenson Pier Rd | May Rd | 2.27 |
| CTH C | May Rd | CTH M | 2.56 |
| May Rd | CTH C | Sand Bay Rd | 2.00 |
| Sand Bay Rd | Rileys Bay Rd | Park Dr | 4.55 |
| CTH M | CTH C | Sand Bay Rd | 0.97 |
| CTH C | Idlewild Rd | N Duluth Ave | 2.97 |
| Bay Shore Dr | Iowa St | Dunn Rd | 3.58 |
| CTH D | Forest Dr | CTH O | 2.50 |
| CTH J | Old Krueger Rd | CTH U | 5.30 |
| CTH U | Clar Lin Rd | Midway Rd | 2.74 |
| CTH TT | Lake Forest Park Rd | Cove Rd | 2.61 |
| CTH H | CTH O | CTH S | 3.01 |
| CTH S | Mount Olive Rd | CTH C | 3.51 |
| CTH TT | State Hwy 57 | Lake Forest Park Rd | 3.44 |
| CTH TT | Canal Rd | CTH T | 4.60 |
| CTH T | N Lake Forest Dr | Whitefish Bay Rd | 6.59 |
| CTH I | State Hwy 42 | CTH T | 4.05 |
| Bay Shore Dr | Bluff Ct | W Carlsville Rd | 1.76 |
| Bay Shore Dr | W Carlsville Rd | CTH G | 5.83 |
| CTH T | Bagnall Rd | Hillside Rd | 4.02 |

| Facility/ Street Name | From | To | Length (Mi.) |
|---|---|---|---|
| CTH P | CTH B | Bechtel Rd | 7.13 |
| CTH V | CTH T | State Hwy 57 | 3.06 |
| CTH T | State Hwy 57 | Ehler Rd | 3.21 |
| Clarks Lake Rd | State Hwy 57 | Cave Point Dr | 3.79 |
| CTH A | CTH V | Berger Rd | 2.17 |
| CTH A | Berger Rd | Wooded Ln | 2.49 |
| CTH A | Wooded Ln | CTH EE | 1.51 |
| CTH E | State Hwy 42 | CTH A | 4.26 |
| CTH EE | State Hwy 42 | CTH A | 3.70 |
| CTH EE | CTH A | CTH F | 2.77 |
| CTH A | CTH EE | Peninsula Players Rd | 1.50 |
| CTH A | Peninsula Players Rd | CTH F | 1.55 |
| Peninsula Players Rd | Gibralter Bluff Rd | CTH A | 3.02 |
| White Cliff Rd | State Hwy 42 | Juddville Rd | 3.31 |
| Juddville Rd | White Cliff Rd | State Hwy 42 | 0.58 |
| Gilbraltar Bluff Rd | Peninsula Players Rd | Bluff Cir | 2.51 |
| CTH F | CTH A | W Meadow Rd | 2.66 |
| CTH F | State Hwy 57 | W Meadow Rd | 2.90 |
| CTH E | S Maple Rd | Red Cherry Rd | 1.28 |
| CTH A | CTH F | State Hwy 42 | 1.90 |
| CTH Q | Moravia St | Town Line Dr | 0.85 |

| Facility/ Street Name | From | To | Length (Mi.) |
|---|---|---|---|
| CTH Q | State Hwy 57 | Woodcrest Rd | 8.60 |
| CTH ZZ | State Hwy 42 | Woodcrest Rd | 0.57 |
| CTH ZZ | Woodcrest Rd | Mink River Rd | 5.24 |
| CTH NP | N Newport Ln | State Hwy 42 | 2.52 |
| CTH NP | Wilderness Ln | N Newport Ln | 0.50 |
| CTH W | Green Bay Rd | Detroit Harbor Rd | 1.78 |
| CTH W | Detroit Harbor Rd | Jackson Harbor Rd | 2.61 |
| CTH W | Main Rd | Indian Point Rd | 3.69 |
| Heritage Lake Rd | CTH EE | CTH T | 2.13 |
| Church St | State Hwy 42 | Harbor School Rd | 1.40 |
| Harbor School Rd | State Hwy 42 | Windsor Ln | 1.56 |
| Co Hwy E | Red Cherry Rd | State Hwy 57 | 0.70 |
| CTH ZZ | Mink River Rd | Wagon Trail Resort | 0.95 |
| Swamp Rd | Sand Hill Rd | CTH C | 3.52 |
| CTH D | Hump Rd | Rica Ln | 0.50 |
| CTH D | CTH D | CTH J | 2.86 |
| Sand Hill Rd | CTH Y | State Hwy 57 | 1.97 |
| CTH O | CTH X | CTH H | 4.99 |
| CTH C | Swamp Rd | CTH D | 2.00 |
| Stone Rd | State Hwy 57 | CTH C | 3.12 |
| Idlewild Rd | CTH H | CTH C | 6.04 |

| Facility/ Street Name | From | To | Length (Mi.) |
|---|---|---|---|
| Feest Rd | State Hwy 42 | Idlewild Rd | 1.00 |
| Park Dr | Olson Dr | Melland Rd | 1.52 |
| E Maple St | N Duluth Ave | Oregon St | 0.74 |
| S 1st Ave | Iowa St | Oregon St | 0.58 |
| Bay Shore Dr | Dunn Rd | Bluff Ct | 2.98 |
| Bluff Dr | CTH B | CTH B | 2.17 |
| Whitefish Bay Rd | CTH OR | Mathey Rd | 3.56 |
| S Lake Michigan Dr | CTH U | Mount Lookout Rd | 1.55 |
| S Lake Michigan Dr | Mount Lookout Rd | Hornspier Rd | 2.00 |
| Hornspier Rd | S Lake Michigan Dr | S Lake Michigan Dr | 0.65 |
| S Lake Michigan Dr | Hornspier Rd | Lake Ln | 2.85 |
| Lake Ln | CTH U | S Lake Michigan Dr | 1.91 |
| CTH U | Sand Ln | State Hwy 57 | 1.76 |
| Utah St | S 12th Ave | Cove Rd | 1.14 |
| Memorial Dr | Quincy St | State Hwy 57 | 1.16 |
| Shiloh Rd | CTH J | Mount Olive Rd | 6.03 |
| Hornspier Rd | CTH S | Shiloh Rd | 1.01 |
| Mount Olive Rd | CTH S | Shiloh Rd | 1.02 |
| Mathey Rd | CTH Tt | Whitefish Bay Rd | 5.03 |
| Oak Rd | Monument Point Rd | Sunny Slope Rd | 1.55 |
| Monument Point Rd | Mathey Rd | Oak Rd | 0.50 |

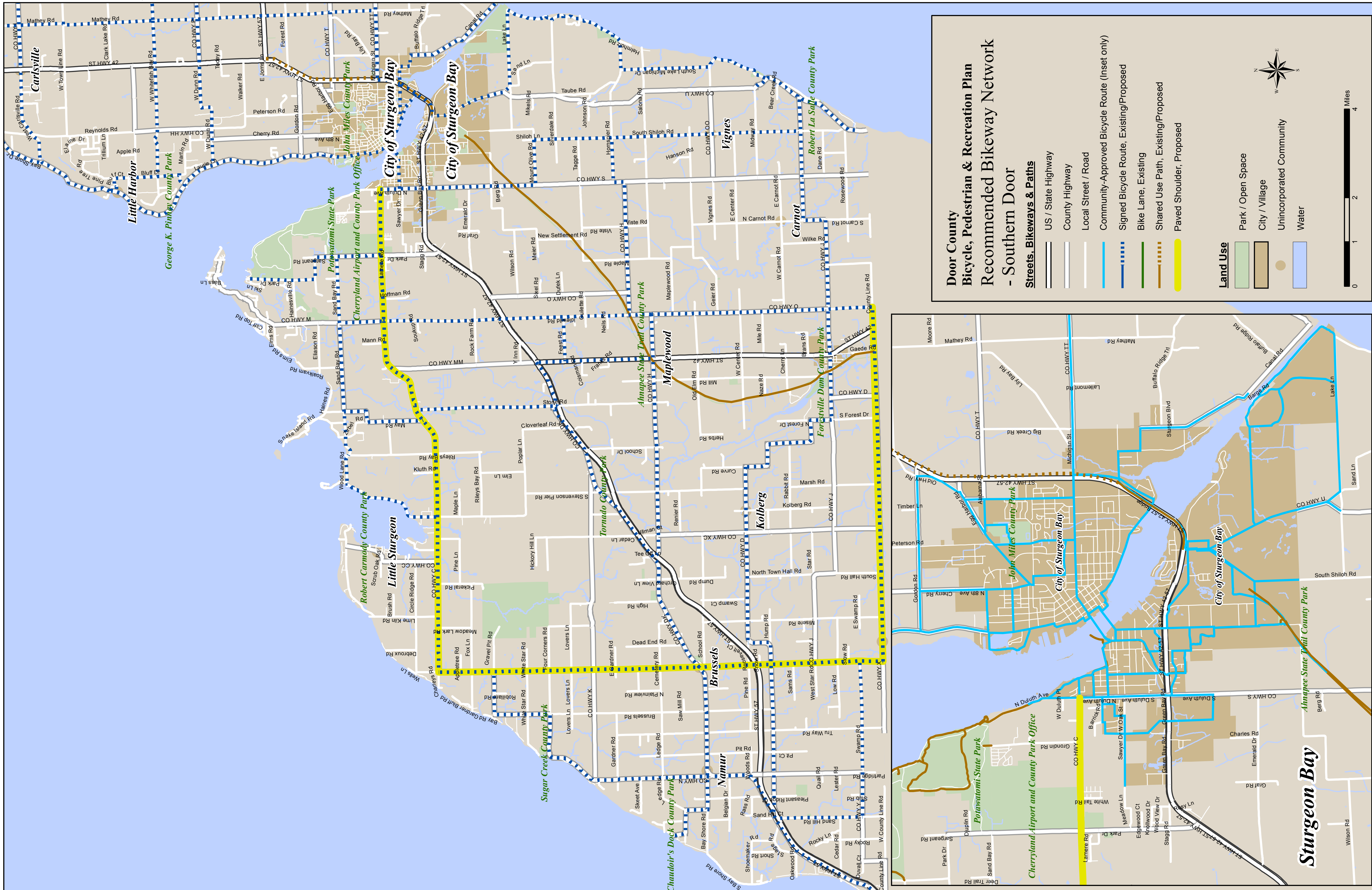
| Facility/ Street Name | From | To | Length (Mi.) |
|---|---|---|---|
| Mathey Rd | Whitefish Bay Rd | Monument Point Rd | 4.03 |
| W Carlsville Rd | CTH B | State Hwy 42 | 2.26 |
| CTH T | Hillside Rd | Hillside Rd | 0.31 |
| Bechtel Rd | E Dunn Rd | CTH T | 0.98 |
| Nelson Ln | CTH T | Clarks Lake Rd | 1.07 |
| Schauer Rd | Clarks Lake Rd | Cave Point Dr | 1.84 |
| Cave Point Dr | Clark Lake Ct | State Hwy 57 | 1.92 |
| Sunny Slope Rd | Oak Rd | CTH T | 2.70 |
| Berger Rd | CTH A | Logerquist Rd | 1.03 |
| S Maple Rd | Berger Rd | CTH E | 2.57 |
| Wooded Ln | CTH A | S Maple Rd | 1.01 |
| W Meadow Rd | CTH F | CTH Q | 4.81 |
| Cherry Rd | CTH E | Bluff Rd | 1.00 |
| Bluff Rd | Red Cherry Rd | State Hwy 57 | 1.11 |
| Town Line Dr | CTH Q | State Hwy 42 | 1.51 |
| Woodcrest Rd | CTH Q | CTH ZZ | 2.03 |
| Woodcrest Rd | CTH ZZ | Scandia Rd | 0.50 |
| Hillcrest Rd | Hill Rd | Waters End Rd | 0.52 |
| Beach Rd | State Hwy 42 | Porcupine Bay Rd | 2.78 |
| Porcupine Bay Rd | Beach Rd | Grasse Ln | 0.55 |
| Grasse Ln | Porcupine Bay Rd | Grasse Ln | 0.69 |

| Facility/ Street Name | From | To | Length (Mi.) |
|---|---|---|---|
| Hillside Dr | State Hwy 42 | Hillside Dr | 0.78 |
| Timberline Rd | CTH NP | Wisconsin Bay Rd | 3.44 |
| W Wisconsin Bay Rd | State Hwy 42 | Timberline Rd | 1.12 |
| Cottage Rd | Garrett Bay Hill Rd | State Hwy 42 | 1.10 |
| Garrett Bay Rd | State Hwy 42 | Garrett Bay Hill Rd | 2.89 |
| Mink River Rd | Waters End Rd | State Hwy 42 | 3.49 |
| Waters End Rd | CTH Zz | Mink River Rd | 0.51 |
| Wildwood Rd | Beach Rd | CTH ZZ | 2.90 |
| Wood Lane Rd | N Stevensons Pier Rd | Rileys Bay Rd | 0.65 |
| N Stevensons Pier Rd | CTH C | Rileys Pt Rd | 2.37 |
| Town Line Rd | CTH W | Mountain Rd | 1.77 |
| Mountain Rd | Town Line Rd | Jackson Harbor Rd | 1.43 |
| Clark Rd/Breuer Rd | State Hwy 57 | Whitefish Bay Rd | 1.94 |
| Cottage Row | Main St | Gibraltar Bluff Rd | 1.56 |
| Fairview Rd | Maple Rd | West of CTH A | 1.98 |
| Maple Rd | CTH EE | CTH E | 1.40 |
| Summit Rd | St Hwy 57 | West of Red Cherry Rd | 1.07 |
| Red Cherry Rd | Co Hwy EE | Bluff Rd | 0.52 |
| High Plateau Rd | Highland Rd | Co Hwy EE | 1.00 |
| Highland Rd | CTH A | CTH F | 2.71 |

| Facility/ Street Name | From | To | Length (Mi.) |
|---|---|---|---|
| State Hwy 57 | CTH E | Ward St | 0.67 |
| Spring Rd | Penninsula Players Rd | North of Half Mile Bridge Dr | 1.98 |
| Maple Grove East | CTH F | West Meadow Road | 1.00 |
| Maple Grove Rd | State Hwy 42 | CTH F | 2.32 |
| Settlement Rd | Town Line Dr | Old Stage Ln | 3.05 |
| Old Stage Rd | Seaquist Rd | Old Stage Rd | 4.57 |
| Waters End Rd | Hillcrest Rd | CTH ZZ | 2.54 |
| Waters End Rd | Mink River Rd | Sand Bay Ln | 1.07 |
| Seaquist Rd | Beach Rd | Mink River Rd | 3.08 |
| Ellison Bluff Rd | Porcupine Bay Rd | Porcupine Bay Rd | 1.50 |
| Europe Bay Rd | Timberline Rd | Europe Bay Rd | 1.16 |
| Isle View Rd | State Hwy 42 | Isle View Rd | 3.23 |
| N Porte Des Morts Dr | Kenosha Dr | State Hwy 42 | 0.51 |
| Door Bluff Park Rd | Garrett Bay Rd | Door Bluff Park Rd | 1.16 |
| Blackberry Rd | Garrett Bay Hill Rd | State Hwy 42 | 1.56 |
| Gibraltar Rd | CTH A | Maple Grove Rd | 0.93 |
| State Hwy 42 | Cottage Row | Shore Rd | 0.63 |
| Hill St | Bluff Ln | State Hwy 42 | 0.05 |
| Bluff Ln | State Hwy 42 | Bluff Ln | 0.17 |
| | | **Total:** | **421.15** |

*This Page Intentionally Left Blank*

**Map 5-3: Recommended Bikeway Network - Southern Door**



**Map 5-4: Recommended Bikeway Network - Northern Door**

## Shared-Use Path Recommendations

Several shared use paths are proposed for Door County, ranging from short segments of a few hundred feet to lengthy paths a few miles long. All of these paths serve the same purpose: to provide bicycle facilities in areas where they do not currently exist, or to increase access or usage where users do not feel safe or comfortable using existing streets.

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

### Ahnapee State Trail Extension

An extension of the Ahnapee trail to span the length of Door County would greatly expand the recreational network. Current planning identifies a 2.5 mile extension of the trail to the split of CTH 42 and CTH 57. A long-range alignment across the county has not yet been identified, but initial feasibility of the concept is described in Appendix G: Ahnapee Trail Extension Feasibility Study.

### Ephraim Multi-Use Trail

The proposed shared use path will connect with the existing segment in Sister Bay that currently starts at the end of Country Lane. This extension would continue south along HWY 42 to Bella Vista Lane, providing safe access to the businesses and hotels located along the way.

### Egg Harbor Connector

This proposed connection would allow cyclists to travel from Harbor School Road over to CTH G, effectively bypassing the congested hilly portion of STH 42 as it enters south of Egg Harbor. An easement from the Landing Resort would be required to make this connection. This proposed connection is not illustrated on the plan maps.

### CTH A Path

This proposed path would run the entire length of CTH A from Jacksonport to Highway 42 in the town of Gibraltar. Please see Appendix I: CTH A Bike Route Analysis for more detail on this recommendation.

### Peninsula State Park Frontage Path

This proposed path would run along STH 42 within the park. As the master planning process for Peninsula State Park is undertaken in mid 2014, this recommendation should be studied further.

*This Page Intentionally Left Blank*

# 6 Recommended Policies

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

The most significant update to County policy to support bicycling interests would be to establish a Complete Streets policy. This policy would be in support of State of Wisconsin Complete Street legislation, and further advance the goals of bicyclists and pedestrians in Door County. Wisconsin's bicycle accommodations law is called Administrative Code Transportation 75 (Trans-75). The code aims to "ensure that bikeways and pedestrian ways are established in all new highway construction and reconstruction projects funded in whole or in part from state funds or federal funds."

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, legislation on the subject has been passed in 26 states and more than 325 other jurisdictions throughout the country, and the Safe and Complete Streets Act of 2013 is currently pending in Congress.

## The La Crosse County Experience

In April 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 sparked a series of local policy adoptions in La Crosse County.

Shortly after the county policy adoption, the City of La Crosse adopted their own complete streets policy called the "Green and Complete Streets Ordinance." This is the first local city-level complete streets policy in the state. Since then, Complete Streets policies were also passed in the Cities of Holmen, West Salem and Onalaska.

Figure 6-1 on the following page displays the full text of the policy passed by La Crosse County, and identifies the key elements of its policy.

Figure 6-1: Breakdown of a county-level 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.

**Vision and Goals**

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.

**Description and Clarification**

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.

**Actions to Achieve Complete Streets**
Including discussion of Planning, Design, Operations and Construction standards

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.

**Exceptions**

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.

**Process and Assessment**

## A Complete Streets Policy for Door County

Like Door County, La Crosse County is home to varied topography and land uses and the legislation would be a good template for Door County. Door County could use the language and content of La Crosse County as a starting point for its own Complete Streets policy.

To achieve a roadway network that is safe, comfortable, and attractive for all users, Door 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 be included as part of the Vision, Policies and Objectives development described earlier. 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 work toward providing seamless transitions between existing biking and pedestrian 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. Develop a Complete Streets checklist to guide the development of individual transportation projects[38]

[38] 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

**Construction**

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

**Operations**

1. Time traffic signals to provide adequate/comfortable pedestrian and cyclist crossing time
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 or included in the Policy, Vision, Goals, Objectives developed in Working Paper #3 and could include:
    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

# 7 Implementation

The Door County Bicycle, Pedestrian and Recreational Facilities Master Plan is a plan that county residents and decision makers can use to guide Door County's progress toward becoming a great place to bike, ride and play. 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 7-1 provides a summary of key recommended Plan actions and programs, along with implementation timeframes, and notes about likely implementing agencies.

Table 7-1: Recommended Programs and Projects Implementation Summary

| Task | Short (0 - 5 years) | Medium (6- 10 years) | Long (10 years and beyond) | Implementers |
|---|---|---|---|---|
| Adopt a Complete Streets Policy | X | | | Door County |
| Continue and Expand Annual Bicycle Summit | X | | | DCCSA, Door County |
| Review CIP annually or biannually to see where bike/pedestrian projects can be bundled with other improvements | X | | | Door County |
| Pursue Economic Development Recommendations Related to Bike Tourism | X | | | Door County, DCEDC |
| Staff Training on Design Practices | X | | | Door County and other municipal partners |
| Hire a Bike and Pedestrian Coordinator | | X | | Door County and other municipal partners |
| Website promoting Local Events and Bicycle/Trail Tourism | X | | | Door County, DCSSA, Municipal partners such as the City of Sturgeon Bay, Door County Visitors Bureau, Door County Economic Development Corporation |
| Apply for Bicycle Friendly Community Designation | X | | | Door County, DCSSA, Municipal partners such as the City of Sturgeon Bay, Door County Visitors Bureau |
| Establish Bicycle and Pedestrian Counts | X | | | Door County, DCSSA, Municipal partners such as the City of Sturgeon Bay |
| Establish a Permanent Pedestrian and Bicycle Advisory Committee | X | | | Door County, DCSSA, Municipal partners such as the City of Sturgeon Bay, Door County Visitors Bureau, |

| Task | Short (0 - 5 years) | Medium (6- 10 years) | Long (10 years and beyond) | Implementers |
|---|---|---|---|---|
| | | | | Door County Economic Development Corporation |
| Youth Bicycling and Walking Safety Education | X | | | Municipal partners such as the City of Sturgeon Bay, Door County Visitors Bureau |
| Create a Countywide Safe Routes to School Plan | X | | | Southern Door County School District, Gibraltar School District, Door County, school districts within municipalities such as School District of Sturgeon Bay |
| Implement Media Campaign | X | | | Door County, DCSSA, Wisconsin Bike Federation |
| Report Card | | X | | Door County, DCSSA, Bicycle and Pedestrian Advisory Committee |
| Bicycle Share Program | | X | | Door County, Marinas, transportation providers, municipal partners that operate marinas (e.g., Town of Egg Harbor, Fish Creek and Sister Bay), Door County Visitors Bureau |
| Develop Regional Wayfinding Sign Program | X | | | Door County, Door County Visitors Bureau, Door County Economic Development Corporation, municipal partners including the City of Sturgeon Bay |
| Law Enforcement Training | | X | | Door County Sheriff's Department, Other local law enforcement agencies (e.g. Sturgeon Bay Police Department), Wisconsin Department of Transportation |
| **Priority Project Recommendations** | | | | |
| CTH PD from CTH C to Potawatomi State Park | X | | | Door County |
| CTH Q from Ephraim to STH 57 | X | | | Door County |
| CTH A paved shoulders and sidepath | | X | | Door County |

## Infrastructure Project Phasing

The Door County Bicycle, Pedestrian and Recreational Facilities Master Plan provides a set of trail and on-street infrastructure recommendations that the county and other project partners can implement, allowing residents and visitors alike to bike and walk more safely and comfortably. 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.

While all projects represent important steps for improving Door County's cycling and walking environment, prioritizing projects will allow the county to program limited financial and staff resources in the most strategic fashion. Projects were scored based on the criteria shown in Table 7-2. The outcome of this exercise was then refined based on known existing opportunities into a coherent, connected cycling network that will grow over time.

Table 7-2. Bicycle Facility Phasing Criteria

| Criterion | Description | Scoring Definitions |
|---|---|---|
| System Connectivity | To what degree does the project fill a missing gap in the bicycle system? | Projects will receive five points if they fill a gap of less than one-quarter mile and 3 points for gap measuring between one-quarter and one-half mile. |
| Provides Access to Community Destinations | Score each project based on its proximity to commercial areas, parks and civic areas. Projects receive a higher score if they are located closer to community destinations. | Projects within one-half mile of a park, school or commercial area receive 5 points; projects within one mile receive 3 points. |
| Roadway Function | Does the street become more complete with a dedicated bicycle facility? Projects are scored based on roadway types. Projects on arterials score higher than projects on local roadways. | Projects will receive 5 points if they are located on state highway, 3 points if they are located on a County road and 1 point if they are a pathway or on a local road. |
| Geographic Distribution | To what extent are projects distributed across the project area. | Geographically unique areas of high priority can be identified by the Working Group. Projects identified within these areas will receive five points. |

The proposed bikeway system is comprised of about 210 projects, many of which are smaller segments of larger combined facility improvements. These are organized into three tiers representing the relative project phasing and a suggested construction timeframe:

1.) Short Term (0 – 5 Years)
2.) Medium Term (6 – 10 Years)
3.) Long Term (10+ years and beyond)

The Plan timeframe takes into consideration the planning horizon of 2030 and recognizes that some projects require significant planning, especially off-street corridors, and may not feasibly be constructed within this timeframe. The Plan is a living document, not static, and will change to respond to new challenges and opportunities as they arise. The project list and phasing should be frequently reviewed (every five years is recommended) to ensure they reflect current priorities and opportunities for the County. There are many factors that can and should affect project implementation, including:

- Any changes to existing grant programs, or creation of new grant or funding programs that affect the type or number of large-budget projects that can be implemented
- Any changes in County policy that could affect how local, state, or federal funds can be spent
- Changes to zoning and land use that will affect where and how development occurs in Door County
- Changes to staff capacity to manage project implementation
- Community input (e.g., through the Bicycle and Pedestrian Advisory Committee)
- Directives (policy or otherwise) from elected officials and other governing bodies
- Interest from partners (e.g., the City of Sturgeon Bay) in implementing projects that are partially or entirely within their jurisdiction

It should be noted that the purpose of a prioritization table is to understand the relative priority of projects so that the County and/or other agency partners may apportion available funding to the highest priority projects. Medium- and 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 funding becomes available. The ranked lists should be considered a "living document" and should be frequently reviewed to ensure they reflect current priorities and opportunities.

Table 7-3. Proposed Project Phasing - Shared Use Paths

| Facility/ Street Name | From | To | Facility Type | Project ID | Length (Mi.) | Phase |
|---|---|---|---|---|---|---|
| Fish Creek Library Path | Bluff Ln | State Hwy 42 | Shared Use Path | 179 | 0.37 | Short Term (0 – 5 Years) |
| CTH G | Alpine Rd | CTH T | Shared Use Path | 188 | 0.45 | Short Term (0 – 5 Years) |
| Egg Harbor Connector Path | Horseshoe Bay Rd | Harbor School Rd | Shared Use Path | 189 | 0.18 | Short Term (0 – 5 Years) |
| St Hwy 42 Path | Shore Rd | Shore Rd | Shared Use Path | 174 | 2.78 | Medium Term (6 – 10 Years) |
| State Hwy 42 | Gibraltar Rd | CTH A | Shared Use Path | 208 | 1.89 | Medium Term (6 – 10 Years) |
| State Hwy 42-57 | Utah St | Jorns Ln | Shared Use Path | 163 | 3.18 | Long Term (10+ years) |
| Hwy 42 path | Bella Vista Lane | Country Lane | Shared Use Path | 171 | 0.84 | Long Term (10+ years) |
| CTH A | State Hwy 42 | CTH V | Shared Use Path | 176 | 11.13 | Long Term (10+ years) |

Table 7-4. Proposed Project Phasing - Paved Shoulders

| Facility/ Street Name | From | To | Facility Type | Project ID | Length (Mi.) | Phase |
|---|---|---|---|---|---|---|
| State Hwy 42 | CTH T | White Cliff Rd | Paved Shoulder | 165 | 0.66 | Short Term (0 – 5 Years) |

| Facility/ Street Name | From | To | Facility Type | Project ID | Length (Mi.) | Phase |
|---|---|---|---|---|---|---|
| CTH G | Alpine Rd | State Hwy 42 | Paved Shoulder | 166 | 0.42 | Short Term (0 – 5 Years) |
| CTH F | Shore Rd | State Hwy 57 | Paved Shoulder | 167 | 7.87 | Short Term (0 – 5 Years) |
| CTH Q | State Hwy 42 | N Bay Dr | Paved Shoulder | 168 | 4.62 | Short Term (0 – 5 Years) |
| State Hwy 42 | CTH E | Church St | Bike Lane | 190 | 0.41 | Short Term (0 – 5 Years) |
| State Hwy 42 | CTH F | Northeast of Gibraltar Rd | Bike Lane | 206 | 0.22 | Short Term (0 – 5 Years) |
| CTH C | CTH X | Duluth Ave | Paved Shoulder | 164 | 21.39 | Medium Term (6 – 10 Years) |
| CTH NP | State Hwy 42 | N Newport Ln | Paved Shoulder | 169 | 2.52 | Medium Term (6 – 10 Years) |
| CTH A | CTH V | Peninsula Players Rd | Paved Shoulder | 172 | 7.68 | Medium Term (6 – 10 Years) |
| CTH W | Main Rd | Jackson Harbor Rd | Paved Shoulder | 173 | 3.92 | Medium Term (6 – 10 Years) |
| CTH X | CTH C | CTH O | Paved Shoulder | 170 | 8.00 | Long Term (10+ years) |

Table 7-5. Proposed Project Phasing - Signed Bike Routes

| Facility/ Street Name | From | To | Facility Type | Project ID | Length (Mi.) | Phase |
|---|---|---|---|---|---|---|
| State Hwy 42 | CTH H | State Hwy 57 | Signed Bike Route | 24 | 2.63 | Short Term (0 – 5 Years) |
| Stone Rd | State Hwy 57 | Lincoln School Rd | Signed Bike Route | 25 | 0.08 | Short Term (0 – 5 Years) |
| State Hwy 57 | Stone Rd | State Hwy 42 | Signed Bike Route | 26 | 1.10 | Short Term (0 – 5 Years) |
| Park Dr | CTH C | Olson Dr | Signed Bike Route | 33 | 1.50 | Short Term (0 – 5 Years) |
| Olson Dr | Park Dr | Park Dr | Signed Bike Route | 34 | 0.50 | Short Term (0 – 5 Years) |
| Oregon St | E Maple St | S 1st Ave | Signed Bike Route | 38 | 0.34 | Short Term (0 – 5 Years) |
| Whitefish Bay Rd | Mathey Rd | Glidden Dr | Signed Bike Route | 44 | 4.66 | Short Term (0 – 5 Years) |
| S 12th Ave | Memorial Dr | Utah St | Signed Bike Route | 54 | 0.07 | Short Term (0 – 5 Years) |
| Quincy St | S 1st Ave | S 3rd Ave | Signed Bike Route | 57 | 0.11 | Short Term (0 – 5 Years) |

| Facility/ Street Name | From | To | Facility Type | Project ID | Length (Mi.) | Phase |
|---|---|---|---|---|---|---|
| S 1st Ave | Oregon St | Quincy St | Signed Bike Route | 58 | 0.11 | Short Term (0 – 5 Years) |
| Cove Rd | Canal Rd | Utah St | Signed Bike Route | 59 | 0.25 | Short Term (0 – 5 Years) |
| CTH S | CTH H | Hornspier Rd | Signed Bike Route | 63 | 0.25 | Short Term (0 – 5 Years) |
| Horseshoe Bay Rd | CTH G | White Cliff Rd | Signed Bike Route | 78 | 4.01 | Short Term (0 – 5 Years) |
| CTH T | Hillside Rd | State Hwy 42 | Signed Bike Route | 81 | 2.14 | Short Term (0 – 5 Years) |
| Schauer Rd | Cave Point Dr | East of Cave Point Dr | Signed Bike Route | 91 | 0.29 | Short Term (0 – 5 Years) |
| State Hwy 57 | CTH Wd | CTH T | Signed Bike Route | 92 | 0.44 | Short Term (0 – 5 Years) |
| State Hwy 42 | Juddville Rd | Peninsula Players Rd | Signed Bike Route | 107 | 0.51 | Short Term (0 – 5 Years) |
| Hwy 42 | Shore Rd | CTH F | Signed Bike Route | 109 | 0.34 | Short Term (0 – 5 Years) |
| CTH F | State Hwy 42 | CTH A | Signed Bike Route | 110 | 1.97 | Short Term (0 – 5 Years) |
| CTH Q | Town Line Dr | Woodcrest Rd | Signed Bike Route | 119 | 2.02 | Short Term (0 – 5 Years) |
| Scandia Rd | Birchwood Dr | Woodcrest Rd | Signed Bike Route | 126 | 0.10 | Short Term (0 – 5 Years) |
| Birchwood Dr | Scandia Rd | Trillium Ln | Signed Bike Route | 127 | 0.25 | Short Term (0 – 5 Years) |
| Trillium Ln | Birchwood Dr | Hill Rd | Signed Bike Route | 128 | 0.28 | Short Term (0 – 5 Years) |
| Hill Rd | Hillcrest Rd | Trillium Ln | Signed Bike Route | 129 | 0.03 | Short Term (0 – 5 Years) |
| Waters End Rd | State Hwy 42 | Hillcrest Rd | Signed Bike Route | 131 | 0.22 | Short Term (0 – 5 Years) |
| State Hwy 42 | Waters End Rd | Beach Rd | Signed Bike Route | 132 | 0.01 | Short Term (0 – 5 Years) |
| Cedar Shore Rd | State Hwy 42 | Garrett Bay Rd | Signed Bike Route | 137 | 0.30 | Short Term (0 – 5 Years) |
| State Hwy 42 | Lakeview Rd | TImberline Rd | Signed Bike Route | 138 | 5.35 | Short Term (0 – 5 Years) |
| State Hwy 42 | Cottage Rd | W Wisconsin Bay Rd | Signed Bike Route | 143 | 0.27 | Short Term (0 – 5 Years) |
| Garrett Bay Hill Rd | Garrett Bay Rd | Blackberry Rd | Signed Bike Route | 145 | 0.19 | Short Term (0 – 5 Years) |

| Facility/ Street Name | From | To | Facility Type | Project ID | Length (Mi.) | Phase |
|---|---|---|---|---|---|---|
| State Hwy 42 | Timberline Rd | N Port Des Morts Dr | Signed Bike Route | 150 | 1.57 | Short Term (0 – 5 Years) |
| State Hwy 57 | CTH F | State Hwy Q | Signed Bike Route | 153 | 0.63 | Short Term (0 – 5 Years) |
| Jackson Harbor Rd | Indian Point Rd | Jackson Harbor Rd | Signed Bike Route | 159 | 0.25 | Short Term (0 – 5 Years) |
| State Hwy 42 | White Cliff Rd | CTH E | Signed Bike Route | 160 | 0.30 | Short Term (0 – 5 Years) |
| State Hwy 57 | Bluff Rd | CTH F | Signed Bike Route | 161 | 0.24 | Short Term (0 – 5 Years) |
| State Hwy 57 | Cave Point Dr | CTH V | Signed Bike Route | 162 | 0.55 | Short Term (0 – 5 Years) |
| State Hwy 42-57 | Utah St | Michigan St | Signed Bike Route | 177 | 0.52 | Short Term (0 – 5 Years) |
| State Hwy 42-57 | CTH U | Utah St | Signed Bike Route | 178 | 1.10 | Short Term (0 – 5 Years) |
| State Hwy 42 | Cottage Row | Shore Rd | Shared Lane Marking | 180 | 0.63 | Short Term (0 – 5 Years) |
| Hill St | Bluff Ln | State Hwy 42 | Shared Lane Marking | 181 | 0.05 | Short Term (0 – 5 Years) |
| Bluff Ln | State Hwy 42 | Bluff Ln | Shared Lane Marking | 182 | 0.17 | Short Term (0 – 5 Years) |
| CTH G | Alpine Rd | CTH T | Signed Bike Route | 187 | 0.47 | Short Term (0 – 5 Years) |
| Unnamed | State Hwy 57 | North of State Hwy 57 | Signed Bike Route | 199 | 0.11 | Short Term (0 – 5 Years) |
| Ward St | State Hwy 57 | Bluff Rd | Signed Bike Route | 200 | 0.48 | Short Term (0 – 5 Years) |
| Guy St | CTH F | Bluff Rd | Signed Bike Route | 201 | 0.25 | Short Term (0 – 5 Years) |
| Park Rd | CTH F | State Hwy 57 | Signed Bike Route | 202 | 0.17 | Short Term (0 – 5 Years) |
| State Hwy 42 | Gibraltar Rd | Maple Grove Rd | Signed Bike Route | 207 | 2.08 | Short Term (0 – 5 Years) |
| Newport Park Rd | Wilderness Ln | Newport Park Rd | Signed Bike Route | 216 | 0.48 | Short Term (0 – 5 Years) |
| North Woodland Dr | Cottage Rd | State Hwy 42 | Signed Bike Route | 218 | 0.48 | Short Term (0 – 5 Years) |
| Kenosha Dr | State Hwy 42 | Kenosha Dr | Signed Bike Route | 221 | 0.48 | Short Term (0 – 5 Years) |
| CTH X | CTH C | Old Krueger Rd | Signed Bike Route | 1 | 8.00 | Medium Term (6 – 10 Years) |

| Facility/ Street Name | From | To | Facility Type | Project ID | Length (Mi.) | Phase |
|---|---|---|---|---|---|---|
| CTH D | State Hwy 57 | Roosevelt Rd | Signed Bike Route | 3 | 3.89 | Medium Term (6 – 10 Years) |
| CTH D | CTH D | Curve Rd | Signed Bike Route | 6 | 3.97 | Medium Term (6 – 10 Years) |
| State Hwy 57 | County Line Rd | CTH D | Signed Bike Route | 8 | 3.32 | Medium Term (6 – 10 Years) |
| State Hwy 57 | CTH D | CTH N | Signed Bike Route | 9 | 1.89 | Medium Term (6 – 10 Years) |
| CTH N | State Hwy 57 | Chaudoirs Dock Rd | Signed Bike Route | 10 | 2.13 | Medium Term (6 – 10 Years) |
| State Hwy 57 | CTH N | CTH C | Signed Bike Route | 11 | 2.40 | Medium Term (6 – 10 Years) |
| State Hwy 57 | CTH C | Tee Off Ln | Signed Bike Route | 12 | 2.77 | Medium Term (6 – 10 Years) |
| CTH H | State Hwy 57 | CTH Ho | Signed Bike Route | 13 | 5.54 | Medium Term (6 – 10 Years) |
| CTH C | CTH X | Swamp Rd | Signed Bike Route | 15 | 0.53 | Medium Term (6 – 10 Years) |
| CTH C | CTH D | State Hwy 57 | Signed Bike Route | 17 | 1.63 | Medium Term (6 – 10 Years) |
| CTH C | State Hwy 57 | Charleys Rd | Signed Bike Route | 18 | 5.93 | Medium Term (6 – 10 Years) |
| CTH N | State Hwy 57 | CTH C | Signed Bike Route | 19 | 7.01 | Medium Term (6 – 10 Years) |
| State Hwy 57 | CTH H | Stone Rd | Signed Bike Route | 20 | 4.15 | Medium Term (6 – 10 Years) |
| CTH C | CTH C | N Stevensons Pier Rd | Signed Bike Route | 27 | 3.51 | Medium Term (6 – 10 Years) |
| CTH C | S Stevenson Pier Rd | May Rd | Signed Bike Route | 28 | 2.27 | Medium Term (6 – 10 Years) |
| CTH C | May Rd | CTH M | Signed Bike Route | 29 | 2.56 | Medium Term (6 – 10 Years) |
| May Rd | CTH C | Sand Bay Rd | Signed Bike Route | 30 | 2.00 | Medium Term (6 – 10 Years) |
| Sand Bay Rd | Rileys Bay Rd | Park Dr | Signed Bike Route | 31 | 4.55 | Medium Term (6 – 10 Years) |
| CTH M | CTH C | Sand Bay Rd | Signed Bike Route | 32 | 0.97 | Medium Term (6 – 10 Years) |
| CTH C | Idlewild Rd | N Duluth Ave | Signed Bike Route | 36 | 2.97 | Medium Term (6 – 10 Years) |
| Bay Shore Dr | Iowa St | Dunn Rd | Signed Bike Route | 40 | 3.58 | Medium Term (6 – 10 Years) |

| Facility/ Street Name | From | To | Facility Type | Project ID | Length (Mi.) | Phase |
|---|---|---|---|---|---|---|
| CTH D | Forest Dr | CTH O | Signed Bike Route | 45 | 2.50 | Medium Term (6 – 10 Years) |
| CTH J | Old Krueger Rd | CTH U | Signed Bike Route | 46 | 5.30 | Medium Term (6 – 10 Years) |
| CTH U | Clar Lin Rd | Midway Rd | Signed Bike Route | 47 | 2.74 | Medium Term (6 – 10 Years) |
| CTH TT | Lake Forest Park Rd | Cove Rd | Signed Bike Route | 60 | 2.61 | Medium Term (6 – 10 Years) |
| CTH H | CTH O | CTH S | Signed Bike Route | 64 | 3.01 | Medium Term (6 – 10 Years) |
| CTH S | Mount Olive Rd | CTH C | Signed Bike Route | 66 | 3.51 | Medium Term (6 – 10 Years) |
| CTH TT | State Hwy 57 | Lake Forest Park Rd | Signed Bike Route | 67 | 3.44 | Medium Term (6 – 10 Years) |
| CTH TT | Canal Rd | CTH T | Signed Bike Route | 68 | 4.60 | Medium Term (6 – 10 Years) |
| CTH T | N Lake Forest Dr | Whitefish Bay Rd | Signed Bike Route | 69 | 6.59 | Medium Term (6 – 10 Years) |
| CTH I | State Hwy 42 | CTH T | Signed Bike Route | 74 | 4.05 | Medium Term (6 – 10 Years) |
| Bay Shore Dr | Bluff Ct | W Carlsville Rd | Signed Bike Route | 76 | 1.76 | Medium Term (6 – 10 Years) |
| Bay Shore Dr | W Carlsville Rd | CTH G | Signed Bike Route | 77 | 5.83 | Medium Term (6 – 10 Years) |
| CTH T | Bagnall Rd | Hillside Rd | Signed Bike Route | 79 | 4.02 | Medium Term (6 – 10 Years) |
| CTH P | CTH B | Bechtel Rd | Signed Bike Route | 82 | 7.13 | Medium Term (6 – 10 Years) |
| CTH V | CTH T | State Hwy 57 | Signed Bike Route | 87 | 3.06 | Medium Term (6 – 10 Years) |
| CTH T | State Hwy 57 | Ehler Rd | Signed Bike Route | 89 | 3.21 | Medium Term (6 – 10 Years) |
| Clarks Lake Rd | State Hwy 57 | Cave Point Dr | Signed Bike Route | 90 | 3.79 | Medium Term (6 – 10 Years) |
| CTH A | CTH V | Berger Rd | Signed Bike Route | 93 | 2.17 | Medium Term (6 – 10 Years) |
| CTH A | Berger Rd | Wooded Ln | Signed Bike Route | 95 | 2.49 | Medium Term (6 – 10 Years) |
| CTH A | Wooded Ln | CTH EE | Signed Bike Route | 98 | 1.51 | Medium Term (6 – 10 Years) |
| CTH E | State Hwy 42 | CTH A | Signed Bike Route | 99 | 4.26 | Medium Term (6 – 10 Years) |

| Facility/ Street Name | From | To | Facility Type | Project ID | Length (Mi.) | Phase |
|---|---|---|---|---|---|---|
| CTH EE | State Hwy 42 | CTH A | Signed Bike Route | 100 | 3.70 | Medium Term (6 – 10 Years) |
| CTH EE | CTH A | CTH F | Signed Bike Route | 101 | 2.77 | Medium Term (6 – 10 Years) |
| CTH A | CTH EE | Peninsula Players Rd | Signed Bike Route | 102 | 1.50 | Medium Term (6 – 10 Years) |
| CTH A | Peninsula Players Rd | CTH F | Signed Bike Route | 103 | 1.55 | Medium Term (6 – 10 Years) |
| Peninsula Players Rd | Gibraltar Bluff Rd | CTH A | Signed Bike Route | 104 | 3.02 | Medium Term (6 – 10 Years) |
| White Cliff Rd | State Hwy 42 | Juddville Rd | Signed Bike Route | 105 | 3.31 | Medium Term (6 – 10 Years) |
| Juddville Rd | White Cliff Rd | State Hwy 42 | Signed Bike Route | 106 | 0.58 | Medium Term (6 – 10 Years) |
| Gilbraltar Bluff Rd | Peninsula Players Rd | Bluff Cir | Signed Bike Route | 108 | 2.51 | Medium Term (6 – 10 Years) |
| CTH F | CTH A | W Meadow Rd | Signed Bike Route | 111 | 2.66 | Medium Term (6 – 10 Years) |
| CTH F | State Hwy 57 | W Meadow Rd | Signed Bike Route | 113 | 2.90 | Medium Term (6 – 10 Years) |
| CTH E | S Maple Rd | Red Cherry Rd | Signed Bike Route | 114 | 1.28 | Medium Term (6 – 10 Years) |
| CTH A | CTH F | State Hwy 42 | Signed Bike Route | 117 | 1.90 | Medium Term (6 – 10 Years) |
| CTH Q | Moravia St | Town Line Dr | Signed Bike Route | 118 | 0.85 | Medium Term (6 – 10 Years) |
| CTH Q | State Hwy 57 | Woodcrest Rd | Signed Bike Route | 122 | 8.60 | Medium Term (6 – 10 Years) |
| CTH ZZ | State Hwy 42 | Woodcrest Rd | Signed Bike Route | 123 | 0.57 | Medium Term (6 – 10 Years) |
| CTH ZZ | Woodcrest Rd | Mink River Rd | Signed Bike Route | 124 | 5.24 | Medium Term (6 – 10 Years) |
| CTH NP | N Newport Ln | State Hwy 42 | Signed Bike Route | 139 | 2.52 | Medium Term (6 – 10 Years) |
| CTH NP | Wilderness Ln | N Newport Ln | Signed Bike Route | 140 | 0.50 | Medium Term (6 – 10 Years) |
| CTH W | Green Bay Rd | Detroit Harbor Rd | Signed Bike Route | 154 | 1.78 | Medium Term (6 – 10 Years) |
| CTH W | Detroit Harbor Rd | Jackson Harbor Rd | Signed Bike Route | 155 | 2.61 | Medium Term (6 – 10 Years) |
| CTH W | Main Rd | Indian Point Rd | Signed Bike Route | 156 | 3.69 | Medium Term (6 – 10 Years) |

| Facility/ Street Name | From | To | Facility Type | Project ID | Length (Mi.) | Phase |
|---|---|---|---|---|---|---|
| Heritage Lake Rd | CTH EE | CTH T | Signed Bike Route | 184 | 2.13 | Medium Term (6 – 10 Years) |
| Church St | State Hwy 42 | Harbor School Rd | Signed Bike Route | 185 | 1.40 | Medium Term (6 – 10 Years) |
| Harbor School Rd | State Hwy 42 | Windsor Ln | Signed Bike Route | 186 | 1.56 | Medium Term (6 – 10 Years) |
| Co Hwy E | Red Cherry Rd | State Hwy 57 | Signed Bike Route | 194 | 0.70 | Medium Term (6 – 10 Years) |
| CTH ZZ | Mink River Rd | Wagon Trail Resort | Signed Bike Route | 213 | 0.95 | Medium Term (6 – 10 Years) |
| Swamp Rd | Sand Hill Rd | CTH C | Signed Bike Route | 2 | 3.52 | Long Term (10+ years) |
| CTH D | Hump Rd | Rica Ln | Signed Bike Route | 4 | 0.50 | Long Term (10+ years) |
| CTH D | CTH D | CTH J | Signed Bike Route | 5 | 2.86 | Long Term (10+ years) |
| Sand Hill Rd | CTH Y | State Hwy 57 | Signed Bike Route | 7 | 1.97 | Long Term (10+ years) |
| CTH O | CTH X | CTH H | Signed Bike Route | 14 | 4.99 | Long Term (10+ years) |
| CTH C | Swamp Rd | CTH D | Signed Bike Route | 16 | 2.00 | Long Term (10+ years) |
| Stone Rd | State Hwy 57 | CTH C | Signed Bike Route | 21 | 3.12 | Long Term (10+ years) |
| Idlewild Rd | CTH H | CTH C | Signed Bike Route | 22 | 6.04 | Long Term (10+ years) |
| Feest Rd | State Hwy 42 | Idlewild Rd | Signed Bike Route | 23 | 1.00 | Long Term (10+ years) |
| Park Dr | Olson Dr | Melland Rd | Signed Bike Route | 35 | 1.52 | Long Term (10+ years) |
| E Maple St | N Duluth Ave | Oregon St | Signed Bike Route | 37 | 0.74 | Long Term (10+ years) |
| S 1st Ave | Iowa St | Oregon St | Signed Bike Route | 39 | 0.58 | Long Term (10+ years) |
| Bay Shore Dr | Dunn Rd | Bluff Ct | Signed Bike Route | 41 | 2.98 | Long Term (10+ years) |
| Bluff Dr | CTH B | CTH B | Signed Bike Route | 42 | 2.17 | Long Term (10+ years) |
| Whitefish Bay Rd | CTH Or | Mathey Rd | Signed Bike Route | 43 | 3.56 | Long Term (10+ years) |
| S Lake Michigan Dr | CTH U | Mount Lookout Rd | Signed Bike Route | 48 | 1.55 | Long Term (10+ years) |

| Facility/ Street Name | From | To | Facility Type | Project ID | Length (Mi.) | Phase |
|---|---|---|---|---|---|---|
| S Lake Michigan Dr | Mount Lookout Rd | Hornspier Rd | Signed Bike Route | 49 | 2.00 | Long Term (10+ years) |
| Hornspier Rd | S Lake Michigan Dr | S Lake Michigan Dr | Signed Bike Route | 50 | 0.65 | Long Term (10+ years) |
| S Lake Michigan Dr | Hornspier Rd | Lake Ln | Signed Bike Route | 51 | 2.85 | Long Term (10+ years) |
| Lake Ln | CTH U | S Lake Michigan Dr | Signed Bike Route | 52 | 1.91 | Long Term (10+ years) |
| CTH U | Sand Ln | State Hwy 57 | Signed Bike Route | 53 | 1.76 | Long Term (10+ years) |
| Utah St | S 12th Ave | Cove Rd | Signed Bike Route | 55 | 1.14 | Long Term (10+ years) |
| Memorial Dr | Quincy St | State Hwy 57 | Signed Bike Route | 56 | 1.16 | Long Term (10+ years) |
| Shiloh Rd | CTH J | Mount Olive Rd | Signed Bike Route | 61 | 6.03 | Long Term (10+ years) |
| Hornspier Rd | CTH S | Shiloh Rd | Signed Bike Route | 62 | 1.01 | Long Term (10+ years) |
| Mount Olive Rd | CTH S | Shiloh Rd | Signed Bike Route | 65 | 1.02 | Long Term (10+ years) |
| Mathey Rd | CTH TT | Whitefish Bay Rd | Signed Bike Route | 70 | 5.03 | Long Term (10+ years) |
| Oak Rd | Monument Point Rd | Sunny Slope Rd | Signed Bike Route | 71 | 1.55 | Long Term (10+ years) |
| Monument Point Rd | Mathey Rd | Oak Rd | Signed Bike Route | 72 | 0.50 | Long Term (10+ years) |
| Mathey Rd | Whitefish Bay Rd | Monument Point Rd | Signed Bike Route | 73 | 4.03 | Long Term (10+ years) |
| W Carlsville Rd | CTH B | State Hwy 42 | Signed Bike Route | 75 | 2.26 | Long Term (10+ years) |
| CTH T | Hillside Rd | Hillside Rd | Signed Bike Route | 80 | 0.31 | Long Term (10+ years) |
| Bechtel Rd | E Dunn Rd | CTH T | Signed Bike Route | 83 | 0.98 | Long Term (10+ years) |
| Nelson Ln | CTH T | Clarks Lake Rd | Signed Bike Route | 84 | 1.07 | Long Term (10+ years) |
| Schauer Rd | Clarks Lake Rd | Cave Point Dr | Signed Bike Route | 85 | 1.84 | Long Term (10+ years) |
| Cave Point Dr | Clark Lake Ct | State Hwy 57 | Signed Bike Route | 86 | 1.92 | Long Term (10+ years) |
| Sunny Slope Rd | Oak Rd | CTH T | Signed Bike Route | 88 | 2.70 | Long Term (10+ years) |

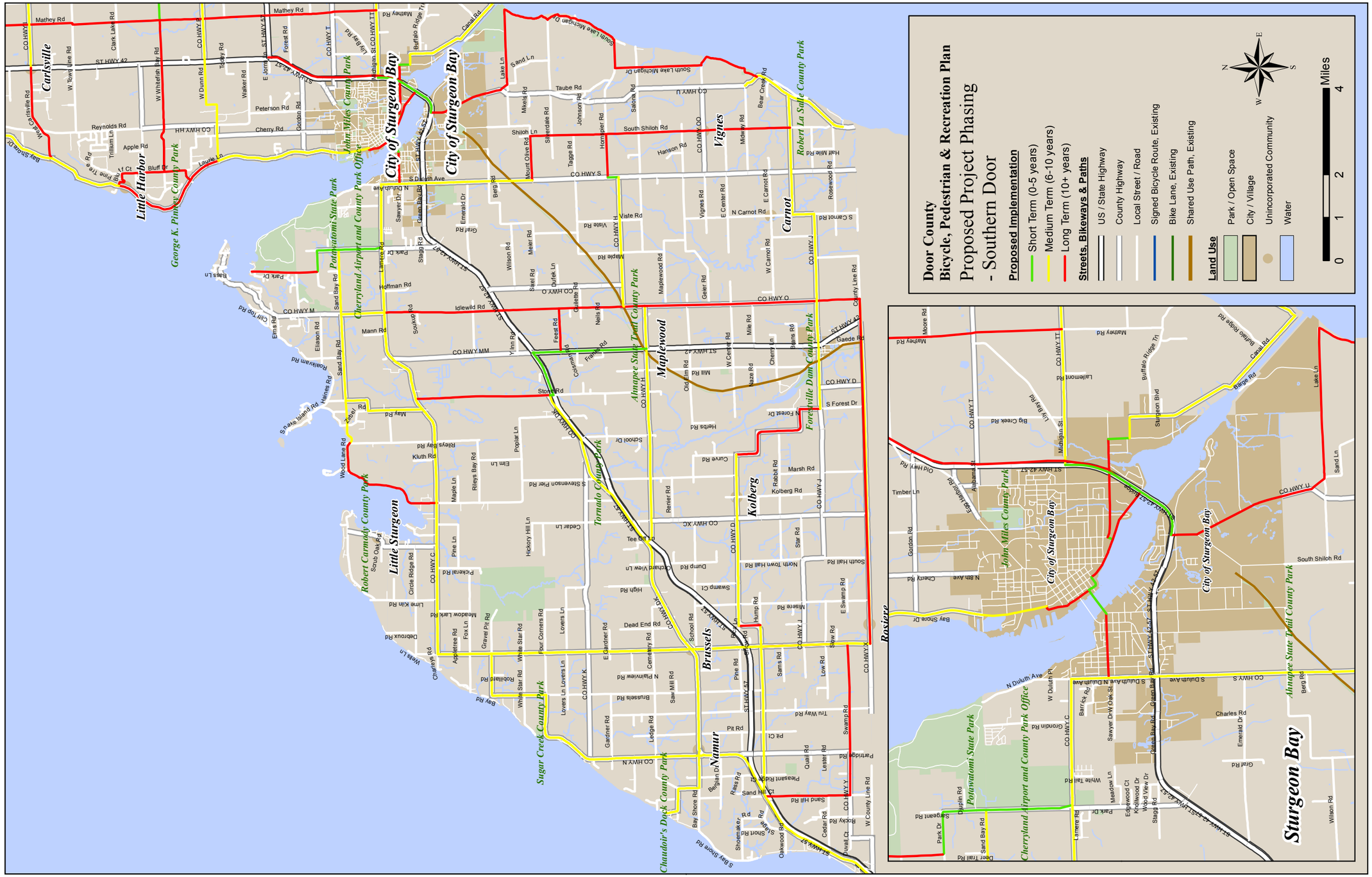
| Facility/ Street Name | From | To | Facility Type | Project ID | Length (Mi.) | Phase |
|---|---|---|---|---|---|---|
| Berger Rd | CTH A | Logerquist Rd | Signed Bike Route | 94 | 1.03 | Long Term (10+ years) |
| S Maple Rd | Berger Rd | CTH E | Signed Bike Route | 96 | 2.57 | Long Term (10+ years) |
| Wooded Ln | CTH A | S Maple Rd | Signed Bike Route | 97 | 1.01 | Long Term (10+ years) |
| W Meadow Rd | CTH F | CTH Q | Signed Bike Route | 112 | 4.81 | Long Term (10+ years) |
| Cherry Rd | CTH E | Bluff Rd | Signed Bike Route | 115 | 1.00 | Long Term (10+ years) |
| Bluff Rd | Red Cherry Rd | State Hwy 57 | Signed Bike Route | 116 | 1.11 | Long Term (10+ years) |
| Town Line Dr | CTH Q | State Hwy 42 | Signed Bike Route | 120 | 1.51 | Long Term (10+ years) |
| Woodcrest Rd | CTH Q | CTH ZZ | Signed Bike Route | 121 | 2.03 | Long Term (10+ years) |
| Woodcrest Rd | CTH ZZ | Scandia Rd | Signed Bike Route | 125 | 0.50 | Long Term (10+ years) |
| Hillcrest Rd | Hill Rd | Waters End Rd | Signed Bike Route | 130 | 0.52 | Long Term (10+ years) |
| Beach Rd | State Hwy 42 | Porcupine Bay Rd | Signed Bike Route | 133 | 2.78 | Long Term (10+ years) |
| Porcupine Bay Rd | Beach Rd | Grasse Ln | Signed Bike Route | 134 | 0.55 | Long Term (10+ years) |
| Grasse Ln | Porcupine Bay Rd | Grasse Ln | Signed Bike Route | 135 | 0.69 | Long Term (10+ years) |
| Hillside Dr | State Hwy 42 | Hillside Dr | Signed Bike Route | 136 | 0.78 | Long Term (10+ years) |
| Timberline Rd | CTH NP | Wisconsin Bay Rd | Signed Bike Route | 141 | 3.44 | Long Term (10+ years) |
| W Wisconsin Bay Rd | State Hwy 42 | Timberline Rd | Signed Bike Route | 142 | 1.12 | Long Term (10+ years) |
| Cottage Rd | Garrett Bay Hill Rd | State Hwy 42 | Signed Bike Route | 144 | 1.10 | Long Term (10+ years) |
| Garrett Bay Rd | State Hwy 42 | Garrett Bay Hill Rd | Signed Bike Route | 146 | 2.89 | Long Term (10+ years) |
| Mink River Rd | Waters End Rd | State Hwy 42 | Signed Bike Route | 147 | 3.49 | Long Term (10+ years) |
| Waters End Rd | CTH ZZ | Mink River Rd | Signed Bike Route | 148 | 0.51 | Long Term (10+ years) |
| Wildwood Rd | Beach Rd | CTH ZZ | Signed Bike Route | 149 | 2.90 | Long Term (10+ years) |

| Facility/ Street Name | From | To | Facility Type | Project ID | Length (Mi.) | Phase |
|---|---|---|---|---|---|---|
| Wood Lane Rd | N Stevensons Pier Rd | Rileys Bay Rd | Signed Bike Route | 151 | 0.65 | Long Term (10+ years) |
| N Stevensons Pier Rd | CTH C | Rileys Pt Rd | Signed Bike Route | 152 | 2.37 | Long Term (10+ years) |
| Town Line Rd | CTH W | Mountain Rd | Signed Bike Route | 157 | 1.77 | Long Term (10+ years) |
| Mountain Rd | Town Line Rd | Jackson Harbor Rd | Signed Bike Route | 158 | 1.43 | Long Term (10+ years) |
| Clark Rd/Breuer Rd | State Hwy 57 | Whitefish Bay Rd | Signed Bike Route | 175 | 1.94 | Long Term (10+ years) |
| Cottage Row | Main St | Gibraltar Bluff Rd | Signed Bike Route | 183 | 1.56 | Long Term (10+ years) |
| Fairview Rd | Maple Rd | West of CTH A | Signed Bike Route | 191 | 1.98 | Long Term (10+ years) |
| Maple Rd | CTH EE | CTH E | Signed Bike Route | 192 | 1.40 | Long Term (10+ years) |
| Summit Rd | St Hwy 57 | West of Red Cherry Rd | Signed Bike Route | 193 | 1.07 | Long Term (10+ years) |
| Red Cherry Rd | Co Hwy EE | Bluff Rd | Signed Bike Route | 195 | 0.52 | Long Term (10+ years) |
| High Plateau Rd | Highland Rd | Co Hwy EE | Signed Bike Route | 196 | 1.00 | Long Term (10+ years) |
| Highland Rd | CTH A | CTH F | Signed Bike Route | 197 | 2.71 | Long Term (10+ years) |
| State Hwy 57 | CTH E | Ward St | Signed Bike Route | 198 | 0.67 | Long Term (10+ years) |
| Spring Rd | Penninsula Players Rd | North of Half Mile Bridge Dr | Signed Bike Route | 203 | 1.98 | Long Term (10+ years) |
| Maple Grove East | CTH F | West Meadow Road | Signed Bike Route | 204 | 1.00 | Long Term (10+ years) |
| Maple Grove Rd | State Hwy 42 | CTH F | Signed Bike Route | 205 | 2.32 | Long Term (10+ years) |
| Settlement Rd | Town Line Dr | Old Stage Ln | Signed Bike Route | 209 | 3.05 | Long Term (10+ years) |
| Old Stage Rd | Seaquist Rd | Old Stage Rd | Signed Bike Route | 210 | 4.57 | Long Term (10+ years) |
| Waters End Rd | Hillcrest Rd | CTH ZZ | Signed Bike Route | 211 | 2.54 | Long Term (10+ years) |
| Waters End Rd | Mink River Rd | Sand Bay Ln | Signed Bike Route | 212 | 1.07 | Long Term (10+ years) |
| Seaquist Rd | Beach Rd | Mink River Rd | Signed Bike Route | 214 | 3.08 | Long Term (10+ years) |

| Facility/ Street Name | From | To | Facility Type | Project ID | Length (Mi.) | Phase |
|---|---|---|---|---|---|---|
| Ellison Bluff Rd | Porcupine Bay Rd | Porcupine Bay Rd | Signed Bike Route | 215 | 1.50 | Long Term (10+ years) |
| Europe Bay Rd | Timberline Rd | Europe Bay Rd | Signed Bike Route | 217 | 1.16 | Long Term (10+ years) |
| Isle View Rd | State Hwy 42 | Isle View Rd | Signed Bike Route | 219 | 3.23 | Long Term (10+ years) |
| N Porte Des Morts Dr | Kenosha Dr | State Hwy 42 | Signed Bike Route | 220 | 0.51 | Long Term (10+ years) |
| Door Bluff Park Rd | Garrett Bay Rd | Door Bluff Park Rd | Signed Bike Route | 222 | 1.16 | Long Term (10+ years) |
| Blackberry Rd | Garrett Bay Hill Rd | State Hwy 42 | Signed Bike Route | 223 | 1.56 | Long Term (10+ years) |
| Gibraltar Rd | CTH A | Maple Grove Rd | Signed Bike Route | 224 | 0.93 | Long Term (10+ years) |

*This Page Intentionally Left Blank*

**Map 7-1: Proposed Project Phasing - Southern Door**



**Map 7-2: Proposed Project Phasing - Northern Door**

## Priority Project Sheets

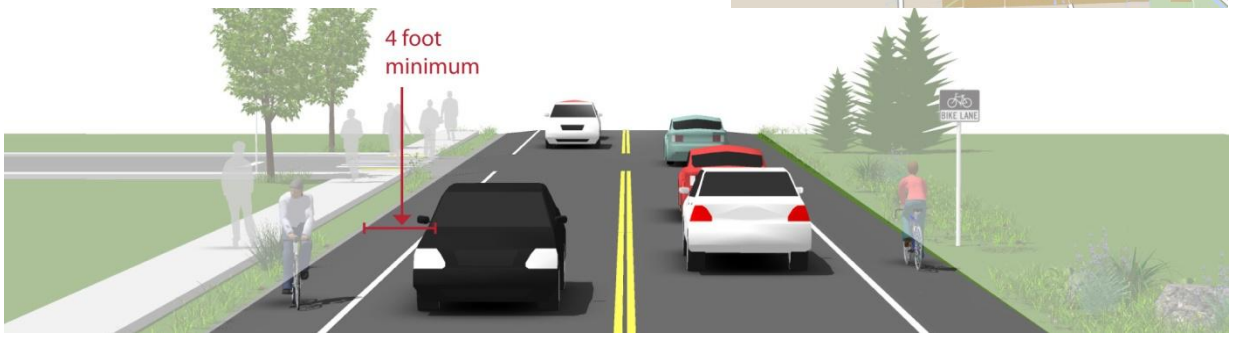
The following pages provide project description sheets with specific recommendations and maps for two priority projects. Specific recommendations were based on field visits, high-resolution aerial photos, and discussions with local and regional planning staff and system users. Each map depicts the recommended roadway under focus, as well as selected nearby connections. Projected cost estimates use the following assumptions. They may be adjusted to accommodate local practices and expectations.

| | |
|---|---|
| Contingency | 25% |
| Engineering and Design | 20% |
| Construction/Overhead/Mobilization | 15% |
| Project Administration | 10% |

# Priority Project Sheet: CTH PD Paved Shoulders

## Existing Conditions:

CTH PD connects CTH C to Potawatomi State Park. The current roadway is two-lanes with a narrow gravel shoulder. The Wisconsin DOT County bike maps classify it as "Moderate Condition" for bicycling. The segment is also classified as part of a tourism loop route.




Typical design of a road with paved shoulders

**Proposed Improvements:** Roadway expansion of CTH PD on both sides to provide a 5 ft paved shoulder (4 ft minimum in constrained conditions). Signage should indicate that the street is a bikeway.

**Extent:** 1.15 miles in length, from CTH C to Potawatomi State Park

## Planning Level Cost Estimates:

| Estimated Direct Costs | |
|---|---|
| Site prep: | $52, 000 |
| Shoulder widening | $440, 000 |
| Signage: | $10, 000 |
| **Total Estimated direct cost:** | **$502, 000** |
| **Direct cost + 70% burden** | **$853, 000** |

# Priority Project Sheet: CTH Q Paved Shoulders

## Existing Conditions:

CTH Q is an important connection from the existing bike route on CTH 57 into the Village of Ephraim. Current roadway is two-lanes with a narrow gravel shoulder. The Wisconsin DOT County bike maps classify it as "Moderate Condition" for bicycling. The segment is also classified as part of a tourism loop route.

Typical design of a road with paved shoulders

**Proposed Improvements:** Roadway expansion of CTH Q on both sides to provide a 5 ft paved shoulder (4 ft minimum in constrained conditions). Signage should indicate that the street is a bikeway.

**Extent:** 1.9 miles in length, from CTH 57 to the Village of Ephraim.

## Planning Level Cost Estimates:

| Estimated Direct Costs | |
|---|---|
| Site prep: | $85, 000 |
| Shoulder widening | $725, 000 |
| Signage: | $17, 000 |
| **Total Estimated direct cost:** | **$827, 000** |
| **Direct cost + 70% burden** | **$1,406, 000** |

## Cost Estimates

A project cost for each type of on-street bicycle and trail facility is shown in Table 7-6: Cost Assumptions These cost opinions were developed based on initial planning-level examples of similarly constructed projects and industry averages. These costs are fully burdened estimates provided in 2013 dollars, rounded to the nearest thousand, thus do not include costs for right-of-way acquisition, wayfinding signs, or other site-specific costs.

Table 7-6: Cost Assumptions

| Facility Type | Cost Per Mile* | Annualized On-Going Costs** | Notes |
|---|---|---|---|
| Signed Route | $15,000 | $1,800 | Assumes regulatory signage every 400' each direction. |
| Shared-Use Path | $1,250,000 | Varies*** | Assumes 12' path. Estimates do not include ROW acquisition costs; costs for potentially required bridges or retaining walls; or costs for amenities including lighting, benches, bicycle parking, interpretive kiosks, etc. |

*Costs include engineering (25%), contingency (15%), and design (20%) allowances.

**Annualized costs assume repainting stripes and pavement markings twice per year. Replacement of 10% of signs per year.

*** Asphalt paths typically require repaving every 7 – 15 years and concrete pathways every 25 years

### 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.

## Funding Sources

From 1993-2011, the state of Wisconsin spent $206.5 million on 685 bicycle and pedestrian projects that used a combination of federal and state 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, pedestrian, and trail projects and programs. Funding sources are summarized in Table 7-7.

# Federal Funding Sources

Federal transportation funding is typically directed through state agencies to local governments either in the form of grants or direct appropriations, independent from state budgets. Federal funding typically requires a local match of 20 percent, although there are sometimes exceptions, such as the recent American Recovery and Reinvestment Act stimulus funds, which did not require a match.

The Wisconsin Department of Transportation (WisDOT) and metropolitan planning organizations (MPOs) administer most federal monies. Most, but not all, of these programs are oriented toward transportation versus recreation, with an emphasis on reducing auto trips and providing inter-modal connections. Federal funding is intended for capital improvements and safety and education programs, and projects must relate to the surface transportation system.

The following is a list of possible Federal funding sources that could be used to support construction of many pedestrian and bicycle improvements. Most of these are competitive, and involve the completion of extensive applications with clear documentation of the project need, costs, and benefits. However, it should be noted that the Federal Highway Administration (FHWA) encourages the construction of pedestrian and bicycle facilities as an incidental element of larger ongoing projects. Examples include providing paved shoulders on new and reconstructed roads, or building sidewalks, on-street bikeways, trails and marked crosswalks as part of new highways.

## 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. The Act replaces the Safe, Accountable, Flexible, Efficient Transportation Equity Act – a Legacy for Users (SAFETEA-LU), which was valid from August 2005 - June 2012.

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 are discussed below.

For more information go to: http://www.fhwa.dot.gov/map21/summaryinfo.cfm

### Transportation Alternatives (TAP)

Transportation Alternatives (TAP) is a new funding source under MAP-21 that consolidates three former SAFETEA-LU programs: Transportation Enhancements (TE), Safe Routes to School (SRTS), and the Recreational Trails Program (RTP). These funds may be used for a variety of pedestrian, bicycle, and streetscape projects including sidewalks, bikeways, multi-use paths, school safety, and rail-trails. TAP funds may also be used for selected education and encouragement programming such as Safe Routes to School. The Wisconsin Department of Transportation (WisDOT) has allocated roughly 2/3rds of TE funds to bicycle and pedestrian projects since the passage of the Intermodal Surface Transportation Efficiency Act (ISTEA) in 1991.

Unless the Governor of a given state chooses to opt out of Recreational Trails Program funds, $85 million in dedicated funds for recreational trails continues to be provided nationally as a subset of TAP. Governor Scott Walker chose to opt in, which means that Wisconsin will receive $2,167,754 in RTP funds per year through FY2014 Eligible Projects for TAP include:

1. **Transportation Alternatives** as defined by Section 1103 (a)(29). This category includes the construction, planning, and design of a range of bicycle and pedestrian infrastructure including "on-road and off-road trail facilities for pedestrians, bicyclists, and other non-motorized forms of transportation, including sidewalks, bicycle infrastructure, pedestrian and bicycle signals, traffic calming techniques, lighting and other safety-related

infrastructure, and transportation projects to achieve compliance with the Americans with Disabilities Act of 1990." Infrastructure projects and systems that provide "Safe Routes for Non-Drivers" is a new eligible activity. For the complete list of eligible activities, visit: http://www.fhwa.dot.gov/environment/transportation_enhancements/legislation/map21.cfm

2. **Recreational Trails.** TAP funds may be used to develop and maintain recreational trails and trail-related facilities for both non-motorized and motorized recreational trail uses. Examples of trail uses include hiking, bicycling, in-line skating, equestrian use, and other non-motorized and motorized uses. These funds are available for both paved and unpaved trails, but may not be used to improve roads for general passenger vehicle use or to provide shoulders or sidewalks along roads.

   Recreational Trails Program funds may be used for:

   - Maintenance and restoration of existing trails
   - Purchase and lease of trail construction and maintenance equipment
   - Construction of new trails, including unpaved trails
   - Acquisition or easements of property for trails
   - State administrative costs related to this program (limited to seven percent of a State's funds)
   - Operation of educational programs to promote safety and environmental protection related to trails (limited to five percent of a State's funds)

3. **Safe Routes to School.** Safe Routes to School activities are eligible for the Transportation Alternatives Program. Both infrastructure and non-infrastructure projects are eligible, and the program elements described in SAFETEA-LU are still in effect. The purpose of the Safe Routes to Schools eligibility is to promote safe, healthy alternatives to riding the bus or being driven to school. All projects must be within two miles of primary or middle schools (K-8). Eligible projects may include:
   - *Engineering improvements.* These physical improvements are designed to reduce potential bicycle and pedestrian conflicts with motor vehicles. Eligible improvements include sidewalk improvements, traffic calming/speed reduction, pedestrian and bicycle crossing improvements, on-street bicycle facilities, off-street bicycle and pedestrian facilities, and secure bicycle parking facilities.
   - *Education and Encouragement Efforts.* These programs are designed to teach children safe bicycling and walking skills while educating them about the health benefits and environmental impacts. Projects and programs may include creation, distribution and implementation of educational materials; safety based field trips; interactive bicycle/pedestrian safety video games; and promotional events and activities (e.g., assemblies, bicycle rodeos, walking school buses).
   - *Enforcement Efforts.* These programs aim to ensure that traffic laws near schools are obeyed. Law enforcement activities apply to cyclists, pedestrians and motor vehicles alike. Projects may include development of a crossing guard program, enforcement equipment, photo enforcement, and pedestrian targeted enforcement operations.

Average annual funds available through TAP over the life of MAP-21 equal $814 million nationally, which is based on a two percent set-aside of total MAP-21 authorizations. Projected apportionments for Wisconsin total $18.7 million for FY 2013 and $18.9 million for FY 2014. Note that state DOTs may

elect to transfer up to fifty percent of TAP funds to other highway programs, so these amounts represent the maximum potential funding.

Door County is eligible to compete for TAP funds through two separate competitive grant programs administered by WisDOT:

1) MAP-21 requires WisDOT to allocate a set amount of TAP funding to rural communities in Wisconsin. These funds are distributed through a competitive grant program that is not open to government agencies located in urban areas containing 200,000 or more residents.

2) Remaining TAP funds (those monies not re-directed to other highway programs) are disbursed through a separate competitive grant program also administered by WisDOT. Local governments, school districts, tribal governments, and public lands agencies are permitted to compete for these funds.

Interim guidance released by the Federal Highway Administration clarifies that the Transportation Alternatives Program does not establish specific standards or procedures for the competitive grant processes, but indicates that the USDOT plans to develop best practices for consideration: "DOT will publish a model Request for Proposal or Notice of Funds Available that States and MPOs may use at their discretion." For more information, see: http://www.fhwa.dot.gov/map21/guidance/guidetap.cfm.

As of this writing additional information regarding WisDOT's plans for administering the grant programs is not available publicly. As WisDOT completes its review of potential programming changes due to MAP-21, further information should become available at: http://www.dot.wisconsin.gov/localgov/aid/bike-ped-facilities.htm.

**Surface Transportation Program (STP)**

The Surface Transportation Program (STP) provides states with flexible funds which may be used for a variety of highway, road, bridge, and transit projects. A wide variety of bicycle and pedestrian improvements are eligible, including on-street bicycle facilities, off-street trails, sidewalks, crosswalks, bicycle and pedestrian signals, parking, and other ancillary facilities. Modification of sidewalks to comply with the requirements of the Americans with Disabilities Act (ADA) is also an eligible activity. Unlike most highway projects, STP-funded bicycle and pedestrian facilities may be located on local and collector roads that are not part of the Federal-aid Highway System. The United States Code Title 23, Chapter 1 defines the Federal-aid Highway system as "a highway eligible for assistance under this chapter other than a highway classified as a local road or rural minor collector." Fifty percent of each state's STP funds are suballocated geographically by population; the remaining fifty percent may be spent in any area of the state.

**Highway Safety Improvement Program (HSIP)**

MAP-21 doubled the amount of funding available through the Highway Safety Improvement Program (HSIP) relative to SAFETEA-LU. HSIP provides $2.4 billion nationally for projects and programs that help communities achieve significant reductions in traffic fatalities and serious injuries on all public roads, bikeways, and walkways. MAP-21 requires each state to formulate a state safety plan, produced in consultation with non-motorized transportation representatives, in order to receive HSIP funds. Eligible projects will be evaluated on anticipated cost-effectiveness of reducing serious injuries and fatalities.

MAP-21 preserves the Railway-Highway Crossings Program within HSIP but discontinues the High-Risk Rural roads set-aside *unless* safety statistics demonstrate that fatalities are increasing on these roads. Bicycle and pedestrian safety improvements, enforcement activities, traffic calming projects, and crossing treatments for non-motorized users in school zones are eligible for these funds. WisDOT estimates that it will receive an average of $47.1 million annually for this program through the lifetime of MAP-21.

**Congestion Mitigation/Air Quality Program (CMAQ)**

The Congestion Mitigation/Air Quality Improvement Program (CMAQ) provides funding for projects and programs in air quality non-attainment and maintenance areas for ozone, carbon monoxide, and particulate matter which reduce transportation related emissions. States with no nonattainment areas may use their CMAQ funds for any CMAQ or STP eligible project. These federal dollars can be used to build bicycle and pedestrian facilities that reduce travel by automobile. Purely recreational facilities generally are not eligible.

Between 1993-2011 the CMAQ program provided $53 million to 78 projects in 11 southeastern counties in Wisconsin non-attainment areas. For current information on designated non-attainment and maintenance zones, including a map of affected counties, please visit the Environmental Protection Agency's (EPA) website; http://www.epa.gov/oaqps001/greenbk/mapnmpoll.html.

Door County previously has been successful in pursuing CMAQ funding and should consider using this source to fund plan recommendations.

**New Freedom Initiative**

MAP-21 continues a formula grant program that provides capital and operating costs to provide transportation services and facility improvements that exceed those required by the Americans with Disabilities Act. Examples of pedestrian/accessibility projects funded in other communities through the New Freedom Initiative include installing Accessible Pedestrian Signals (APS), enhancing transit stops to improve accessibility, and establishing a mobility coordinator position.

For more information visit: http://www.hhs.gov/newfreedom/.

**Pilot Transit-Oriented Development Planning**

MAP-21 establishes a new pilot program to promote planning for Transit-Oriented Development. At the time of writing the details of this program are not fully clear, although the bill text states that the Secretary of Transportation may make grants available for the planning of projects that seek to "facilitate multimodal connectivity and accessibility," and "increase access to transit hubs for pedestrian and bicycle traffic."

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

## Partnership for Sustainable Communities

Founded in 2009, the Partnership for Sustainable Communities is a joint project of the EPA, the U.S. Department of Housing and Urban Development (HUD), and USDOT. The partnership aims to "improve access to affordable housing, more transportation options, and lower transportation costs while protecting the environment in communities nationwide." The Partnership is based on five Livability Principles, one of which explicitly addresses the need for bicycle and pedestrian infrastructure:

Provide more transportation choices: Develop safe, reliable, and economical transportation choices to decrease household transportation costs, reduce our nation's dependence on foreign oil, improve air quality, reduce greenhouse gas emissions, and promote public health.

The Partnership is not a formal agency with a regular annual grant program. Nevertheless, it is an important effort that has already led to some new grant opportunities (including both TIGER I and TIGER II grants). Door County should track Partnership communications and be prepared to respond proactively to announcements of new grant programs. Initiatives that speak to multiple livability goals are more likely to score well than initiatives that are narrowly limited in scope to bicycle and pedestrian efforts.

For more information visit: http://www.sustainablecommunities.gov/grants.html.

## Community Development Block Grants

The Community Development Block Grants (CDBG) program provides money for streetscape revitalization, which may be largely comprised of pedestrian improvements. Federal CDBG grantees may use the funds for real property, public facility improvements, and planning. Pedestrian and Bicycle Master Plan projects that enhance accessibility are a good fit for this funding source. CDBG funds could also be used to write an ADA Transition Plan for the city or support design and construction of projects.

More information: www.hud.gov/cdbg

## Community Transformation Grants

Community Transformation Grants administered through the Center for Disease Control support community-level efforts to reduce chronic diseases such as heart disease, cancer, stroke, and diabetes. Active transportation infrastructure projects and programs that promote healthy lifestyles are a good fit for this program, particularly if the benefits of such improvements accrue to population groups experiencing the greatest burden of chronic disease.

For more info: http://www.cdc.gov/communitytransformation/.

## Land and Water Conservation Fund

The Land and Water Conservation Fund (LWCF) provides grants for planning and acquiring outdoor recreation areas and facilities, including trails. Funds can be used for right-of-way acquisition and construction. The program is administered by the Wisconsin Department of Natural Resources as a grant program. Any Pedestrian and Bicycle Master Plan projects located in future parks could benefit from planning and land acquisition funding through the LWCF. Trail corridor acquisition can be funded with LWCF grants as well.

For more information visit: http://dnr.wi.gov/Aid/LWCF.html and http://www.nps.gov/lwcf/.

## Rivers, Trails, and Conservation Assistance Program

The Rivers, Trails, and Conservation Assistance Program (RTCA) is a National Parks Service (NPS) program providing technical assistance via direct NPS staff involvement to establish and restore greenways, rivers, trails, watersheds, and open space. The RTCA program provides only for planning assistance—there are no implementation monies available. Projects are prioritized for assistance based on criteria including conserving significant community resources, fostering cooperation between agencies, serving a large number of users, encouraging public involvement in planning and implementation, and focusing on lasting accomplishments. This program may benefit trail development in the Door County indirectly through technical assistance,

particularly for community organizations, but should not be considered a future capital funding source. For more information visit: http://www.nps.gov/pwro/rtca/who-we-are.htm.

### Additional Federal Funding

The landscape of federal funding opportunities for bicycle and pedestrian programs and projects is always changing. A number of Federal agencies, including the Bureau of Land Management, the Department of Health and Human Services, the Department of Energy, and the Environmental Protection Agency have offered grant programs amenable to bicycle and pedestrian planning and implementation, and may do so again in the future. For up-to-date information about grant programs through all federal agencies, see http://www.grants.gov/

## 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) lives on.

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

All BPFP funds have been awarded through FY 2014. The next BPFP funding cycle is expected to begin by October 2013. Although BPFP funding as a distinct set-aside has been discontinued, projects previously eligible for BPFP monies will now be eligible under the WisDOT Transportation Alternatives Program. The State of Wisconsin will contribute $1,000,000 each year in additional funds beyond federal TAP funds.

WisDOT will solicit applications that would have been eligible for BPFP funding as part of TAP award cycles. The next TAP award cycle is scheduled to begin in October 2013, and thereafter WisDOT aims to solicit TAP projects every two calendar years. TAP funding distributed by WisDOT will be allocated on a competitive basis after a selection committee rates and ranks applications and then makes funding recommendations.

See the WisDOT BPFP page for the most up to date information: http://www.dot.wisconsin.gov/localgov/aid/bike-ped-facilities.htm. Eligibility and application requirements are described below.

#### Eligibility

- Funds are available for both planning and construction, including:
  - Planning projects costing $50,000 or more
  - Construction projects costing $200,000 or more
- Project sponsors must pay for the project and then seek reimbursement from WisDOT
- Federal funds will pay for up to 80% of project costs. The sponsor must provide at least the remaining 20%
- No funding cap, but WisDOT's ability to fund projects over $1 million is "very limited", according to the BPFP application guidelines (See: http://www.dot.wisconsin.gov/localgov/docs/smip-sample.pdf)
- Statutory language specifically excludes pedestrian-only facilities, such as sidewalks and streetscaping projects
- Local governments with taxing authority and Indian Tribal Nations may apply for funding

- The project must be usable when completed - not staged so that additional money is necessary to make it a useful project

**Required Elements**

- Project Summary and Description
- Sponsor and Contact Information
- Prioritization (if requesting funds for more than one project in an urbanized area)
- Project Costs and Dates
- A realistic estimate of how many people will use the proposed facility on an annual basis
- Project benefits (transportation system improvements, preservation of state historic, environmental and scenic resources, and/or promotion of economic development, tourism, or safety)
- Narrative response to set of detailed questions:
    - Construction projects:
        - Location, length, width, surface materials, connections to existing or planned facilities
        - Relationship to bicycle or pedestrian plan (if applicable)
        - Summary of bicycle and pedestrian plans developed over the past five years
        - Summary of programs in the community designed to encourage walking and bicycling
    - Historic related projects:
        - Documentation from National and/or State Register of Historic Places, locally adopted landmarks ordinance, and/or Wisconsin Historical Society.
        - Description of historic significance
        - Photograph(s) of historic elements
    - Landscaping/streetscape applications
        - Describe how improvements will promote walking and bicycling

A sample BPFP application can be found here: http://www.dot.state.wi.us/localgov/aid/bike-ped-facilities.htm.

For more information on the history of bicycle and pedestrian funding in Wisconsin, including a list of WisDOT-funded projects from state and federal sources, see http://www.dot.wisconsin.gov/localgov/aid/bike-ped-funding.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 of the programs below are 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

*Eligibility and Purpose:* Helps to buy land or easements and develop or renovate local park and recreation area facilities for nature-based outdoor recreation purposes including trails. Applicants compete for funds on a regional basis.

**Friends of State Lands**

*Eligibility and Purpose:* Grants from this program help improve facilities, build new recreation projects, and restore habitat on state properties.

**Habitat Area**

*Eligibility and Purpose:* Protects and restores important wildlife habitat in Wisconsin in order to expand opportunities for wildlife-based recreation such as hunting, trapping, hiking, bird watching, fishing, nature appreciation and wildlife viewing.

**Recreational Trail Aids (RTA)**

*Eligibility and Purpose:* Municipal governments and incorporated organizations are eligible to receive reimbursement for development and maintenance of recreational trails and trail-related facilities for both motorized and non-motorized recreational trail uses. Eligible sponsors may be reimbursed for up to 50 percent of the total project costs. This program may be used in conjunction with the state snowmobile or ATV programs and Stewardship development projects.

- Maximum grant amount: $45,000 ($200,000 every third calendar year)
- Match requirement: 50 percent
- Contact: Tim Parsons, 608-267-9385
- Deadline: May 1

**State Trails**

*Eligibility and purpose:* Applications for grants under this subprogram must be for properties identified as part of the State Trail system. It is possible for sponsors to nominate additional trails for state trail designation. The Streambank Protection Program, a sub-program of the State Trails program, protects water quality and fish habitat in Wisconsin by establishing buffers along high-priority waterways.

**Urban Green Space**

*Eligibility and Purpose:* These grants help buy land or easements in urban areas to preserve the scenic and ecological values of natural open spaces for nature-based outdoor recreation, including non-commercial gardening.

**Urban Rivers**

*Eligibility and Purpose:* These grants helps buy land on rivers flowing through urban or urbanizing areas to preserve or restore the scenic and environmental values of riverways for nature-based outdoor recreation. For more information, see http://dnr.wi.gov/Aid/Grants.html#tabx4.

## 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 7-7 Summary of Potential Funding Sources

| | | Funding Program | Planning Design and/or Construction: On-Street Pedestrian Facilities | On-Street Bicycle Facilities | Off-Street Shared-use Paths | Non-Infrastructure Programs |
|---|---|---|---|---|---|---|
| Federal Sources | MAP-21 | Transportation Alternatives (TAP) | ✓ | ✓ | ✓ | ✓ |
| | | Recreational Trails Program (RTP) | | | ✓ | |
| | | Safe Routes to School (SRTS) | ✓ | ✓ | ✓ | ✓ |
| | | Surface Transportation Program (STP) | ✓ | ✓ | ✓ | |
| | | Highway Safety Improvement Program (HSIP) | ✓ | ✓ | ✓ | ✓ |
| | | Congestion Mitigation/Air Quality (CMAQ) | ✓ | ✓ | ✓ | ✓ |
| | | New Freedom Initiative | ✓ | | ✓ | ✓ |
| | | Pilot Transit-Oriented Development (TOD) | | | | |
| | | Partnership for Sustainable Communities | ✓ | ✓ | ✓ | |
| | | Community Development Block Grants (CDBG) | ✓ | | | ✓ |
| | | Community Transformation Grants (CTG) | ✓ | ✓ | ✓ | ✓ |
| | | Land and Water Conservation Fund (LWCF) | | | ✓ | ✓ |
| | | Rivers, Trails, and Conservation Assistance (RTCA) | | | ✓ | |
| State Sources | | WisDOT Bicycle and Pedestrian Funding Program (BPFP) | ✓ | ✓ | ✓ | |
| | DNR | Acquisition of Development Rights (ADR) | | | ✓ | |
| | | Aids for the Acquisition & Development of Local Parks (ADLP) | | | ✓ | |
| | | Habitat Area | | | ✓ | |
| | | Natural Area | | | ✓ | |
| | | State Trails<br>Streambank Protection | | | ✓ | |
| | | Urban Green Space (UGS) Grants | | | ✓ | |
| | | Urban Rivers (UR) Grants | | | ✓ | |

*This Page Intentionally Left Blank*

# Appendices

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

**Appendix A: Plan and Policy Review**

**Appendix B: Complete Streets, Land Use and Design, and Mode Choice**

**Appendix C: High to Low Speed Transition Areas**

**Appendix D: US Bicycle Routes System Brief**

**Appendix E: Demand and Benefits Model**

**Appendix F: Bicycle and Pedestrian Design Guidelines**

**Appendix G: Ahnapee Trail Extension Feasibility Study**

**Appendix H: Education and Encouragement Strategies**

**Appendix I: CTH A Bike Route Analysis**

**Appendix J: Online Survey Results**

**Appendix K: 2013 Estimated Bicycle Tourism Events Financial Impact**

The appendices to this plan may be viewed online at:

http://www.co.door.wi.gov/